

**Oracle® Communications Unified
Communications Suite**

Installation and Configuration Guide

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Oracle Communications Unified Communications Suite Installation and Configuration Guide, Release 6 Update 1

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Chapter 1. Calendar Server 6.3 Initial Configuration

Completing the Sun Java System Calendar Server 6.3 Installation: Initial Configuration

After you install the Calendar Server software with the Communications Suite installer, you must configure the Calendar Server to complete the installation. You perform this initial runtime configuration by running the Calendar Server configuration program, `csconfigurator.sh`. In addition, you must perform a few manual post-configuration steps.

This document includes the following sub-chapters:

- [Initial Runtime Configuration Program for Calendar Server 6.3 software \(csconfigurator.sh\)](#)
- [Post-Configuration Tasks](#)
- [Database Migration Utilities for Calendar Server 6.3](#)
- [Migration user via csexport and csimport to different domain](#)

Calendar Server 6.3 Initial Runtime Configuration Program

Initial Runtime Configuration Program for Calendar Server 6.3 Software (csconfigurator.sh)

After you configure Calendar Server after installing the Calendar Server software, and before using it, run the two configuration programs in the following order:

1. `comm_dssetup.pl`
Configure the LDAP directory server.
2. `csconfigurator.sh`
Configure Calendar Server as described in this chapter.

This chapter contains the following topics:

- [Gathering Your Configuration Information for Calendar Server 6.3 Software](#)
- [Running csconfigurator.sh](#)
- [Automatic Base 64 Encoding of Passwords for Calendar Server 6.3](#)



Note

If you had an earlier version of Calendar Server or Messaging Server installed, you might need to migrate your LDAP directory entries from Schema version 1 to Schema version 2.

Do not run the configuration utility described in this chapter until you have read the [Sun Java Communications Suite 5 Schema Migration Guide](#). It will instruct you on the timing and options for running the configuration utilities.

Gathering Your Configuration Information for Calendar Server 6.3 Software

The Calendar Server configuration program `csconfigurator.sh`, creates a new `ics.conf` configuration file in the following directory:

For Solaris: `cal-svr-base/config`

For Linux: `cal-svr-base/config`

The configuration program will ask you many questions for which you must enter specific information about your installation. Use the [Calendar Server Worksheet](#) to gather your information before running the configuration program. (You should determine this information before you run the install any Communications Suite or Java ES components to avoid conflicts (such as port numbers) with other component products.)

Running csconfigurator.sh

You can run the configuration program from a graphical user interface (GUI), or from the command line.

If you run the program remotely, you must set your `DISPLAY` environment variable properly and allow X-Windows connections from the server to display on your computer. For example, to use the `xhost` utility, execute the following command on your computer:

```
# xhost +
```

This section contains the following topics:

- [To Run the Configuration Program from the Command Line](#)
- [To Run the Configuration Program from the GUI](#)

To Run the Configuration Program from the Command Line

1. Log in as or become superuser (`root`).
2. Change to the `cal-svr-base/sbin` directory.
3. Run the script using the options chosen from the following table:

Option	Description
<code>-nodisplay</code>	Run the configuration script in text-only mode (non-GUI).
<code>-noconsole</code>	Do not display text output. Use this with <code>-nodisplay</code> to run the configuration script in silent mode.
<code>-novalidate</code>	Do not validate input field text.
<code>-saveState statefile</code>	Save the answers that you input in response to configuration questions to a state file (text file). Unless you specify a fully qualified path for the state file, it will be saved in the default directory: <code>/opt/SUNWics5/cal/jconfigure</code> .
<code>-state statefile</code>	Use the state file for setting input values. This option must be used in conjunction with <code>-novalidate</code> and <code>-noconsole</code> .

For example, to run the configuration script in command-line mode, issue the following command:

```
./csconfigurator.sh -nodisplay
```

The command-line version asks for the same information and in the same order as the GUI. Default values are indicated in square brackets, []. To accept a default value, press Enter on your keyboard.



Note

For the text of the information contained in the various questions presented by the script, refer to the [Calendar Server Worksheet](#) or see the text in the GUI section that follows.

To Run the Configuration Program from the GUI

1. Log in as or become superuser (`root`).
2. Change to the `cal-svr-base/sbin` directory.
3. Run the command:

```
./csconfigurator.sh
```

The configuration program displays the Welcome Screen.



Caution

The configuration program only configures a single domain. If you plan to use multiple domains, you need to add the domains using Delegated Administrator.

4. Click Next to continue or Cancel to exit.
The Administration, User Preferences and Authentication Screen appears.
5. Type your information and click Next.
The User Preferences Directory Options Screen appears.
6. Type your information and click Next.
Use the following information for assistance in filling out this screen.

LDAP Server Host Name

Host name of the LDAP directory server you are using for user authentication. Default: current host

LDAP Server Port

Port number that the LDAP server listens on. Default: 389

Directory Manager DN

User name that can make changes in the directory server schema. Default: `cn=Directory Manager`

Directory Manager Password

Password of the Directory Manager. This will not be stored in plain text. Default: None

The Virtual Domains and Calendar Administrator Screen appears.

7. Type your information and click Next.
Use the following information for assistance in filling out this screen.

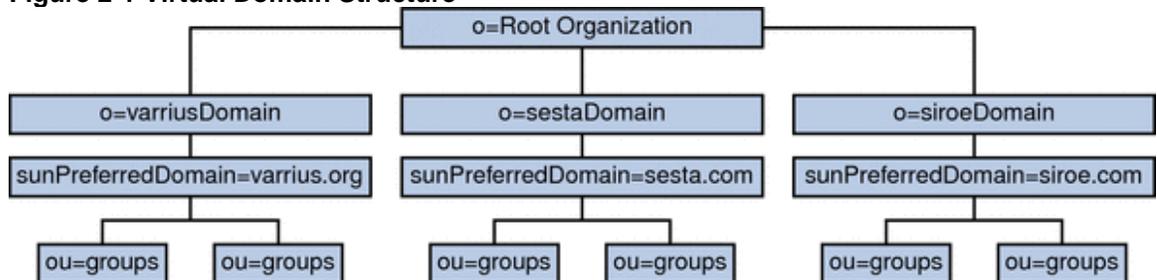


Note

Virtual domains, hosted domains and multiple domains are all names for the same ability to have more than one LDAP domain with its corresponding user and group records.

If you are upgrading from a non-virtual domain environment, the Enable Virtual Domains Support checkbox must be selected. If you already have a multiple domain environment, the checkbox is greyed out. Virtual domains support is now the default behavior of Calendar Server, and is not optional.

Figure 2-1 Virtual Domain Structure



Virtual domains support is now the default behavior for Calendar Server for fresh installations. Using the configuration program graphical user interface, enter a default domain name in the New Default domain input box. The configuration program then creates the domain for you.

Choose your default domain from one of those showing in the Default domain box. If you already used multiple domains in the previous version of Calendar Server, and you do not want to use the domain showing in the Default domain box, click the box to see the list of domains you can choose from and select a new default domain.

The Calendar Administrator Name and Password Screen appears.

8. Type your information and click Next.
Use the following information for assistance in filling out this screen.

Username

Username of the Calendar Server Administrator. Default: `calmaster`

Administrator Password

Password of the Calendar Server Administrator. Default: `None`

Email Address

Email address for the Calendar Server Administrator.

Site Administrator

The Site Administrator is the user that has proxy authentication rights across domains.

Click the appropriate response: `Yes` if the Calendar Administrator is also the Site Administrator. `No` if the Calendar Administrator is not the Site Administrator.

The Email and Email Alarms Screen appears.

9. Type your information and click Next.
Use the following information for assistance in filling out this screen.

Email Alarms

Specifies whether Calendar Server should send an email alarm message to a Calendar Server administrator in case a server problem occurs. Default: `disabled`. If you choose `Disabled`, no administrator receives email alarms for server problems.

Administrator Email Address

Email address of the Calendar Server Administrator who will receive the email alarm messages. Default: `None`

SMTP Host Name

Host name of the SMTP server where used to send alarm messages. Default: `current host`.

The Runtime Configuration Screen appears.

10. Type your information and click Next.
Use the following information for assistance in filling out this screen.

Service Port

Port number that Calendar Server listens on to provide Web (HTTP) access to users. Default: `80`.

Maximum Sessions

Maximum number of concurrent Calendar Server sessions. Default: `5000`

Maximum Threads

Maximum number of concurrent Calendar Server threads. Default: `20`

Number of Server Processes

Maximum number of Calendar Server processes to run on the server. Default: Number of CPUs on the server where you are installing Calendar Server.

Runtime User ID

UNIX user name under which Calendar Server will run. If the account does not exist, the configuration program will create it. Default: `icsuser`



Caution

Do not use `root` as the Runtime User ID.

Runtime Group ID

UNIX group under which Calendar Server will run. If the group does not exist, the configuration program will create it. Default: `icsgroup`

Calendar Server Startup Options

Select one or both options by clicking in the check box.

- Start after successful configuration

Specifies whether to start Calendar Server automatically after this configuration program successfully finishes running.

- Start on system startup

Specifies whether to start Calendar Server automatically after a system startup.



Note

By default, only the Start on system startup checkbox is selected.

The Set Up a Front End-Back End Deployment Screen appears.

11. Choose whether to configure this server as a single server deployment, or a front-end, back-end deployment. If you choose to have a single server instance of Calendar Server, do not select the check box on this screen. If you want to put your Calendar Server databases on one or more servers, while keeping the processes that communicate with the client on a different server, select the check box.

For instructions on how to configure an instance of Calendar Server as a front end or a back end server, see [Configuring a Front End or Back End Calendar Server](#).

The Directories to Store Configuration and Data Files Screen appears.

12. Accept the default directories on this screen. While you are allowed to choose the store configuration and data files directories, it is not advised. Click Next to continue. The Select Directories Configuration Screen appears.
13. Type your information and click Next. Use the following information for assistance in filling out this screen.

Config Directory

Directory where the configuration file (`ics.conf`) resides.

Database Directory

Directory where Calendar Server creates and stores the calendar database files. Default: `/var/opt/SUNWics5/csdb`

Attachment Store Directory

Directory where the attachment store resides. Default: `/var/opt/SUNWics5/astore`

Logs Directory

Directory where Calendar Server writes log files. Default: `/var/opt/SUNWics5/logs`

Temporary Files Directory

Directory where the Calendar Server writes temporary files. Default: `/var/opt/SUNWics5/tmp`



Note

If any of these directories do not already exist, a pop-up window appears for each missing directory. Click the appropriate button to choose whether to have the configuration program create the new directory, or to return you to the screen where you can choose a different directory.

For any directory that already exists but is not empty, a pop-up window appears with two choices. Click the appropriate button to accept the directory anyway, or to return to the screen where you can choose a different directory.

The Archive and Hot Backup Configuration Screen appears.

14. Type your information and click Next.

This screen enables you to select both automatic backup types, or either one of the two, or none. Select or deselect the boxes appropriately. Using both archive backups and hot backups is strongly recommended.



Tip

Prevent the catastrophic loss of all your database copies due to an equipment failure. Keep your automatic backup copies on a disk or disk system other than the one where your live databases reside.

For information on automatic backups, see "Chapter 9, Configuring Automatic Backups (csstored)" in the *Sun Java System Calendar Server 6.3 Administration Guide*.

The Archive and hot backup Configuration Screen appears.

15. Type your information and click Next.

Use the following information for assistance in filling out this screen.

Enable Archive

When this box is selected (default), `csstored` will take a snapshot of your calendar databases every 24 hours. Throughout the day, at regular intervals, it stores the transaction log files for that day with the snapshot in the archive backup directory.

If this box is not checked, the Archive Directory input field is greyed out.

Archive Directory

Choose the backup directory by clicking Browse, or accept the default.

Enable Hot Backup

When this box is selected (default), `csstored` takes a snapshot of your calendar databases every 24 hours, then applies the transaction logs to the snapshot at a set interval (default is two minutes), throughout the day, ensuring a nearly complete duplicate of your live database.

If this box is not checked, the Hot Backup Directory input field is greyed out.

Hot Backup Directory

Choose the backup directory by clicking Browse, or accept the default.

Keep Archives for (in days)

This field is only active if the Enable Archive box is selected; otherwise, it is greyed out.

Click the up or down arrows in the Minimum and Maximum fields to select range of days of archival backups to keep in the backup directory.

Keep Hot Backups for (in days)

This field is only active if the Enable Hot Backup box is selected; otherwise, it is greyed out. You can set the number of hot backups to keep in two ways:

- Click the up or down arrows in the Minimum and Maximum fields to select the range of days of hot backups to keep in the directory.

The number of copies actually stored at any one time depends on the size of the files and the size of the directory. When either the size limits, or maximum number of copies exceeds the limit, the oldest copies are purged down to the minimum number specified on this configuration screen.

- If you want the same settings for Hot Backups as for Archival Backups, you can check the Same As Archive box.

The Ready to Configure Screen appears.

16. Click Configure Now to configure Calendar Server.

Up to now the screens have been gathering data needed for the configuration and performing some validity checking. You can go back and redo the configuration information at this point, or start the configuration.

The Sequence Completed Screen appears.

This panel provides a running update of all the tasks and the disposition (passed or failed). When the message "All Tasks Passed", the configuration has finished. Check the log files indicated to see if there are any error messages.

17. Click Next when the configuration program completes.
The Configuration Summary Screen appears.
18. Click Details to view the details of the configuration log or Close to exit the configuration program.

Automatic Base 64 Encoding of Passwords for Calendar Server 6.3

In the past, the Calendar Server configuration file had some passwords in clear text. Though there are

read permission restrictions on `ics.conf`, someone can see the passwords when the Administrator is editing the configuration file. In Calendar Server 6.3, the passwords have been moved to another file and obfuscated by base 64 encoding them. This will prevent someone from seeing the passwords accidentally. Since no encryption is done, the file must still be read protected and prevented from falling into the wrong hands to keep the passwords secure.

If you are installing Calendar Server for the first time, the configuration program encodes the passwords you create during the configuration process, and stores them in a separate password configuration file.

If you are upgrading your existing Calendar Server software to the Calendar Server 6.3 version, the configuration program encodes the existing passwords found in the `ics.conf` file, and moves them to the password configuration file.

In both cases, the configuration program also adds a new `ics.conf` parameter to indicate the location of the password file, as shown in the following example:

```
local.passwordfile="/etc/opt/SUNWics5/config/icspassword.conf"
```

It is not advisable to change this configuration parameter.

The configuration parameters moved out of `ics.conf` due to this change are the following:

- `local.authldapbindcred`
- `local.enduseradmincred`
- `local.lookupldapbindcred`
- `service.siteadmin.cred`



Note

The LDAP bind passwords that are generated by the configurator are re-generated each time the configurator is run, once they are moved out of the `ics.conf` file.

CSFrontEndDeployment

Configuring a Front-End or Back-End Calendar Server

In the Calendar Server configuration tool, the **Set Up a Front End-Back End Deployment Screen** enables you to choose whether to configure this server as one of the following:

- A single-server deployment of Calendar Server
- A front-end instance of Calendar Server
- A back-end instance of Calendar Server

If you choose to have a single-server instance of Calendar Server, do not select the check box on this screen. If you want to put your Calendar Server databases on one or more servers, while keeping the processes that communicate with the client on different servers, select the check box.

Use the following topics for more information:

- [Single-Server Deployment](#)
- [Front-End and Back-End Deployment](#)

Single-Server Deployment

Do not change any part of this screen if you want a single-server deployment in which both the administrative processes and the databases reside on one server. Click **Next** to continue.

If you wish to deploy separate Front End and Back End machines, click the check box labeled: **Setup a Front End/Back End deployment**. The screen will change and you will be allowed to configure the front-end and back-end servers separately.

Front-End and Back-End Deployment



Note

You must run the Calendar Server configuration program on each front-end server and back-end server you add to your configuration.

To complete this screen, perform the following steps:

- To configure this instance of Calendar Server as a back-end server (that is, the server on which to store calendar databases), you need only specify the service port.

The service port entry box is pre-filled with the port named in the `ics.conf` parameters `service.dwp.server.hostname.port` and `service.dwp.port`.

If you want to change the port number, enter the desired port number in the Service Port entry box.

- To configure this instance of Calendar Server as a front-end server, click **Add a Host**.

Next, enter the host names and IP addresses of the back-end Calendar Server instances with which this front-end will communicate.

For each back-end Calendar Server, click **Add a Host** and enter its host name and IP address.

- If this server is the default front-end server, select the **Default** check box.

Click Next.



Note

You may also remove back-end Calendar Servers from this list by clicking **Remove Selected Host**.

Calendar Server 6.3 Post-Configuration Tasks

Calendar Server Post-Configuration Tasks

After you install the Calendar Server software and run the Calendar Server configuration program (`csconfigurator.sh`), you must perform some configuration settings and changes that the Communications Suite installer and Calendar Server configuration utility do not make. You must manually make changes to the following two items by editing the `ics.conf` file:

- **DWP and CLD Configurations.** Enable the CLD cache option. This cache stores the DWP host server information for calendar users and thus reduces calls to the LDAP directory server.
- **Default Time Zone.** Change the default time zone if you are not in the Americas/New York time zone.

For more information on these changes, see the [Sun Java System Calendar Server 6.3 Administration Guide](#).

Database Migration Utilities for Calendar Server 6.3

Database Migration Utilities for Calendar Server 6.3

This chapter describes the various database migration utilities available for migrating your calendar databases and LDAP database after you have installed and configured Calendar Server 6.3 software.

This chapter contains the following sections:

- [An Overview of Calendar Server Database Migration Utilities](#)
- [Choosing the Right Calendar Server Utilities](#)
- [csmigrate Utility](#)
- [cs5migrate Utility](#)
- [csmig Utility](#)
- [csvdmig](#)
- [commdirmig](#)

Tip

If you are migrating from Calendar Server 6.0, 6.1, or 6.2 versions, run the utility called [csmigrate](#). If you did not already run `cs5migrate` for recurring events and tasks in your previous deployment, you must run `cs5migrate` on your existing calendar databases before running `csmigrate`.

If you are migrating from Calendar Server 5.1.1, migrate the calendar databases and the LDAP database using the migration utilities as explained in [Choosing the Right Calendar Server Utilities](#).

If you had an even earlier version of Calendar Server installed, call technical support for assistance with migration of your data.

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An Overview of Calendar Server Database Migration Utilities

This section describes each of the migration utilities. Use only the migration utilities you need, depending on which version of Calendar Server you previously had installed. These utilities are found in the `sbin` directory.

Tip

If you have ever run the `cs5migrate` utility against your databases, but did not use the `-r` option, you must run it again with the `-r` option before running any of the other utilities.

The migration utilities are as follows:

csmig Utility

Assigns an owner to each calendar in the Calendar Server 6 database and maps each calendar ID (`calid`) to an owner, if needed, which allows support for multiple domains and the LDAP Calendar Lookup Database (CLD) plug-in.

Run this utility before `cs5migrate` and `csvdmig`.

csvdmig

Upgrades a Calendar Server 6 site to use multiple domains by adding the calendar's domain (`@domainname`) to each `calid`. For example, in the domain `sesta.com`, the **jd**oe `calid` would now be `jd`oe@sesta.com. This utility is packaged with Calendar Server.

Run this utility after `csmig` and before `cs5migrate`.

cs5migrate Utility

Migrates your calendar databases from Calendar Server version 5 to version 6.2 format. You must run this utility against your databases specifying the `-r` option. If you migrated from Calendar Server version 5.1.1 to version 6.2 prior to this time, but you did not run the `cs5migrate` utility with the `-r` option, you must run it with that option before running the `csmigrate` utility.

Run this utility after `csmig` and `csvdmig` and before `csmigrate`.

csmigrate Utility

Migrates your calendar databases for upgrading from Calendar Server version 6.0, 6.1, or 6.2 to Calendar Server 6.3 version. If you need to run `cs5migrate` with the `-r` option, run it before this utility.

commdirmig

Migrates LDAP data from Schema version 1 to Schema version 2 in preparation for use with Access Manager (in Legacy mode).

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Choosing the Right Calendar Server Utilities

This section helps you decide which utilities you need to run to have all calendar databases and your LDAP database at the Calendar Server 6.3 software level.

Use the following table to find the correct collection of utilities to run:

 **Note**
Run the utilities in the order given.

Choosing the Right Utilities

Calendar Server Version You Are Migrating From	Condition of Your Database Files	Utilities to Use
--	----------------------------------	------------------

Calendar Server 6.0, 6.1, 6.2	You are using recurring events and tasks. If you ever had a pre 6.0 installation at some point, you have already run <code>cs5migrate</code> in the past. You already use Schema version 2.	Run <code>csmigrate</code>
Calendar Server 6.0, 6.1, 6.2	You are using recurring events and tasks. If you ever had a pre 6.0 installation at some point, you have already run <code>cs5migrate</code> in the past. You did not use Schema version 2 before, but need to now.	Run <code>csmigrate</code> and <code>commdirmig</code> .
Calendar Server 6.0, 6.1, 6.2	You had a pre 6.0 installation at some point, and you have never run <code>cs5migrate</code> against your files. You already use Schema version 2, or you are on Schema version 1 and plan to stay with it.	Run <code>cs5migrate</code> and <code>csmigrate</code> .
Calendar Server 6.0, 6.1, 6.2	You had a pre 6.0 installation at some point, and you have never run <code>cs5migrate</code> against your files. You did not use Schema version 2 before, but need to now.	Run <code>cs5migrate</code> , <code>csmigrate</code> , and <code>commdirmig</code> .
Calendar Server 5.1.1	You did not use multiple domains in the past.	Run <code>csmig</code> , <code>csvdmig</code> , <code>cs5migrate</code> , <code>csmigrate</code> , and <code>commdirmig</code> .
Earlier than Calendar Server 5.1.1	Your files do not support multiple domains or the LDAP CLD. Your LDAP database is using Schema version 1.	Call technical support for help getting your database and LDAP files to Calendar Server 5.1.1 level.
Earlier than Calendar Server 5.1.1	Your system is configured for limited virtual domains, or you have multiple instances of Calendar Server software installed on an operating system that predates Solaris 10.	Contact the sales account representative for an evaluation of your migration requirements.

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csmigrate Utility

The `csmigrate` utility is used to migrate Calendar Server 6.0, 6.1 or 6.2 databases to Calendar Server 6.3 databases. You can find the `csmigrate` utility in the `sbin` directory of the Calendar Server product along with other administrative tools.

This section contains the following topics:

- [csmigrate Utility Syntax](#)
- [csmigrate Example](#)
- [How to Run the Calendar Server csmigrate Utility](#)

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csmigrate Utility Syntax

The syntax for the `csmigrate` command is:

```
csmigrate [-q] [-d] [-l min|max] [-b backup_dir] source_dbdir target_dbdir
```

The options and their usage are as follows:

`-q` (optional)

Specifies quiet mode and no print instructions.

`-d` (optional)

Specifies dry run mode and no new database written.

`-l min|max` (optional)

Specifies log level. The migration logs are written to `csmigrate.log` and errors are written to `csmigrateError.log` in the default logs directory.

`-b backup_dir` (optional)

Specifies the directory to backup source database. The program backs up the source database to this directory and works on that copy to prevent any damage to the source databases. Default location is the `backup` under the source database directory.

`-source_dbdir` (mandatory)

The directory where pre-migration database files are located.

`-target_dbdir` (mandatory)

The directory where post-migration files are created.

`-V` (other supported option)

To print the version information of the tool.

`-?` (other supported option)

To print the usage information of the tool.



Note

The exit codes for the program are 255 on failure and 0 on success.

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csmigrate Example

Examples of using the options in `csmigrate` command are:

```
csmigrate -b /var/opt/SUNWics5/tmpdb /var/opt/SUNWics5/old_db /var/opt/SUNWics5/new_db  
  
csmigrate -q /var/opt/SUNWics5/old_db /var/opt/SUNWics5/new_db  
csmigrate -l min old_db /var/opt/SUNWics5/new_db  
csmigrate -l max old_db /var/opt/SUNWics5/new_db
```

How to Run the Calendar Server csmigrate Utility

1. Log in with root privileges.
2. Stop all services.

For example, issue the following command:

```
stop-cal
```

3. Move your current databases to a temporary directory.

For example, move the entire `csdb` directory to the `oldcsdb`.

```
mv cal-svr-base/SUNWics5/csdb/* cal-svr-base/SUNWics5/oldcsdb
```

4. Make sure both the new directory and old files in that directory are owned by the default administrator (`icsuser`, `icsgroup`).

If the ownership is not correct, change ownership using the following command:

```
chown -R icsuser:icsgroup /cal-svr-base/SUNWics5/oldcsdb/
```

5. Run the migration tool.

Migrate from your new backup copy (`oldcsdb`) to the `csdb` directory as shown in the following example:

```
cd cal-svr-base/SUNWics5/cal/sbin/  
./csmigrate -l max /cal-svr-base/SUNWics5/oldcsdb cal-svr-base/SUNWics5/csdb
```

6. Restart calendar services.

For example, use the following command:

```
stop-cal
```

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cs5migrate Utility

The `cs5migrate` utility is used to migrate the Calendar Server 5.1.1 databases to Calendar Server 6.3 level. In addition, run this utility if you are migrating from one of the earlier Calendar Server 6 versions, and you did not use the recurring option.

The original cs5migrate documentation in [Sun ONE Calendar Server 6.0 Installation Guide for Solaris Operating Systems](#). In Calendar Server 6.3, no new information was provided.

**Note**

In the past, if you did not plan to use the Connector for Microsoft Outlook, you could choose to run this utility without doing the recurring data conversion. However, starting with Calendar Server 6.3, you must convert your recurring data to the new format.

This utility can be found in the `sbin` directory along with other administrative tools, after you have upgraded to Calendar Server 6.3 software.

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csmig Utility

The `csmig` utility assigns an owner to each calendar in the calendar database and maps each calendar ID (`calid`) to an owner, if needed.

The `csmig` utility supports multiple domains and the LDAP Calendar Lookup Database (CLD) plug-in. Calendars in the migrated database are accessible using the LDAP CLD plug-in. For information about the LDAP CLD plug-in, see [Chapter 5, Configuring Calendar Database Distribution Across Multiple Machines in Calendar Server Version 6.3](#).

This section describes the following topics:

- [csmig Utility Functions](#)
- [csmig Utility Requirements](#)
- [csmig Syntax](#)
- [csmig Utility Migration Steps](#)
- [csmig Tips and Troubleshooting](#)

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csmig Utility Functions

The `csmig` migration utility performs the following functions:

- [Migrates Calendars](#)
- [Assigns Owners to Calendars](#)
- [Updates LDAP Attributes](#)

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Migrates Calendars

`csmig` migrates both user and resource calendars in the current calendar database (`*.db` files) specified by the `caldb.berkeleydb.homedir.path` parameter. In the new destination target database, `csmig` updates entries required by the LDAP CLD plug-in in the calendar properties (`calprops`), events, todos (tasks), and group scheduling engine (GSE) database files.

`csmig` writes only to the destination target database; it does not update your existing calendar database.

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Assigns Owners to Calendars

`csmig` assigns an owner to each calendar in the calendar database and maps each calendar ID (`calid`)

to an owner, if needed. All default `calids` are kept as is, and no changes are made. Other calendars are mapped as follows:

- User calendars that don't have valid owners will be owned by the user passed to `csmig` by the `-c` option. For example, if calendar ID `jsmith` doesn't have an owner, it will be converted to `orphan:jsmith`, where `orphan` is specified as the `-c` option.
- Resource calendars that don't have an owner will be owned by the resource user passed to `csmig` by the `-r` option.
- If a resource calendar has any colons (`:`) in the name, the colons are converted to underscores, so that the migrated name has only one colon.

For example, a calendar named `football` with owner `bkamdar` will be converted to `bkamdar:football`. A calendar named `tchang:soccer` with the owner `bkamdar` will be converted to `bkamdar:tchang_soccer`. A resource calendar named `auditorium:room1` with an owner `admin1` will be converted to `admin1:auditorium_room1`.

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Updates LDAP Attributes

`csmig` updates LDAP attributes for all relevant LDAP entries, including `icsSubscribed`, `icsCalendar`, `icsCalendarOwned`, `icsFreeBusy`, `icsSet`, and for resource calendars, `uid`. `csmig` creates the `icsDWPHost` attribute for each calendar in the LDAP directory server database. `icsDWPHost` specifies the host name of the back-end server where a calendar resides.

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`csmig` Utility Requirements

The requirements for using `csmig` are:

- The calendar database must not be corrupted. Use the `csdb check` command to check your calendar database, and if necessary, run the `csdb rebuild` command to rebuild the database. For information about these commands, [Appendix D, Calendar Server Command-Line Utilities Reference](#).
- You must have sufficient disk space for the new destination target database and if applicable, your backup database.
- To run `csmig`, log in as `icsuser` (or as the Calendar Server runtime user ID specified during configuration). If you run `csmig` as superuser (`root`), you might need to reset the permissions for the migrated files.

You must also have privileges to manage the attributes of calendar users in the LDAP directory server that stores user preferences.

- Calendar Server must be stopped.

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`csmig` Syntax

The `csmig` utility has the following syntax:

```

csmig [-t DestinationDB]
      [-b Backend-DWPHost]
      [-o OutputFile]
      [-e ErrorFile]
      [-m MappingFile]
      [-c calendarOwner]
      [-r resourceOwner]
      [migrate |dryrun ]

```

The following table lists the utility options, gives a description of each, and gives the default value.

csmig Options	Description and Default Value
-t <i>DestinationDB</i>	Specifies the destination target database that <code>csmig</code> generates. The default is <code>MigratedDB</code> .
-b <i>Backend-DWPHost</i>	Specifies the name of the DWP back-end host server. This name must match the DWP back-end host server name specified in the <code>ics.conf</code> file.
-o <i>OutputFile</i>	Specifies an output file that captures the <code>csmig</code> output to the screen as well as any errors that occur. The default is <code>MigrateOut</code> .
-e <i>ErrorFile</i>	The file where <code>csmig</code> writes any errors or database entries that cannot be resolved. If database entries cannot be resolved, they are not written to the destination database. The default is <code>MigrateError</code> .
-m <i>MappingFile</i>	Specifies an output mapping file generated in <code>dryrun</code> mode that lists entries in the LDAP schema that need to be changed. For example: Old: <code>calid=jsmith</code>

New: `calid=jsmith:basketball`

The mapping file provides only a list of changes to make to the LDAP schema. `csmig` does not actually make the changes to the schema

The mapping file is not used in `migrate` mode.

-c <i>calendarOwner</i>	Specifies the owner for user calendars that don't have owners.
-r <i>resourceOwner</i>	Specifies the owner for resource calendars that don't have owners.
migrate dryrun	Specifies which mode the utility is running in. Use <code>migrate</code> mode to perform the migration. Use <code>dryrun</code> mode to generate the output mapping file before you actually migrate.

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csmig Utility Migration Steps

If you had a version of Calendar Server predating version 5.1.1, after you install and configure Calendar Server 6.3, run `csmig` to migrate your existing Calendar Server and LDAP databases. Migration of the LDAP data is required for the LDAP CLD plug-in to work properly. Use these steps to migrate calendar

data using `csmig`:

High Level Steps for Using `csmig`

1. Configure your Directory Server using `comm_dssetup.pl`.

If you have not already indexed LDAP attributes using `comm_dssetup.pl`, do so at this time. This will greatly help performance of the LDAP data migration.

2. Using a staging server (not your production server), perform a test dry run.

A dry run reports what `csmig` would do during an actual migration but does not migrate any data. After the dry run, and before you actually migrate, correct any errors and determine a plan to handle any unresolved calendars.

For instructions on how to perform a test dry run, see [csmig Utility Migration Steps](#).

3. Migrate Your Production Data

During a production run, `csmig` migrates the calendar database (`.db` files) and LDAP data (user and group preferences data), `icsSubscribed`, `icsCalendar`, `icsCalendarOwned`, `icsFreeBusy`, `icsSet`, and `uid` (for resource calendars). After the migration, all calendar resources will have an LDAP entry created.

For instructions on how to migrate your production data, see [csmig Utility Migration Steps](#).

To Perform a Test Dry Run

1. Install Calendar Server 6.3 (if necessary) on the staging server.
2. Copy a snapshot of your calendar database to the staging server.
3. Mimic your production LDAP environment on the staging server by performing the following tasks:
 - Install Directory Server.
 - Install a snapshot of the LDAP database on this server.
4. Run `comm_dssetup.pl` to configure the staging Directory Server.
5. Run `csconfigurator.sh` to configure the staging Calendar Server.
6. Log in as `icsuser` (or, if its different, log in as the Calendar Server runtime user ID specified during configuration). If you run `csmig` as superuser (`root`), you might need to reset the permissions for the migrated files.
7. Change to the `cal-svr-base/SUNWics5/cal/sbin` directory.
8. Run the `csdb check` command to check your database for corruption. If corruption is indicated, run `csdb rebuild` to rebuild the database.
9. Consider creating a catchall `calid` for user calendars that don't have an owner. For example, the following command creates a user with the `calid` of `orphan`:

```
./csuser -g orphan -s adminuser -y password -l en -c orphan create orphan
```

10. Stop the Calendar Server using the `stop-cal` command (if necessary).

```
cal-svr-base/SUNWics5/cal/sbin/stop-cal
```

11. Run `csmig` with the `-dryrun` option. For example, you might enter:

```
./csmig -b sesta.com -o csmig.out -e csmig.errors  
-m csmig.map -c orphan -r calmaster dryrun
```

This command assigns user calendars without an owner (orphan calendars) to the owner `orphan` and resource calendars without an owner to the owner `calmaster`.

12. Check the output mapping file (`csmig.map`). The mapping file lists entries that need to be

- updated in the LDAP schema.
13. Check the output, mapping, and error files. Resolve any LDAP issues or errors that you find. Determine how you will handle any unresolved calendars before the actual migration. Several options are:
 - Delete any unneeded calendars before you migrate.
 - Assign owners to any unresolved calendars.
 - Allow `csmig` to assign owners to the calendars during migration using the `-c` and `-r` options.
 14. Run `csmig` to migrate your staging calendar database.

For example, the following command migrates the calendar database to the `/var/opt/SUNWics5/testcsdb/` directory:

```
./csmig -t /var/opt/SUNWics5/testcsdb/ -b sesta.com  
-o csmig.out -e csmig.errors -m csmig.map -c orphan  
-r calmaster migrate
```

15. After the test migration is finished, perform these steps to check out the newly migrated calendar database.
 - a. Copy the migrated database to the `/csdb` directory specified by the `caldb.berkeleydb.homedir.path` parameter. Or, edit this parameter to point to the new location of the migrated database.
 - b. Run `csdb check` on the new calendar database. The number of events and todos in the migrated database should match the pre-migration totals.
 - c. Search for `icsCalendarOwned` entries and make sure that the entries match the pre-migration number of calendars.
 - d. Log in to Communications Express and verify some of the calendars in the migrated database.

If the test migration is successful, you are ready to migrate your production database.

To Migrate Your Production Data

1. Log in as `icsuser` (or as the Calendar Server runtime user ID specified during configuration). If you run `csmig` as superuser (`root`), you might need to reset the permissions for the migrated files.
2. Change to the `cal-svr-base/SUNWics5/cal/sbin` directory.
3. Stop the Calendar Server using the `stop-cal` command.

```
cal-svr-base/SUNWics5/cal/sbin/stop-cal
```

4. Backup the following data:
 - Calendar database (`.db` files).
 - LDAP data: `slapd` database directory and LDAP database.
 - `ics.conf` file. This step is not actually required, but it can be useful if you need to revert to your original configuration.
5. Run `csmig` with the `-migrate` option.

For example, the following command migrates the calendar database to the `/var/opt/SUNWics5/newcsdb/` directory:

```
./csmig -t /var/opt/SUNWics5/newcsdb/ -b sesta.com  
-o csmig.out -e csmig.errors -m csmig.log -c orphan  
-r calmaster migrate
```

6. Check for any unresolved calendars in the error file (`csmig.errors`) and resolve them according to your plan from [csmig Utility Migration Steps](#) under [csmig Utility Migration Steps](#).
7. Run the `csdb check` command to check your migrated database. If any corruption is indicated,

run `csdb rebuild` to rebuild the database.

8. Copy the new migrated database to the `/csdb` directory specified by the `caldb.berkeleydb.homedir.path` parameter. Or, edit this parameter to point to the new location of the migrated database.
9. Enable the LDAP CLD plug-in by making any necessary changes to the following configuration parameters in the `ics.conf` file:
 - `service.dwp.enable = "yes"`
 - `service.dwp.port = "59779"`
 - `csapi.plugin.calendarlookup = "yes"`
 - `csapi.plugin.calendarlookup.name = "*"`
 - `caldb.cld.type = "directory"`
 - `caldb.dwp.server.default = "default-server-name"`
 - `caldb.dwp.server.server-hostname.ip = "_server-hostname_"` (for each back-end server including the local server)
 - `caldb.cld.cache.enable = "yes"` (if you want to use the CLD cache option)
 - `caldb.cld.cache.homedir.path` specifies the location of the CLD cache directory. The default is `/var/opt/SUNWics5/csdb/cld_cache`.

For information about setting configuration parameters for the LDAP CLD plug-in, see [Chapter 5, Configuring Calendar Database Distribution Across Multiple Machines in Calendar Server Version 6.3](#).

10. Restart Calendar Server using the `start-cal` command.
11. Log in to Communications Express and verify that your configuration is working by checking several of the migrated calendars.

To disable alarms while you are making your checks, set each of the following parameters in the `ics.conf` file to "no":

 - `caldb.serveralarms = "no"`
 - `caldb.serveralarms.dispatch = "no"`
 - `service.ens.enable = "no"`
 - `service.notify.enable = "no"`
 - `ine.cancellation.enable = "no"`
 - `ine.invitation.enable = "no"`
 - `service.admin.alarm = "no"`

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csmig Tips and Troubleshooting

The section describes the following tips and trouble shooting examples:

- [The csmig dry run calendar shows the wrong owner for a calendar.](#)
- [The LDAP calendar search doesn't work correctly.](#)
- [The csmig dry run indicates duplicate calendar names.](#)
- [How do I assign orphan calendars to different owners?](#)
- [How do I move calendar users to another back-end server?](#)

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The csmig dry run calendar shows the wrong owner for a calendar.

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Example Problem

A calendar named `tchang:myCalendar` has the owner `jsmith` in the calendar database, and the `csmig` dry run shows the mapping as `jsmith:tchang_myCalendar`. However, you would like to name this calendar `tchang:myCalendar` and assign the owner as `tchang`.

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Example Solution

Before the migration, use the `cscal` utility to change the owner of the calendar `tchang:myCalendar` to `tchang`. Once this is done, the migration will map this calendar to `tchang:myCalendar` and add `icsCalendarowned` to the LDAP entry for user ID `tchang`.

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The LDAP calendar search doesn't work correctly.

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Example Problem

After migration, the LDAP calendar search is enabled, but the calendar search dialog does not return any results or returns only partial results.

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Example Solution

Enabling the LDAP calendar search allows Calendar Server to search `(&(objectclass=icscalendaruser)(icscalendarowned=substr))`.

Manually run two different searches on the LDAP data with the following filters and compare the output:

- LDAP search with filter `(&(objectclass=icscalendaruser)(icscalendarowned=substr))`
- LDAP search with filter `(icscalendarowned=substr)`

Since the server uses the filter that includes `icsCalendarUser` object class, the LDAP server might have been deployed with the schema check disabled, and some calendar entries may have been provisioned without the `<classname>icsCalendarUser</classname>` object class.

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The csmig dry run indicates duplicate calendar names.

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Example Problem

The `csmig` dry run mapping file and output file indicate that there is a duplicate calendar name. For example, in the original database, `jsmith` owns the following calendars:

- `basketball` with 5 events
- `jsmith:basketball` with 10 events

The dry run indicates that during a migration, the two calendars will be merged, and the resulting calendar will be `jsmith:basketball` with owner `jsmith` and 15 total events

The output file will include the following warning message:

```
Error modifying calendar properties, error=2
```

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Example Solution

If you don't want the two calendars to be merged, change the owner of `basketball` to a user other than `jsmith` before the migration. This will preserve the data integrity of the two separate calendars.

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How do I assign orphan calendars to different owners?

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Example Problem

By default `csmig` assigns all orphan calendars to a single owner, but I would like to assign different owners for some orphan calendars.

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Example Solution

`csmig` does not accept the mapping file in the command line. However, you can assign owners to the orphan calendars in the original database before the migration. Check the dry run mapping file for all orphan calendars. Then use the `cscal` utility to assign owners to the orphan calendars before the migration. Run `csmig` in `-dryrun` mode again to verify the new owners.

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How do I move calendar users to another back-end server?

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Example Problem

How do I move users from one back-end server to another?

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Example Solution

To move a calendar user, you `export` each of the user's calendars on the original server and then `import` the calendars on the second server. After the calendars are moved, you can delete the calendars on the original server. For instructions on how to move calendars, see [Managing User Calendars](#).

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csvdmig

The `csvdmig` utility prepares your calendar databases and LDAP user and group entries for use in a multiple-domain environment. Even if you plan to use only the default domain, you must run this utility.



Note

Be sure to run `csmig` before using this utility if you are migrating from a non-domain environment to the multiple domain environment in Calendar Server 6.3.

This sections contains the following topics:

- [csvdmig Functions](#)
- [csvdmig Syntax](#)
- [csvdmig Examples](#)

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csvdmig Functions

The `csvdmig` utility performs the following changes to your databases and LDAP entries:

- The format of calendar IDs (`calids`) is changed:

From: `userid:calendar-name`

To: `userid@domain:calendar-name`

- Access Control List (ACL) access rules are changed:

From: `userid`

To: `userid@domain`

- The LDAP directory server user entries for the Calendar Server attributes are modified as:

`userid:calendar-name` to `userid@domain:calendar-name`.

- Updates the owner and attendee fields in events and tasks in the calendar database. For example:

If `jsmith` in the domain `sesta.com` is the owner of an event, the new owner field would contain `jsmith@sesta.com`.



Caution

The `csvdmig` utility updates the databases and LDAP directory in place. That is, it does not create a separate migrated database, but alters the database you are converting. Therefore, to be safe, run `csvdmig` against snapshots of your databases and LDAP directory.

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csvdmig Syntax

The `csvdmig` utility has the following syntax:

```
csvdmig [-t DestinationDB]
        [-c ConfigFile]
        [-e ErrorFile]
        [-m MappingFile]
        migrate [DB|LDAP]
```

The following table lists the options used by `csvdmig`, and gives a description of each.

Option	Description and Default Value
-m <i>MappingFile</i>	Input parameter specifying a mapping file. For more information on the mapping file, see Mapping File . The default is <code>MigrateMapping</code> .
-c <i>ConfigFile</i>	Input parameter that specifies a Calendar Server configuration file. The default is the <code>ics.conf</code> file.
-t <i>DestinationDB</i>	Output parameter that specifies the location of the database to be migrated. The default is <code>MigratedDB</code> . <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 10px; margin-top: 10px;"> <p>i Tip Always use the <code>-t</code> option.</p> <p>For more information on this option, see Destination DB.</p> </div>
-e <i>ErrorFile</i>	output parameter that specifies the name of the error file for errors that cannot be resolved. The default is <code>MigrateError</code> .
DB	LDAP Specifies which database to modify: DB – the calendar database LDAP – the LDAP directory The default is the calendar database (DB).

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Mapping File

The mapping file is an input text file that maps existing users to their respective domains. You must create the mapping file before you run `csvdmig`. Specify one entry per line with a space between the old and new values. For example:

```
user1 user1@sesta.com
user2 user2@siroe.com
user3 user3@sesta.com
...
user_n_ user_n_@siroe.com
```

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Destination DB

The location of the database to be migrated. The utility updates the file in place. Be sure you have backed up this directory before using the `csvdmig` utility.

If you do not specify the `-t` option, the utility will attempt to migrate the contents of the current directory (the directory specified by performing `pwd` at the command line), with unpredictable results.

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csvdmig Examples

The following are `csvdmig` examples

- Migrate the LDAP directory server data using default values:

```
csvdmig migrate LDAP
```

- Migrate the Calendar Server database:

```
csvdmig -t targetDB -e errorFile -m mappingFile migrate
```

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commdirmig

The `commdirmig` utility migrates your LDAP data from Sun Java System LDAP Schema version 1 to Schema version 2 in preparation for using Access Manager for authentication services. If your previous installation already used Schema version 2, you do not have to run this utility again.

- [Who Should Run the commdirmig Utility](#)
- [When to Run the commdirmig Utility](#)
- [Where to Find Documentation on the commdirmig Utility](#)
- [Where to Find the Utility](#)

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Who Should Run the commdirmig Utility

This migration utility migrates your Schema version 1 LDAP database to Schema version 2. If you are going to use Access Manager software for authentication, you must convert your LDAP entries to Schema version 2 format by running this utility.

If you are not using Access Manager, you should still consider migrating your LDAP data, since Schema version 2 is the preferred LDAP mode for all Communications Suite products that use LDAP.



Note

If you have a separate LDAP directory for preferences, you must run `commdirmig` on that LDAP as well as the one used for authentication.

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When to Run the commdirmig Utility

Run `commdirmig` after you have run all the other migration utilities necessary to migrate your calendar and LDAP databases from your earlier version of Calendar Server software to the 6.3 version of the Calendar Server software.

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Where to Find Documentation on the commdirmig Utility

The `commdirmig` migration utility requires special preparation and planning. It is documented in a separate guide, see [Sun Java Communications Suite 5 Schema Migration Guide](#).

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Where to Find the Utility

The `commdirmig` utility comes bundled with Delegated Administrator that you install from the Communications Suite installer.

A patch is also available from technical support for the utility.

Migration user via csexport and csimport to different domain

Migrating Users Using csexport and csimport to Different Domains

This scenario explains how to migrate/move calendar users via csexport and csimport to a different domain.

NOTE

It is even possible to use a different user and different domain as well. So you able to move `userA@domain1.tld` to `userX@domain2.tld` with this mechanism.

Example:

Migration from `ggreen@logical.tld` to `ggreen@vmdomain.tld`

LDAP User entry on JES5

NOTE

For Calendar migration the `ics*` attributes are important, so I'll only list the attributes you should take care of. Specially the `icsCalendarOwned` and `icsSubscribed` are important, also take care about the `mail` attribute.

```
dn: uid=ggreen,ou=People,o=logical.tld,dc=vmdomain,dc=tld
cn: Gustaf Green
givenName: Gustaf

icsCalendar: ggreen@logical.tld
icsCalendarOwned: ggreen@logical.tld$Gustaf Green
icsDWPHost: myjazz.vmdomain.tld
icsStatus: Active
icsSubscribed: ggreen@logical.tld$Gustaf Green
icsTimezone: Europe/Paris

mail: Gustaf.Green@logical.tld
```

Export on JES5 the calendar of user `ggreen@logical.tld`

```
bash-3.00# ./csexport -c ggreen@logical.tld calendar /tmp/ggreen.ics
Calendar ggreen@logical.tld has been exported to /tmp/ggreen.ics
```

The important lines in the exported file are those where the calendar server user is mention, for example:

the calendar properties itself

```
X-NSCP-CALPROPS-RELATIVE-CALID:ggreen@logical.tld
X-NSCP-CALPROPS-NAME:Gustaf Green
X-NSCP-CALPROPS-PRIMARY-OWNER:ggreen@logical.tld
```

the calendar events

```
ORGANIZER;CN="Gustaf Green"  
;SENT-BY="Gustaf.Green@logical.tld"  
;X-S1CS-EMAIL=Gustaf.Green@logical.tld  
:ggreen@logical.tld  
  
X-NSCP-ORGANIZER-EMAIL:Gustaf.Green@logical.tld
```

NOTE

Your exported user calendar *.ics file may vary and include more places where the user is mention.

LDAP User Entry on COMMS6

NOTE

For Calendar migration the ics* attributes are important, so I'll only list the attributes you should take care of. Specially the **icsCalendarOwned** and **icsSubscribed** are important, also take care about the **mail** attribute.

```
dn: uid=ggreen,ou=People,o=vmdomain.tld,o=isp  
cn: Gustaf Green  
givenName: Gustaf  
  
icsCalendar: ggreen@vmdomain.tld  
icsCalendarOwned: ggreen@vmdomain.tld$Gustaf Green  
icsDWPHost: mycando.vmdomain.tld  
icsFirstDay: 2  
icsStatus: Active  
icsSubscribed: ggreen@vmdomain.tld$Gustaf Green  
icsTimezone: Europe/Paris  
  
mail: Gustaf.Green@vmdomain.tld
```

Calendar Migration

As we're migrate from *logical.tld* to *vmdomain.tld* we need the edit the *.ics file which was exported from JES5 system before we're importing the file into COMMS6 user.

NOTE

You need to know that in the exported file all events created and owned by *ggreen@logical.tld*, when you import this file to "another" user (e.g. another domain) you most likely run into problem.

The solution is to replace the string *ggreen@logical.tld* with *ggreen@vmdomain.tld* in the whole exported file *before* you import this file.

In this scenario we replace the value of LDAP attribute **icsCalendar** of the "old" user with the value of the LDAP attribute **icsCalendar** of the "new" user.

TIP

In this example you simply could replace *logical* with *vmdomain* in the *.ics file as the user name and the Top Level Domain part are the same.

If you use vi, you could do it by simply typing **:1,\$s/logical/vmdomain/g**

The important lines in the *.ics file looks like this after you have edit it:

For the calendar properties itself:

```
X-NSCP-CALPROPS-RELATIVE-CALID:ggreen@vmdomain.tld
X-NSCP-CALPROPS-NAME:Gustaf Green
X-NSCP-CALPROPS-PRIMARY-OWNER:ggreen@vmdomain.tld
```

For the calendar events:

```
ORGANIZER;CN="Gustaf Green"
;SENT-BY="Gustaf.Green@vmdomain.tld"
;X-S1CS-EMAIL=Gustaf.Green@vmdomain.tld
:ggreen@vmdomain.tld

X-NSCP-ORGANIZER-EMAIL:Gustaf.Green@vmdomain.tld
```

Import on COMMS6

```
bash-3.00# ./csimport -c ggreen@vmdomain.tld calendar /export/ggreen.ics
Calendar ggreen@vmdomain.tld has been imported from /export/ggreen.ics
```

NOTE

Be aware to have the same Timezone settings on the Convergence Client as on the Client the user regular use, otherwise the calendar events become imported but displayed "wrong".

Please find below shell script for export and import of calendar, be aware the script are for educational reason only.

Example shell script to **export** all users:

```
#!/bin/sh

#####
###   Export Entire Calendar Database   ###
###   -----                           ###
###   M.Button - Sun Technical Support   ###
###   10/04/08 - v1.1                   ###
#####

#####
### Functions ###
#####

_validate()
{
    ### Check Command line path is valid ###
    if [ "$dbexportpath" = "" ]
    then
        echo "Error: No export location specified!"
        echo
        echo "Usage:"
        echo "  exportdb.sh [path of exported database]"
    fi
}
```

```

    echo
    exit
fi
if [ ! -d "$dbexportpath" ]
then
    echo "Error: Export location specified not found!"
    exit
fi

### Check it is okay to continue with export ###

echo
echo "Export entire calendar database!"
echo "-----"
echo
echo "It's highly recommended to shutdown your calendar server before"
echo "you continue to export the entire database."
echo
echo "Export to: $dbexportpath"
echo
echo "Do you wish it continue [y/n]?"
read ask
if [ "$ask" != "y" ] && [ "$ask" != "Y" ]
then
    ### Exit if user does not enter Y ###
    exit
fi
}

_build_cal_list()
{
    #####
    ### Build Calendar List File ###
    #####

    echo
    echo "Building Calendar List..."
    ./cscal list | cut -f1 -d" " > $dbexportpath/cal-list

    ### Find EOF ###
    numofcals=`cat $dbexportpath/cal-list | wc -l`
    echo "Found: $numofcals Calendars in database."
}

_export_calendars()
{
    #####
    ### Export Calendars ###
    #####

    echo

    for calid in `cat $dbexportpath/cal-list`
    do
        ### Remove ending colon in line ':' ###
        chars=`echo "$calid" | wc -c`

```

```

chars=`expr $chars - 2`
calid=`echo "$calid" | cut -c1-$chars`

### Export Calendar with csexport command ###
./csexport -v -c $calid calendar $dbexportpath/$calid.ics >>
$dbexportpath/export.log
echo "Exported: $calid"
done
}

#####
### Start ###
#####

dbexportpath=$1

_validate
_build_cal_list
_export_calendars

echo
echo "Export process complete!"
echo "  Check $dbexportpath/export.log for details."

```

```

echo

### End of Script ###

```

Example shell script to **import** all users:

```

#!/bin/sh

#####
###   Import Entire Calendar Database   ###
###   -----   ###
### M.Button - Sun Technical Support   ###
### 10/04/08 - v1.1                   ###
#####

#####
### Functions ###
#####

_validate()
{
    ### Check Command line path is valid ###
    if [ "$dbimportpath" = "" ]
    then
        echo "Error: No import location specified!"
        echo
        echo "Usage:"
        echo "  importdb.sh [path to exported database]"
        echo
        exit
    fi
    if [ ! -d "$dbimportpath" ]
    then
        echo "Error: Import location specified not found!"
        exit
    fi

    ### Check it is okay to continue with export ###
    echo
    echo "Import entire calendar database!"
    echo "-----"
    echo
    echo "It's highly recommended to shutdown your calendar server before"
    echo "you continue to import the entire database."
    echo
    echo "Import from: $dbimportpath"
    echo "`cat $dbimportpath/cal-list | wc -l` calendars to import."
    echo
    echo "Do you wish it continue [y/n]?"
    read ask
    if [ "$ask" != "y" ] && [ "$ask" != "Y" ]
    then

```

```

    ### Exit if user does not enter Y ###
    exit
fi
}

_import_calendars()
{
#####
### Import Calendars ###
#####

echo

for calid in `cat $dbimportpath/cal-list`
do
    ### Remove ending colon in line ':' ###
    chars=`echo "$calid" | wc -c`
    chars=`expr $chars - 2`
    calid=`echo "$calid" | cut -c1-$chars`

    ### Export Calendar with csexport command ###
    ./csimport -v -c $calid calendar $dbimportpath/$calid.ics >>
$dbimportpath/import.log
    echo "Imported: $calid"
done
}

#####
### Start ###
#####

dbimportpath=$1

_validate
_import_calendars

echo
echo "Import process complete!"
echo "  Check $dbimportpath/import.log for details."

```

```
echo
```

```
### End of Script ###
```

Chapter 2. Communications Express 6.3 Initial Configuration

Completing the Sun Java System Communications Express 6.3 Installation: Initial Configuration

This chapter describes the configuration and migration steps you must perform, after installation, before you can use Communications Express.

This document includes the following sections:

- [Before You Begin](#)
- [Communications Express File Directory Layout](#)
- [Prerequisites for Configuring Communications Express](#)
- [Schema Choices](#)
- [Invoking Configuration Wizard](#)
- [Configuring Communications Express](#)
- [Post Configuration Instructions](#)
- [Customizing the Landing Page of Communications Express](#)
- [Undeploying Communications Express](#)

Before You Begin

Before you configure Communications Express, make sure you have the following dependent components installed and configured:

- Directory Server.
- Messaging Server and Calendar Server. Make sure you have recorded the relevant details about the installations, such as the hostname, port number, administrator username and password.
- Be sure you have run the Comm Directory Server set-up script, `comm_dssetup.pl`.

Communications Express File Directory Layout

After you install and configure Communications Express, the related files and directories are arranged in the organization as shown in [Table 2-1](#). The table is not exhaustive. It shows only the required directories and files for typical server administration tasks.

Table 2-1 Communications Express Directories and Files

Directory and Legends	Default Location and Description
<p>Communications Express Base</p> <p><code>uwc-basedir</code></p>	<p>Default location:</p> <p>Solaris™: <code>/opt/sun/comms/ce/</code></p> <p>Linux: <code>/opt/sun/comms/ce/</code></p> <p>Communications Express is installed in this directory.</p> <p>Note: On Solaris OS 10, the Communications Suite installer allows multi-installation of Communications Express; you can install multiple Communications Express base directories per machine. On Linux, only one Communications Express base directory is permitted.</p>
<p>Deployed Directory</p> <p><code>uwc-deployed-dir</code></p>	<p>Default location:</p> <p>Solaris: <code>/var/opt/comms/ce/</code></p> <p>Linux: <code>/var/opt/comms/ce/</code></p> <p>Communications Express is deployed in this directory. The web container takes the files from this location while loading Communications Express.</p>
<p>Web Applications Root Directory</p> <p><code>WEB-INF</code></p>	<p><code>uwc-deployed-dir/WEB-INF</code></p> <p><code>WEB-INF</code> directory of Communications Express web application</p>
<p>Webmail directory</p>	<p><code>uwc-deployed-dir/webmail</code></p> <p>Contains all the webmail related files that Communications Express uses.</p>
<p>Configuration</p> <p><code>config</code></p>	<p><code>uwc-deployed-dir/WEB-INF/config/</code></p> <p>Contains all the Communications Express configuration files</p>
<p>Domain</p> <p><code>domain</code></p>	<p><code>uwc-deployed-dir/WEB-INF/domain/</code></p> <p>Contains per domain localization and Customization files</p>
<p>Skin</p> <p><code>skin</code></p>	<p><code>uwc-deployed-dir/WEB-INF/skin/</code></p> <p>Contains per domain themes</p>
<p>Logs</p> <p><code>logs</code></p>	<p><code>uwc-deployed-dir/logs/</code></p> <p>Contains the Communications Express log files. By default log messages are saved to the Web Server's error log file. You can change this location by setting the <code>log.file</code> configuration parameter in the <code>uwconfig.properties</code> file.</p>
<p>System Administrator Programs</p> <p><code>sbin</code></p>	<p><code>uwc-basedir/sbin/</code></p> <p>Contains the Communications Express system administrator executable programs and scripts</p>
<p>Help</p> <p><code>help</code></p>	<p><code>uwc-deployed-dir/help</code></p> <p>Contains Communications Express help files</p>

Prerequisites for Configuring Communications Express

Before running the Communications Express configuration wizard, make sure you:

- Choose your schema. Refer to the section on [Schema Choices](#) for information on the available schema.
- Ensure that you have the following entry in the `/etc/hosts` file on your Solaris system:

ip-of system Fully-Qualified-Hostname

For example,

```
129.158.230.64 budgie.siroe.varrius.com budgie
```

- Ensure that the following components are up and running before you configure Communications Express. Make sure that the configuration of the products for Communications Express is done in the following order:
 - Directory Server
 - Application Server or Web Server
 - Access Manager, if Communications Express wants to participate in SSO (Single Sign On) with other products (For example, Portal Server).



Note

The Web Server that is hosting Communications Express should be running as `root` when configuring for Remote AM SDK deployment.

- Messaging Server
- Calendar Server
- Delegated Administrator if you have chosen Sun Java System LDAP Schema, v.2
- Verify whether users are able to log in to the following servers correctly:
 - Messaging Server
 - Calendar Server
 - Access Manager (formerly known as Identity Server), if you want Communications Express to participate in SSO with other products

Schema Choices

Prior to installing and configuring, you will need to decide on the schema model you wish to adopt. You have two schema and web container options available when deploying Communications Express.

- Sun Java System LDAP Schema, v.1
- Sun Java System LDAP Schema, v.2

The configurator screen displayed for each schema and web container combination varies depending on your schema and web container selection. [Appendix A, Configuration Panel Sequence](#), in the *Sun Java System Communications Express 6.3 Administration Guide*, lists the screens that are displayed for each schema and web container combination.

Invoking Configuration Wizard

This section describes how to invoke the configuration tool

To Invoke the Configuration Wizard

1. Log in as Administrator (`root` for UNIX or Linux).
2. Before invoking the configuration wizard set the display settings.

3. Go to `INSTALLROOT/ce/sbin` directory.
4. Type the following at the command prompt to invoke the configuration wizard:

`./config-uwc` to invoke the configuration tool in the GUI mode.

`./config-uwc -nodisplay` to invoke the configuration tool in the console mode.

Note
This chapter discusses configuration of Communications Express in GUI mode.

Note
This version does not support the silent installation mode.

Configuring Communications Express

The following steps walk you through configuring Communications Express.

Note
If you are invoking the configuration wizard in a language other than English, resize the configuration screen to view its contents properly.

To Configure Communications Express

1. Run the configuration wizard by following the steps in [Invoking Configuration Wizard](#). The Welcome screen appears. Click Next. The Select the Directory to Store Configuration and Data Files screen appears.
2. Select the directory in which the configuration and data files for Communications Express should be deployed.
For example, `/var/opt/sun/comms/ce`. This directory is referred as *uwc-deployed-path* throughout this guide.
Click Next. The Select Components to be Configured screen appears.
3. Select the components you want to configure and deselect those components you do not wish to configure.
The following components are available:
 - Mail Component
 - Calendar Component

Note
You have to select at least one component from the Select Components to be Configured screen.

Although the component size is displayed as zero, the Mail and Calendar components are installed.

Click Next. The Network Connection screen appears. The configuration program tries to establish network connection by using the host name and the DNS domain name displayed in this screen.

Host Name: Displays the host name on which Communications Express is being configured

DNS Domain Name: Displays the DNS domain name maintained by the DNS Server. Click Next. The Select a Web Container screen appears.

4. Select the web container you want to use.

The options available are:

- Web Server
 - Application Server
- Click Next.

If you have selected Web Server as your web container, the following screens appear.

- Configure the Web Server by performing the following steps.

The Web Server Configuration Details screen appears first.

- Specify the local Web Server instance details.
 - **Server Root Directory:** Browse to select the installation root of the Web Server. Default location is `/opt/SUNWwbsvr7/`.
 - **Server Instance Identifier:** Enter the Web Server instance on which Communications Express is to be deployed. For example, `budgie.siroe.varrius.com`.
 - **Virtual Server Identifier:** Enter the virtual server identifier on which Communications Express is to be deployed. For example, `https-budgie.siroe.varrius.com`.
 - **HTTP Port:** Enter the HTTP port number Web Server listens to. The Web Server listens to this HTTP port number when Communications Express is accessed.



Note

If you want to configure a secure HTTP port number, specify it after configuring Communications Express. To configure a secure port number see [Configuring Secure Socket Layer](#).

Click Next. The configuration wizard checks if the Web Server connection instance is alive. If the Web Server instance is not up and running, an error message appears. Refer to [Prerequisites for Configuring Communications Express](#) to know more about the prerequisites required before configuring Communications Express.

The Web Server Administration Instance Details screen appears.

1. a. • Specify the Administration Instance Details.

The following options are available

- **Administration Server Port:** Enter the Web Server administration server port number.
- **Administration Server User ID:** Enter the Web Server administrator user ID.
- **Administration Server Password:** Enter the Web Server administrator password.

You will see a small popup window indicating that the Web Server Instance is being verified. This may take a few minutes.

If the configuration wizard is unable to connect to the Web Server Instance, an error message is displayed. Click Accept, to continue with the installation process, or click Choose New, to specify different Web Server configuration details.

Click Next. The Web Container User and Group screen appears.

- Specify the identity, the web container uses to run the services.
 - **Web Container User ID:** Displays the web container user identifier from the user database.
 - **Web Container Group ID:** Displays the web container group identifier from the group database.

Click Next. The configuration wizard installs some files and directories containing sensitive data, such as passwords. The ownership of these files and directories are given to web container user and group mentioned in this screen. Only the web container user is given read and write permissions to the files and directories containing sensitive data.



Note

Ensure you enter the correct web container User ID and Group ID values in this screen. Entering wrong values may result in startup failure of the Communications Express.

Click Next.

- If you have selected Application Server to be your web container, the following screens appear:

Configure Application Server by performing the following steps. The Application Server Configuration Details screen appears first.

- Specify the Application Server Configuration Details that the configuration wizard can use to configure Communications Express with Application Server.
 - **Install Directory:** Browse to select the local directory in which Application Server is installed.
 - **Domain Directory:** Browse to select the domain directory of the Application Server.
 - **Document Root Directory:** Browse to select the document root directory of the Application Server.
 - **Server Target Name:** Enter a name for the Application Server target, for which Communications Express is to be configured. The Communications Express configuration wizard supports only the Domain Administration Server (DAS) deployment for Application Server .
 - **Virtual Server Identifier:** Enter the virtual server identifier for which Communications Express is to be configured.
 - **Server Instance HTTP Port:** Enter the Application Server port number where an HTTP service is available. This is the HTTP port from which Communications Express application will be accessed.



Note

Specify the HTTP Port number here. If you want to configure a secure HTTP port number, specify it after configuring Communications Express. To configure a secure port number, refer to the post configuration steps provided in the section [Configuring Secure Socket Layer](#).

Click Next. You will see a popup window indicating that the Application Server Instance is being verified. This may take a few minutes. An Error message is displayed if the configure tool is unable to connect to the Application Server Instance. Click Accept, to continue with the installation process, or click Choose New, to specify the Application Server Configuration Details again. When the configuration wizard successfully verifies the Application Server instance, the Application Server instance Details screen is displayed.

- Specify the administration instance details of the Application Server.

The administration instance details are used by the configuration wizard to deploy Communications Express on Application Server:

- **Administration Server Port:** Enter the Administration Server port number.



Note

The administration port of the Application Server that you specify must be available for configuring Communications Express on Application Server.

- **Administrator User ID:** Enter the administrator's user identifier.
- **Administrator Password:** Enter the administrator's user password.
- **Secure Administration Server Instance:** Select this option to specify that the Application Server's administration instance is running in the secure mode. Deselect the checkbox, to specify that the Application Server's administration instance is running in the normal mode. Depending on the selection, a popup window confirming the mode in which the Application Server's administration instance is running appears. Click OK to exit the popup window.



Note

When deploying Communications Express on the Application Server, two files, `server.xml` and `server.policy`, are modified. Before modifying the `server.xml` and `server.policy` files, a backup of these files is maintained by the configuration wizard. The backup files are stored in the directory: `DOMAIN-DIRECTORY/ SERVER-INSTANCE-NAME/ config/ .CommsExpress_YYYYMMDDhhmmss`
Here:

- DOMAIN-DIRECTORY is the Application Server's domain directory.
- SERVER-INSTANCE-NAME is the Application Server Instance Name for which Communications Express is being configured.
- YYYYMMDDhhmmss is the time stamp of the backup directory.

Click Next. The Module Name for this Web Application screen appears.

- Enter the module name with which Communications Express should be deployed on Application Server.
The configuration wizard has now collected the required parameters to configure Communications Express with the web container of your choice.

Click Next. The Web Container User and Group screen appears.

1. Specify the identity, the web container uses to run the services.
 - **Web Container User ID:** Displays the web container user identifier from the user database.
 - **Web Container Group ID:** Displays the web container group identifier from the group database.

Click Next. The configuration wizard installs some files and directories containing sensitive data, such as passwords. The ownership of these files and directories are given to web container user and group mentioned in this screen. Only the web container user is given read and write permissions to the files and directories containing sensitive data.

**Note**

Ensure you enter the correct web container User ID and Group ID values in this screen. Entering wrong values may result in startup failure of the Communications Express.

Click Next. The URI Path Setting screen appears.

2. Enter the URI where Communications Express should be deployed.

For example, `/uwc`

**Caution**

If you are using an existing URI to deploy Communications Express, the configuration tool first removes any previous application data before deploying Communications Express on that URI. For example, if you are deploying Communications Express on a URI such as `/uwc` that has a web application deployed in it, Communications Express configurator first removes the existing web-application from `/uwc` before deploying Communications Express. This could result in the loss of the previous application's data and accessibility of the application.

Click Next. The Do you want Hosted Domain Support? screen appears.

3. Select the option to enable hosted domain support for Communications Express.

Select this option only if you have enabled hosted domain support in Calendar Server.

Click Next. The User/Group Directory (LDAP) Server Details screen appears.

4. Enter the following details:

LdapURL: Specify the user or group LDAP URL in the format `ldap://UG-LDAP-HOST:UG-LDAP-PORT` where:

- *UG-LDAP-HOST* is the LDAP hostname
- *UG-LDAP-PORT* is the LDAP port number

Bind DN: Enter the LDAP distinguished name of the User/Group administrator.

Bind Password: Enter the bind password for User/Group administrator.

Click Next. The DC Tree Suffix screen appears.

5. Enter the base distinguished name for the DC tree suffix.

This suffix is used by the Communications Express to search for domain lookup.

Click Next. The Default Domain Name screen appears.

6. Enter the default domain name.

Each domain has certain properties. When a user logs into a domain that does not have the required properties, the properties are picked up from the default domain name.

Click Next. The Enable Access Manager for Single Sign-on screen appears.

7. Select Enable Identity Support for Communications Express if you want to enable Access Manager for Single Sign-on.

Only if you have enabled Identity Support for Communications Express, the Access Manager Preferences screen is displayed.

Enter the Access Manager Preferences such as the login URL, Access Manager Administrator DN and Password in this screen.

- **Admin DN:** Enter the complete LDAP DN (distinguished name) of the Access Manager Administrator, such as `DN=uid=amAdmin, ou=people, Access Manager- root suffix`.
 - **Admin Password:** Enter the password for the Access Manager administrator. Click Next. The Messaging Express Port screen appears.
8. Specify the Messaging Server related parameters.
This screen appears only when the mail component is selected in the Select Components to be Configured screen.
The following options are available:
- **Webmail Server Hostname:** Specify the hostname where the webmail server is installed.
 - **Webmail Server Port Number:** Specify the port number which the Messaging Server HTTP (`mshhttpd`) port number listens to. For example, the default is: `8990`.
 - **Enable login in secure mode:** Select this option if you want users to log in secure mode.
 - **Webmail Server SSL Port Number:** If you have configured Webmail Server to run in SSL mode, enter the SSL port number.
 - **Webmail Admin User ID:** Specify the administrator user ID for the Webmail Server.
 - **Admin Password:** Enter the administrator password for webmail. Click Next. The Calendar Server Host and Port Configuration screen appears.
9. Specify the Calendar Server host and port.
This screen appears only when calendar component is selected in the Select Components to be Configured screen.
The options available are:
- **Calendar Server Host Name:** Enter the Calendar Server's host name.
 - **Calendar Server HTTP Port Number:** Enter the Calendar Server's HTTP port number. Click Next. The Calendar Server Administration Details screen appears.
10. Enter the Calendar Server user ID and password.
- **Administrator User ID:** Enter the Calendar Server's administrator's name. For example, `calmaster`.
 - **Administrator User Password:** Enter the Calendar Server's administrator's password.



Note

Ensure that the Calendar Admin User ID value you have entered here is the same as the `service.admin.calmaster.userid` value mentioned in Calendar Server's `ics.conf` file.

Click Next. The PAB Directory Server Details screen appears.

11. Specify the details where the PAB entries are stored in the LDAP server.
The Personal Address Book LDAP Server is the store where users personal address books are located. Enter the following details in this screen:
- **LDAP URL:** Specify the LDAP host and port for the PAB Store. The URL should be in the format: `ldap://PAB-ldap-hostname:PAB-ldap-portnumber`
 - **Bind DN:** Enter the LDAP DN to be used to bind to the PAB Store. The Bind DN specified here should have appropriate privileges to manage the data under root suffix `o=PiServerDB`.
 - **Password:** Enter the bind password. Click Next. The Ready to Configure screen appears.
- The configuration program checks for enough disk space on your machine and then lists the components it is ready to configure.
- Click **Configure Now**, to configure Communications Express.
 - Click **Back**, to change any of your configuration variables.
 - Click **Cancel**, to exit from the configuration program.
- If you clicked **Configure Now**, a summary of tasks and the sequence status is displayed. Click Next. The Configuration Summary screen lists the status of the configuration program.

Click Details button to view the log.

The Post Configuration Instructions screen appears only when the configuration is successful. This screen may display warning messages when the required shared components are not installed. In order to complete the configuration process, follow the post-configuration instructions provided here.

Post Configuration Instructions

To complete the configuration process, follow the post configuration steps.



Note

Make sure you are familiar with the location of the Communications Express files. Refer to the section on [Default Paths and File Names](#) in the *Sun Java System Communications Express 6.3 Administration Guide*.

Refer to [Chapter 3, Configuration Details](#) in the *Sun Java System Communications Express 6.3 Administration Guide* for more details on the configuration parameters.

To Configure Communications Express After Installation

After installing Communications Express, ensure that for a setup using Access Manager single sign-on, the Core and LDAP services are added. For more information, refer to the section on [Tuning LDAP Related Configuration Parameters](#) in the *Sun Java System Communications Express 6.3 Administration Guide*.

After you have configured Communications Express, perform the following steps:

1. Enable the Mail component in Communications Express by configuring Single Sign-On.

Refer to [Chapter 1, Overview of Communications Express](#) in the *Sun Java System Communications Express 6.3 Administration Guide* for information on configuring Messenger Express and Communications Express.

Use the `configutil` command to set the following parameters in the Messaging Server configuration file, `msg.conf`.

For details about these parameters, see [Messaging Server Configuration](#). For details about using the `configutil` command, see the *Sun Java System Messaging Server 6.3 Administration Reference*.

- `local.webmail.sso.uwcontexturi = context-uri-for-communications-express-installation`
 - `local.webmail.sso.uwcport = uwc-port-for-communications-express-installation`
 - `local.webmail.sso.uwcsslport = uwc-ssl-port-for-communications-express-installation`
 - `local.webmail.sso.uwenabled = 1`
2. Go to `calendar-server-install-directory/SUNWics5/cal/bin/config` (For example, `/opt/SUNWics5/cal/bin/config`).
Edit the `ics.conf` file and set the following:
 - `service.http.allowadminproxy = "yes"`
 - `service.http.admins = proxy-admin-for-calendar-http-service`
 - `service.admin.calmaster.userid = the-value-specified-for-calendar.wcap.adminid-in-uwconfig.properties`
 - `service.admin.calmaster.cred = the-value-specified-for-calendar.wcap.passwd-in-uwconfig.properties`
 - `service.wcap.anonymous.allowpubliccalendarwrite = "yes"`
 - `service.http.allowanonymouslogin = "yes"`
 - `service.calendarsearch.ldap = "no"`

- `service.http.ui.enabled = "yes"`
If you have edited the `ics.conf` file, restart Calendar Server for the changes to take effect.
3. To enable Communications Express for Access Manager SSO, see [Setting up Access Manager Single sign-on](#).
 4. Type the following commands to restart the Messaging Server.

```
msg-svr-base/sbin/stop-msg
```

```
msg-svr-base/sbin/start-msg
```

5. Type the following commands to restart the Calendar Server.

```
cal-svr-base/cal/sbin/stop-cal
```

```
cal-svr-base/cal/sbin/start-cal
```

6. Restart the web container.

Communications Express is now ready and you can access the application from:

```
http(s)://Web-Container-host:Web-Container-port/URI path
```

where:

- *Web-Container-host* is the host name of the web container instance in which the Communications Express application is configured.
- *Web-Container-port* is port number of the web container instance in which the Communications Express is configured.
- *URI path* is the path specified in the URI Path Setting screen.

Customizing the Landing Page of Communications Express

The landing page displayed after login can be customized by using a parameter called `gotoUri`. You can customize the landing page to display the Calendar, Address Book, or Options page. By default, the landing page of Communications Express displays the Mail page.



Note

This feature is available only if you have applied the patch version of Communications Express 6.3.

You can customize the landing page by using one of the following options:

- Modifying the browser URL
- Modifying the LDAP attribute
- Modifying the server configuration parameter

Customizing the Landing Page by Using the Browser URL

To customize the landing page, you should add the `gotoUri` parameter to your browser URL in the following format:

```
http://host name:port number/uwc/?gotoUri=landing page choice
```

For example, to customize the landing page to display the Address Book page, type the URL in the following format:

```
http://xyz.com:8080/uwc/?gotoUri=/abclient/AddressBook
```

**Note**

This customization applies only to the current session and needs to be reset for every session.

Customizing the Landing Page by Modifying the LDAP Attribute

The user LDAP (or Sun Java System Directory Server) entry has a multivalued attribute called `sunUCExtendedUserPrefs`. You can customize the landing page by adding the following value to the attribute:

`landingPage=landing page choice`

For example, `landingPage=/abclient/AddressBook`

**Note**

This customization applies to the user whose entry has been modified with the attribute, and needs to be added only once. However, you can override this customization by setting the `gotoUri` parameter in your browser URL.

Customizing the Landing Page by Modifying the Server Configuration Parameter

You can customize the landing page by adding the following configuration parameter in the `uwconfig.properties` file:

`uwc.gotoUri=landing page choice`

For example, `uwc.gotoUri=/abclient/AddressBook`

The configuration file is located in the `uwc-deploy-dir/WEB-INF/config` directory on the server.

**Note**

This customization applies to all users and the configuration parameter must be added only once. However, you can choose to override the customization by using the previous options.

You can use the following configuration parameter values to set the landing page:

- `/abclient/AddressBook` - to set the Address Book page as the landing page
- `/base/UWCMain?forwardtodefview=true` - to set the Calendar page as the landing page
- `/base/MailOptions` - to set the Mail Options page as the landing page
- `/base/CalendarPreferences` - to set the Mail Options page as the landing page
- `/base/ABPreferences` - to set the Address Book Options page as the landing page
- `/base/UserPreferencesSettings` - to set the Global Options page as the landing page

**Note**

When you use more than one option to set the `gotoUri` parameter, the system takes the following configuration precedence:

1. Browser URL
2. User LDAP attribute
3. Server configuration parameter

Undeploying Communications Express

To undeploy Communications Express from Web Server or Application Server, you need to undeploy the Communications Express web application. Please refer to the relevant documentation for Web Server and Application Server on how to undeploy an application.

Chapter 3. Communications Suite 6 Update 1 Initial Configuration

Communications Suite 6 Update 1 Initial Configuration

This page automatically lists the initial configuration information you need when installing Communications Suite components. Use the following information to perform the initial configuration after installing the Communications Suite software.

Page: [Calendar Server 6.3 Post-Configuration Tasks](#)

Page: [Calendar Server 6.3 Initial Runtime Configuration Program](#)

Page: [Calendar Server 6.3 Initial Configuration](#)

Page: [Communications Express 6.3 Initial Configuration](#)

Page: [Communications Suite 6 Update 1 Initial Configuration](#)

Page: [Convergence 1 Update 1 Initial Configuration](#)

Page: [Delegated Administrator 6.4 Initial Configuration](#)

Page: [Instant Messaging 8 Initial Configuration](#)

Page: [Messaging Server 7 Update 1 Initial Configuration](#)

Chapter 4. Communications Suite 6 Update 1 Installation Flowchart

Communications Suite 6 Update 1 Installation Flowchart

What this flowchart does:

- Provides a decision tree for deploying Communications Suite products and the Sun Java System products that support Communications Suite.
- Directs you to specific sets of installation instructions based on your decisions.

This flowchart focuses on your logical deployment; that is, it emphasizes the software products and functional components that make up Communications Suite.

By functional component, we mean one piece of software that can be installed separately from other Communications Suite software on one host or one Solaris zone. A simple product like Delegated Administrator can be treated as one functional component. A complicated product like Messaging Server typically comprises several components: the message store, MTA, and so on.

This flowchart does *not* offer guidelines for designing your physical hardware configurations. It assumes you can map functional components to specific hosts or Solaris zones on which you will install the software. For each component, follow the linked installation instructions.

The installation instructions are meant as best practices; they are the recommended path for installing and configuring our products. You may choose to tweak these instructions because your deployment differs in some respects from the assumptions made here. Other paths may work for you. But these instructions, and in particular the *sequence* of tasks described here, are recommended.

For general installation information for Communications Suite 6 Update 1, see the [Communications Suite 6 Update 1 Installation Guide](#).

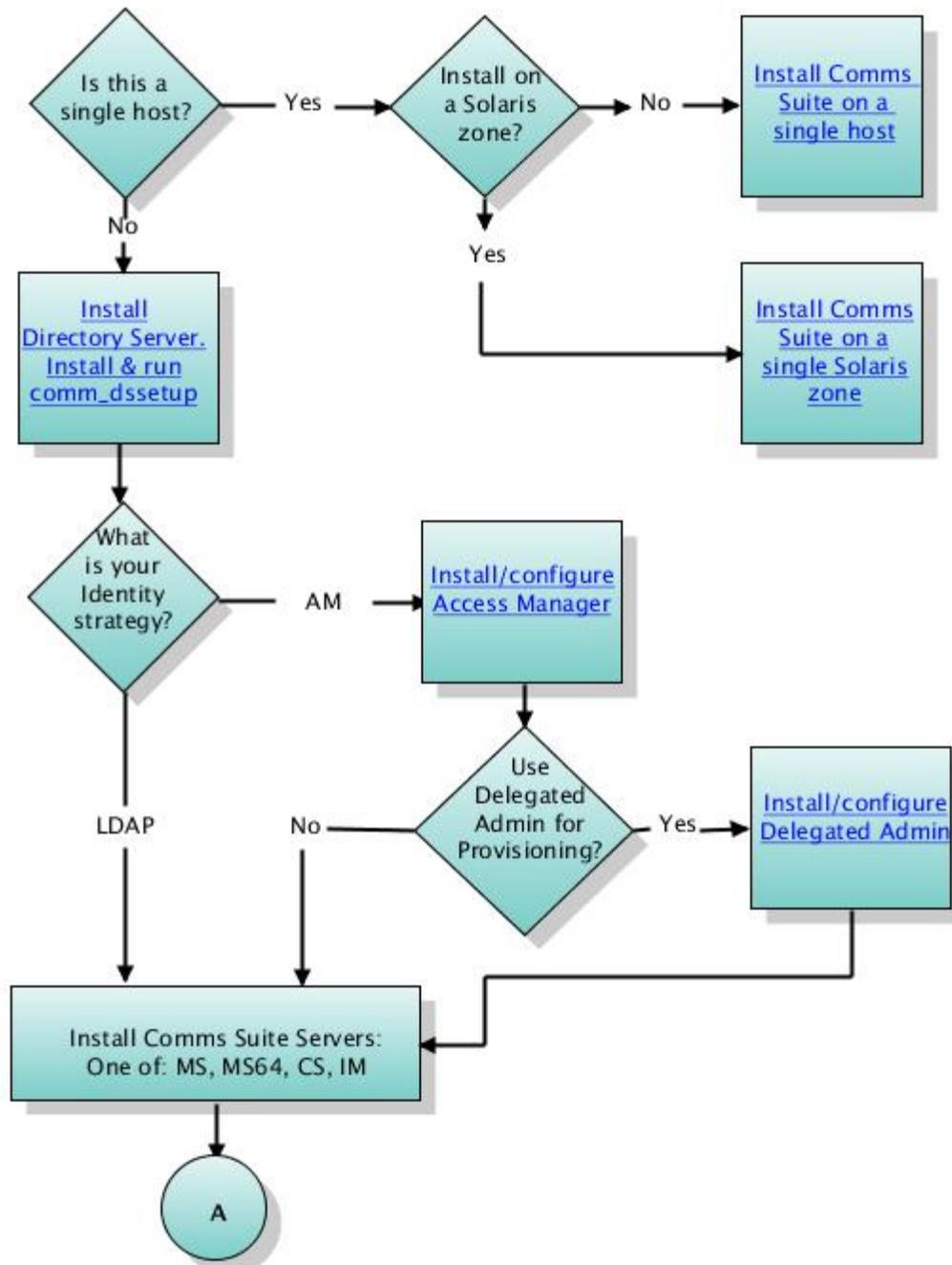
Before you use this flowchart:

- Read the [Communications Suite Deployment Planning Guide](#).
- Read the [Communications Suite 6 Update 1 Component Dependencies](#) table.

This table answer the question: to install a particular Communications Suite product, which other components do you need?

For example, suppose you want to install Messaging Server and use a third-party IMAP client. Do you need to install Convergence or Communications Express? Answer: No. Do you need Access Manager? Answer: No. You *can* install Access Manager for SSO; but you also can use the Messaging Server (Trusted Circle) SSO.

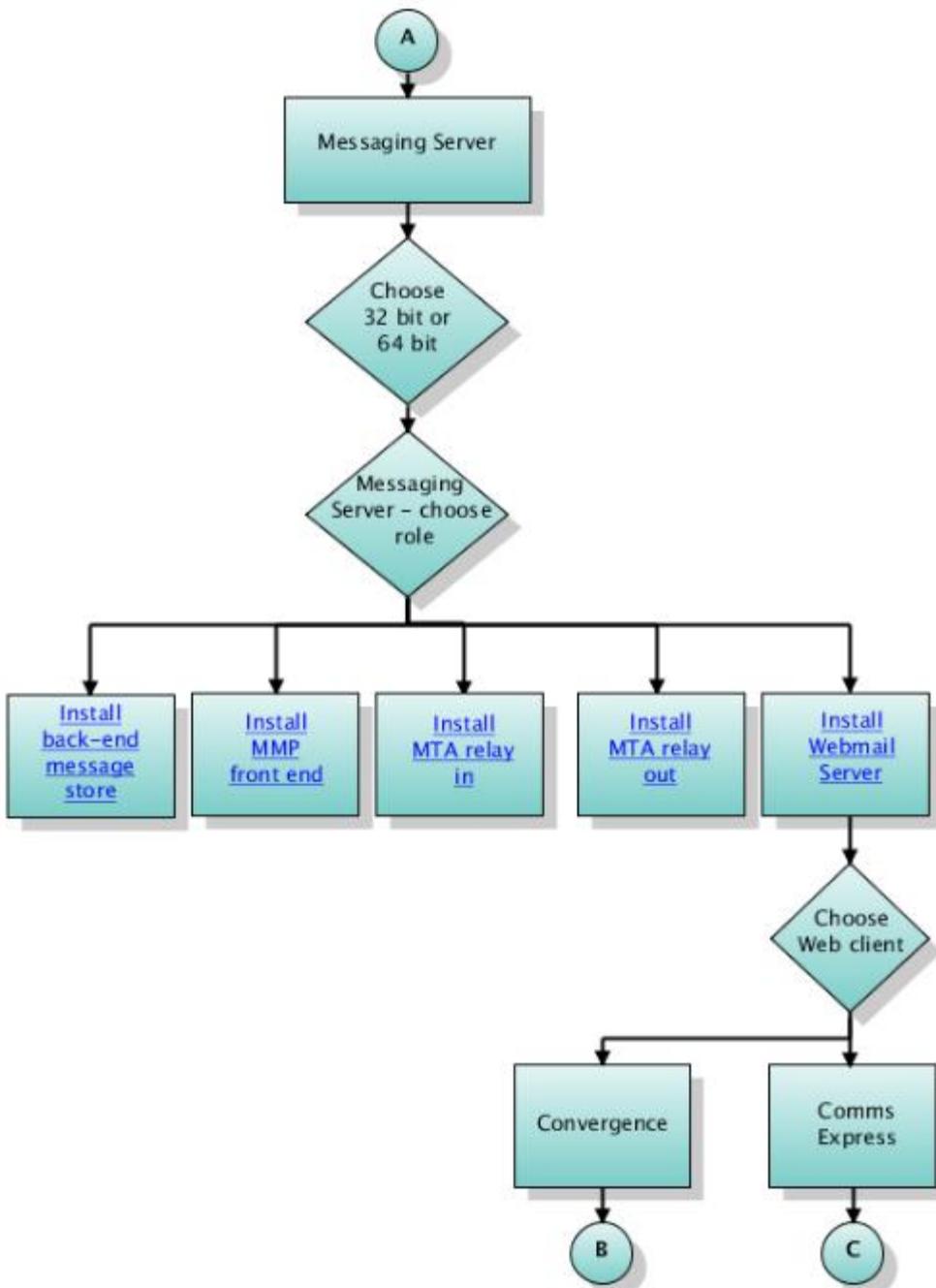
Communications Suite Installation Flowchart: First Decisions



Communications Suite Installation Flowchart: Messaging Server

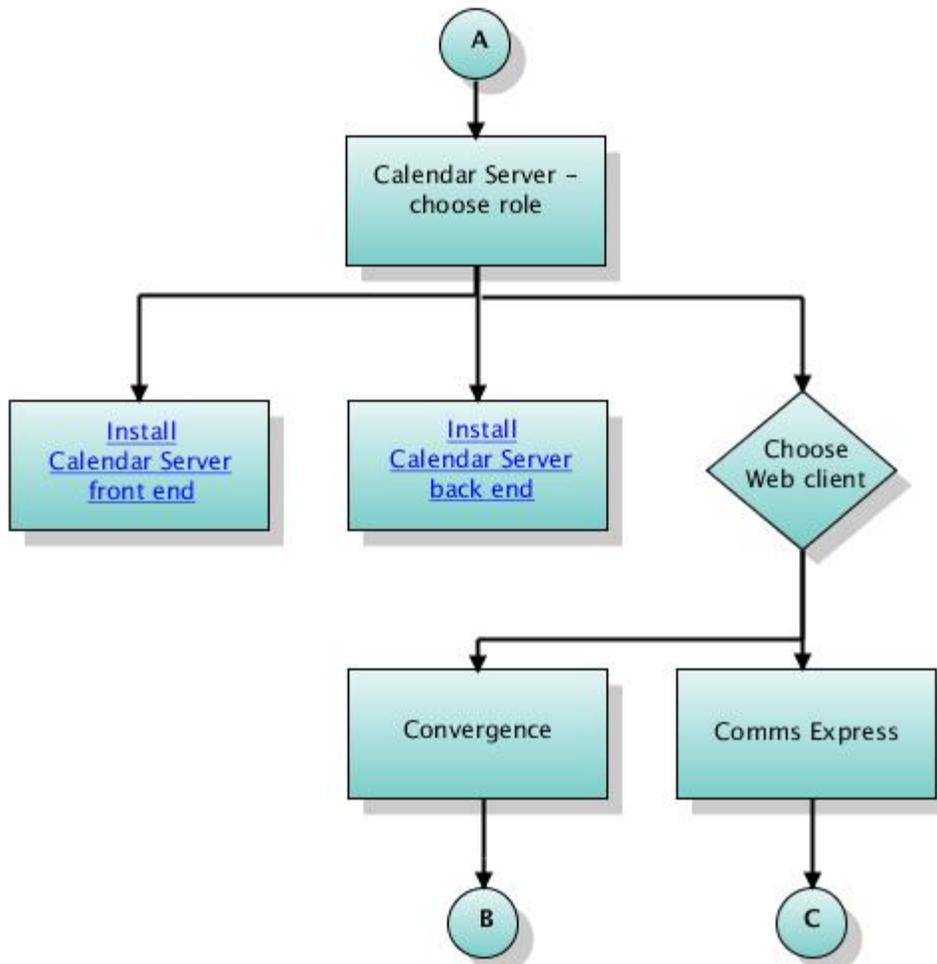
We recommend that you install and configure Messaging Server before you configure Calendar Server and Instant Messaging.

We also recommend that you first install the Messaging Server back-end message store(s). Next, install the MTAs, MMP front ends, and Webmail Servers.



Communications Suite Installation Flowchart: Calendar Server

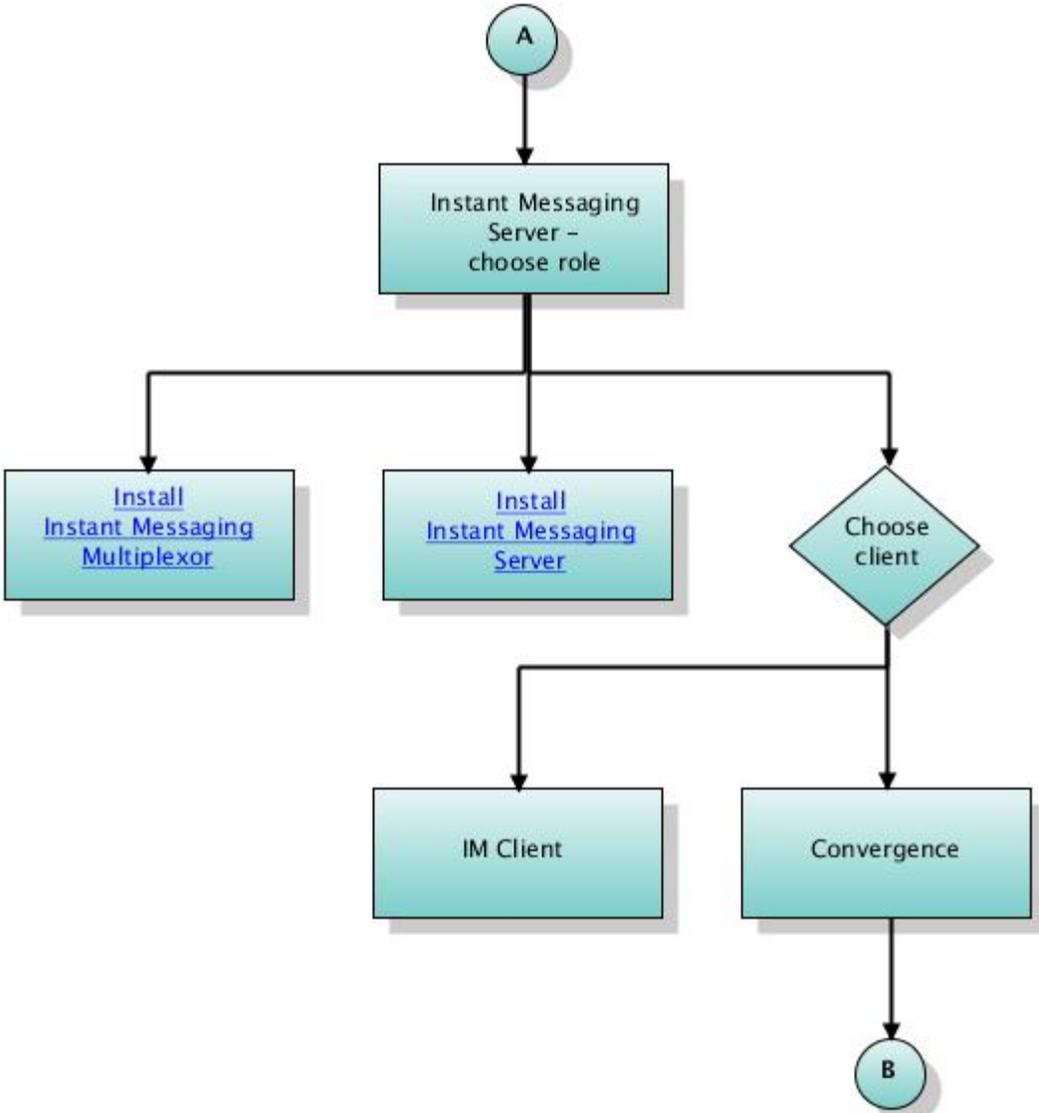
We recommend that you first install the Calendar Server back-end component, then the front end.



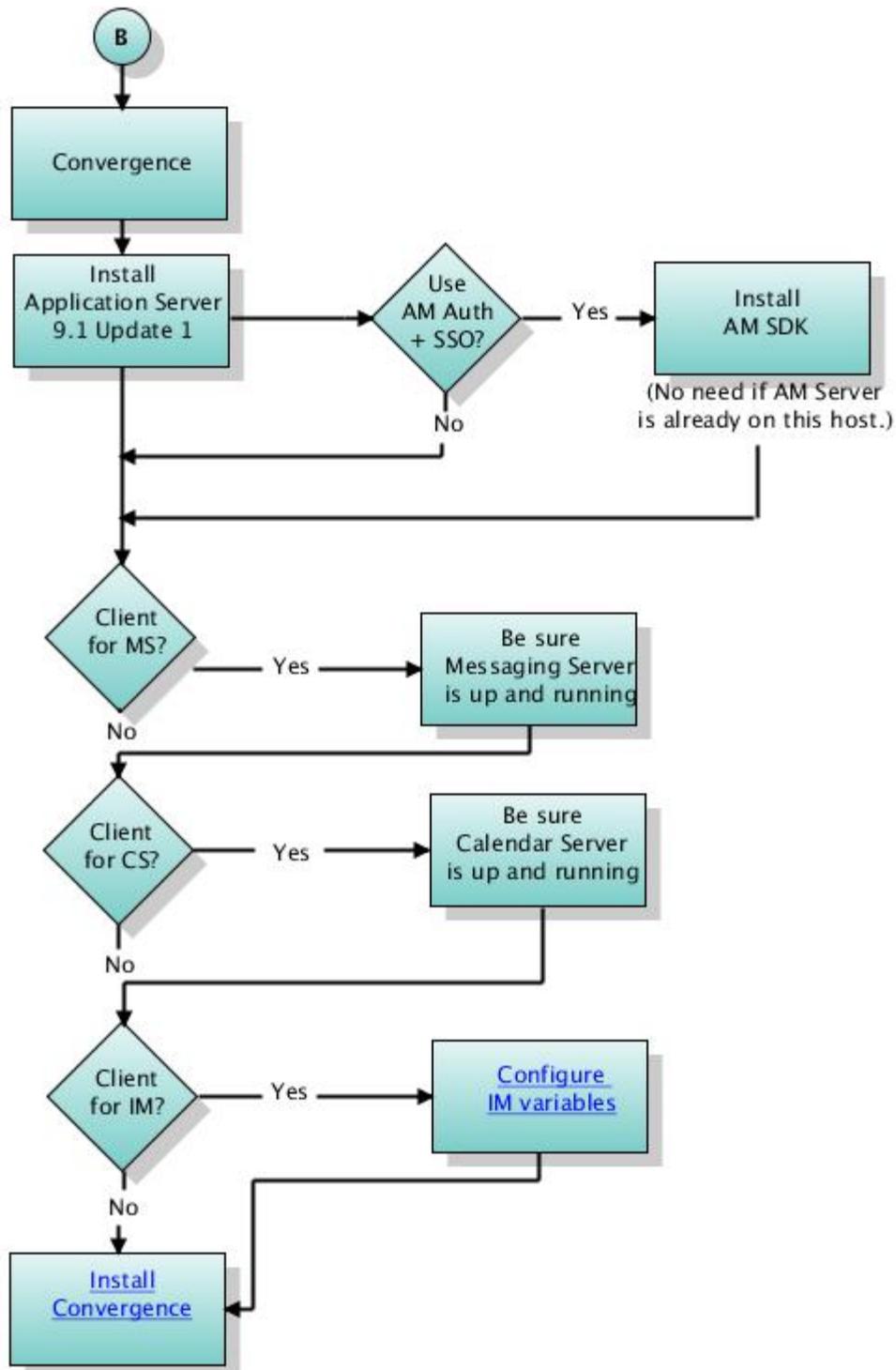
Communications Suite Installation Flowchart: Instant Messaging

As a best practice, before you configure Instant Messaging, install and configure Messaging Server and Calendar Server; the IM configuration uses these services.

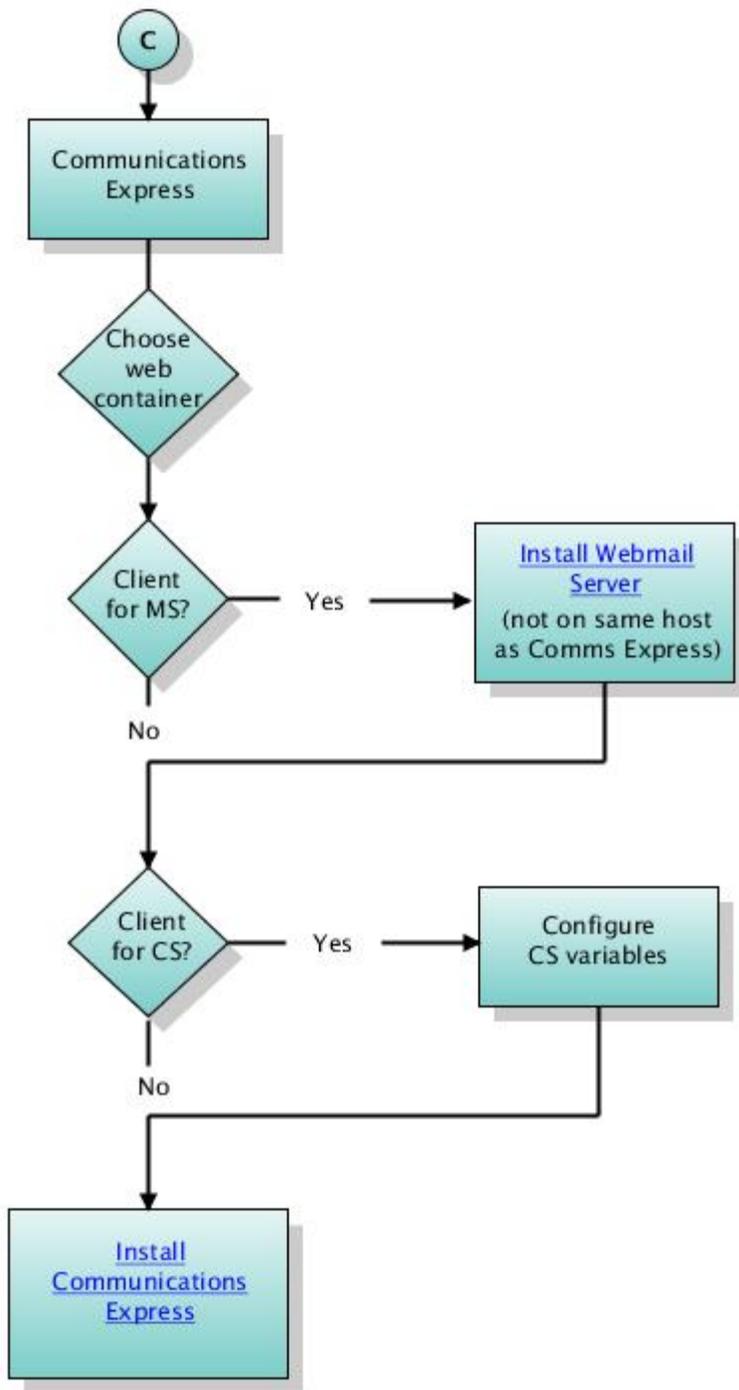
We also recommend that you first install the Instant Messaging Server, then the Instant Messaging Multiplexor.



Communications Suite Installation Flowchart: Convergence



Communications Suite Installation Flowchart: Communications Express



Chapter 5. Communications Suite 6 Update 1 Installation Scenario - Access Manager

Communications Suite 6 Update 1 Installation Scenario - Install Access Manager

Assumptions

This scenario shows how to install Access Manager on a separate host. It is based on the *Install/configure Access Manager* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Access Manager installation is one functional component of your multi-host deployment.
- You are installing Access Manager on a separate host or Solaris zone; you are not bundling Access Manager with Communication Suite products on the same host.
- If you are deploying multiple instances of Access Manager across several hosts or zones, you can follow these instructions for each host on which you install Access Manager.

Which Software Components and Downloads Do You Need?

- Java ES 5 Update 1 distro - for Access Manager 7.1 and Web Server 7.0 Update 1

Download this software from the Communications Suite download site. For details, see [Get the Software](#).



If you are installing Access Manager 7.1 on a Linux system, you should verify that a compatible version of Java Development Kit (JDK) is installed. For details, see [Verifying the Correct JDK Version to Support Access Manager](#).

Which Task Sequence Do You Follow?

1. Be sure that Directory Server Enterprise Edition 6.2 is installed and configured on another machine or zone in your deployment.
2. Start Directory Server.
3. Launch the Java ES 5 Update 1 installer.
4. With the Java ES installer, install Access Manager 7.1 and Web Server 7.0 Update 1.

To install these products, follow the instructions in the [Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX](#).

For details, see this [Access Manager Configuration Guide](#). You can also find installation instructions in this [Access Manager Deployment Example](#).

5. Start Web Server.
6. Start Access Manager.

Chapter 6. Communications Suite 6 Update 1 Installation Scenario - Calendar Server Back End

Communications Suite 6 Update 1 Installation Scenario - Install Calendar Server Back End

Assumptions

This scenario shows how to install an instance of Calendar Server as a back end on a separate host. It is based on the *Install Calendar Server Back End* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). A Calendar Server back end stores the calendar databases.

The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Calendar Server back end is one functional component of your multi-host deployment.
- You are installing Calendar Server on a separate host or Solaris zone; you are not bundling Calendar Server with Communication Suite products on the same host.
- If you are distributing multiple instances of the Calendar Server back end across several hosts or zones, you can follow these instructions for each host on which you install the Calendar Server back end.



Deploying a Front End and Back End on One Host

What if you intend to deploy a single-server instance of Calendar Server (that is, a Calendar Server deployment with both a front end and back end running on this host)?

To deploy a Calendar Server front end *and* back end together: Follow the procedure shown below. However, when you run the Calendar Server configuration program, when the **Set Up a Front End-Back End Deployment** screen is displayed, do not select the check box on this screen.

Which Software Components and Downloads Do You Need?

- Communications Suite: for Calendar Server

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

Before you install the Calendar Server back end:

Be sure you have planned for the following:

- Calendar Server Administrators
- Hosted Domains

For information about these topics, see [Calendar Server Pre-Installation Planning](#).

Install and configure the Calendar Server back end:

1. Run the Communications Suite installer.

When the Comms Installer lists the components to install, choose the following component:

Calendar Server 6.3

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the Calendar Server back end:
[Calendar Server 6.3 - Configuration Worksheet](#)

3. Run the Calendar Server initial configuration program:

```
# INSTALLROOT/calendar/bin/csconfigurator.sh
```

For detailed instructions, see [Calendar Server 6.3: Initial Configuration](#).

4. When the Calendar Server `csconfigurator.sh` program displays the **Set Up a Front End-Back End Deployment** screen, select the check box.

A Front End-Back End Deployment screen appears.

5. To configure this instance of Calendar Server as a back-end server, specify the **Service Port**. (Do not check the **Add a Host** box; that box is for configuring a front-end server.)

6. The **Service Port** box is pre-filled with the port named in the `ics.conf` parameters `service.dwp.server.hostname.port` and `service.dwp.port`.

If you want to change the port number, enter the new port number in the **Service Port** box.

For detailed instructions on configuring the **Set Up a Front End-Back End Deployment** screen in the `csconfigurator.sh` program, see [Configuring a Front-End or Back-End Calendar Server](#).

Chapter 7. Communications Suite 6 Update 1 Installation Scenario - Calendar Server Front End

Communications Suite 6 Update 1 Installation Scenario - Install Calendar Server Front End

Assumptions

This scenario shows how to install an instance of Calendar Server as a front end on a separate host. It is based on the *Install Calendar Server Front End* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Calendar Server front end is one functional component of your multi-host deployment.
- You are installing Calendar Server on a separate host or Solaris zone; you are not bundling Calendar Server with Communication Suite products on the same host.
- If you are distributing multiple instances of the Calendar Server front end across several hosts or zones, you can follow these instructions for each host on which you install the Calendar Server front end.



Deploying a Front End and Back End on One Host

What if you intend to deploy a single-server instance of Calendar Server (that is, a Calendar Server deployment with both a front end and back end running on this host)?

To deploy a Calendar Server front end *and* back end together: Follow the procedure shown below. However, when you run the Calendar Server configuration program, when the **Set Up a Front End-Back End Deployment** screen is displayed, do not select the check box on this screen.

Which Software Components and Downloads Do You Need?

- Communications Suite: for Calendar Server

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

Before you install the Calendar Server front end:

Be sure you have planned for the following:

- Calendar Server Administrators
- Hosted Domains

For information about these topics, see [Calendar Server Pre-Installation Planning](#).

Install and configure the Calendar Server front end:

1. Run the [Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the following component:

Calendar Server 6.3

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the Calendar Server front end:
[Calendar Server 6.3 - Configuration Worksheet](#)

3. Run the Calendar Server initial configuration program:

```
# INSTALLROOT/calendar/bin/csconfigurator.sh
```

For detailed instructions, see [Calendar Server 6.3: Initial Configuration](#).

4. When the Calendar Server `csconfigurator.sh` program displays the **Set Up a Front End-Back End Deployment** screen, select the check box.

A Front End-Back End Deployment screen appears.

5. To configure this instance of Calendar Server as a front-end server, click **Add a Host**.
6. Enter the host names and IP addresses of the back-end Calendar Server instances with which this front-end will communicate.

For each back-end Calendar Server, click **Add a Host** and enter its host name and IP address.

7. If this server is the default front-end server, select the **Default** check box.

For detailed instructions on configuring the **Set Up a Front End-Back End Deployment** screen in the `csconfigurator.sh` program, see [Configuring a Front-End or Back-End Calendar Server](#).

Chapter 8. Communications Suite 6 Update 1 Installation Scenario - Communications Express

Communications Suite 6 Update 1 Installation Scenario - Install Communications Express

Assumptions

This scenario shows how to install an instance of the Communications Express on a separate host or Solaris zone. It is based on the *Install Communications Express* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Communications Express is one functional component of your multi-host deployment.
- The Communications Suite back-end servers (Messaging Server, Calendar Server, Instant Messaging) are installed on separate hosts or zones.
- If you are distributing multiple instances of the Communications Express across several hosts or zones, you can follow these instructions for each host on which you install the Communications Express.

Which Software Components and Downloads Do You Need?

Software Components:

To successfully configure and run Communications Express on this host or Solaris zone, you need to install the following software components:

- Web container. Choose one of the following:
 - Application Server 9.1 Update 1
 - Web Server 7.0
- Communications Express 6.3

Note: Application Server 8.x and Web Server 6.x are also supported web containers. However, for a first-time installation, it is recommended that you use the latest versions of these web containers.

Downloads:

- Choose one of the following software downloads to obtain the web container software:
 - Application Server 9.1 Update 1 with High Availability Database (HADB) - Zip/File Based
 - Java ES 5 Update 1 distro: for Web Server 7.0
- Communications Suite: for Communications Express

These software files are available on the Communications Suite download site. For details, see [Get the Software](#).

Which Task Sequence Do You Follow?

Step 1. Install the Web Container

You can deploy Communications Express to any of these supported web containers:

- Application Server 9.1 Update 1
- Application Server 8.x
- Web Server 7.0
- Web Server 6.x

Note: The Communications Suite installer does not install Web Server or Application Server.

To install Application Server 9.1 Update 1:

You can install Application Server 9.1 Update 1 by downloading the software from the Java Platform, Enterprise Edition 5 SDK download site. (See the preceding section, *Which Software Components and Downloads Do You Need?*.)

For more information about installing Application Server, see the [Application Server 9.1 Installation Guide](#).

To install Web Server 7.0:

1. From the Identity Management Suite, launch the Java ES 5 Update 1 installer.
2. With the Java ES installer, install Web Server 7.0 Update 1.

To install Web Server, follow the instructions in the [Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX](#).

Step 2. Install Communications Express:

1. To install Communications Express, follow these instructions: [Run the Communications Suite installer](#).
2. When the Comms Installer lists the components to install, choose the following components:
 - Communications Express 6.3

Make sure that the other components are not selected.



Note:

Installing Communications Express 6.3 from Communications Suite 6 Update 1 Installer will install both English and localization versions of the product.

Step 3. Prepare to Configure Communications Express:

Before running the Communications Express configuration wizard, make sure you:

- Choose your schema. Refer to the section on [Schema Choices](#) for information on the available schema.
- Ensure that you have the following entry in the `/etc/hosts` file on your Solaris system:

ip-of system Fully-Qualified-Hostname

For example,

```
129.158.230.64 budgie.siroe.varrius.com budgie
```

- Ensure that the following components are up and running before you configure Communications Express:

- Directory Server
- Application Server or Web Server
- Access Manager, if you intend Communications Express to participate in SSO (Single Sign-On) with other products



Note

The Web Server that is hosting Communications Express should be running as `root` when configuring for Remote AM SDK deployment.

- Messaging Server
- Calendar Server
- Verify whether users are able to log in to the following servers correctly:
 - Messaging Server
 - Calendar Server
- Access Manager, if you want Communications Express to participate in SSO with other products

Step 4. Configure Communications Express:

1. Use the following worksheet to gather configuration information for the Communications Express: [Communications Express 6.3 - Configuration Worksheet](#)
2. Start Web Server or Application Server.
3. Run the Communications Express initial configuration program:

```
# INSTALLROOT/ce/sbin/config-uw
```

4. When you run the initial configuration program, specify the configuration values to connect to the back-end servers supported in your Communications Express deployment:
 - To support the Communications Express mail component, configure values for the Webmail Server.
 - To support the Communications Express calendar component, configure values for the Calendar Server.

For detailed instructions, see [Communications Express 6.3: Initial Configuration](#).

Chapter 9. Communications Suite 6 Update 1 Installation Scenario - Convergence

Communications Suite 6 Update 1 Installation Scenario - Install Convergence

Assumptions

This scenario shows how to install an instance of the Convergence on a separate host or Solaris zone. It is based on the *Install Convergence* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Convergence is one functional component of your multi-host deployment.
- The Communications Suite servers (Messaging Server, Calendar Server, Instant Messaging) are installed on separate hosts.
- If you are distributing multiple instances of the Convergence across several hosts, you can follow these instructions for each host on which you install the Convergence.



This scenario describes how to install the software that should run on the same host as Convergence. For a list of all the products required for Convergence, including those installed on other hosts, see [Product Version Requirements for Convergence 1 Update 1](#).

Which Software Components and Downloads Do You Need?

Software Components:

To successfully configure and run Convergence on this host, you need to install the following software components:

Required:

- **Sun Java System Application Server 9.1 Update 2 with High Availability Database (HADB) - Zip/File Based**
- **Convergence 1 Update 1**

Recommended:

- **Webmail Server component of Messaging Server 7 Update 1**

We recommend that you install the Webmail Server on this host.

Optional, for SSO:

- **Sun Java System Access Manager 7.1 SDK**

To use Access Manager for authentication and/or Single Sign-on (SSO), you also must install the Access Manager SDK. To successfully use the Access Manager SDK on this host, Access Manager Server 7.1 must be installed on a remote host.

Downloads:

- Application Server 9.1 Update 2 with High Availability Database (HADB) - Zip/File Based
- Java ES 5 Update 1 distro: for Access Manager 7.1
- Communications Suite: for Convergence 1 Update 1 and Webmail Server

Download these software files from the Communications Suite download site. For details, see [Get the Software](#).

Convergence Support for SSO

Access Manager is not your only choice for SSO. Convergence also supports the Messaging Server (Trusted Circle) SSO.

If you have a third-party authentication or SSO service, you can also customize the Convergence Server to create an authentication and/or SSO plug-in for that service. For details, see

- [Writing a Custom Authentication Module for Convergence](#)
- [Writing a Custom SSO Module for Convergence](#)

About Webmail Server

The best deployment practice is to place the Webmail Server on the same host as Convergence to provide horizontal scalability and enable smooth growth of services.

Note: From a functional perspective, Convergence provides complete mail service when the Webmail Server is located on a different host than Convergence. Therefore, in some deployments, the Webmail Server may be located on a different host.

Other Messaging Server components such as the message store and MTA, Calendar Server, and Instant Messaging Server may be located on other hosts.

Which Task Sequence Do You Follow?

Step 1. Install Application Server 9.1 Update 2 with High Availability Database (HADB) - Zip/File Based.



Download the Application Server software zip file from the Communications Suite download site. Do not install the version of Application Server bundled with JES 5 Update 1; that is an older version of Application Server.

If you are installing the software from the Communications Suite DVD, do not use the Application Server bundled on the DVD. Go to the Communications Suite download site to obtain the correct version of Application Server. (For a link to the site, see [Get the Software](#).)

To obtain a multi-language version of Application Server, go to the Application Server download site. (The Communications Suite download site does not provide a multi-language version.)

Follow these guidelines:

- The high availability database (HADB) version provides shared components needed by Application Server and Communications Suite. You can configure this version of Application Server without using the HADB.
- The Communication Suite installer does not install Application Server.
- To install Application Server, follow the instructions in the [Sun Java System Application Server 9.1 Installation Guide](#).
- Install Application Server before you install Access Manager and configure Convergence.
- To verify which version of Application Server you have installed, see [Verify Application Server Version](#).

Step 2. Install Access Manager 7.1 SDK

Perform this task only if you intend to use Access Manager for authentication and/or SSO.

Prerequisite: This task assumes that Access Manager Server 7.1 is installed on a remote host.

If you already have Access Manager Server installed on *this* host, you do not need to install the Access Manager SDK.

1. Be sure that Directory Server Enterprise Edition 6.3 is installed and configured on another host in your deployment.
2. Start Directory Server.
3. Verify that Application Server 9.1 Update 2 is installed and running on this host.
4. Verify that the full Access Manager 7.1 server is running and accessible, either on a remote host (or on another instance on the same host where you plan to install the Access Manager SDK).
5. Log in as or become superuser (`root`).
6. Launch the Java ES 5 Update 1 installer.
7. When the Java ES installer displays the Choose Software Components Page, under Access Manager 7.1, select only the Access Manager SDK.
8. Choose the **Configure Later** option for installing the Access Manager 7.1 SDK.



About the Configure Later Option

If you install the Access Manager 7.1 SDK to Application Server 9.1 without installing the full Access Manager Server on this host, you must choose **Configure Later**. If you do not, the AM SDK does not work.



Realm Mode and Legacy Mode

Convergence supports both Access Manager Realm mode (the default) and Legacy mode for providing authentication and SSO.

Follow the instructions in [Deploying the Access Manager 7.1 SDK with Application Server 9.1](#).

For more information, see: [Technical Note: Deploying Access Manager with Application Server 9.1](#).

For information about the Java ES installer, see [Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX](#).

For more details, see [Access Manager Configuration Guide](#). You can also find installation instructions in

this [Access Manager Deployment Example](#).

Step 3. Before you install Messaging Server (Webmail Server component):

Note: Perform this task if you are installing Webmail Server on this host.

- Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see [Default Port Numbers](#).

Step 4. Install Convergence and Webmail Server:

1. Run the [Communications Suite installer](#).
2. When the Comms Installer lists the components to install, choose the following components:

- Convergence 1 Update 1 (Integrated Web Client)
- Messaging Server. Choose the 32-bit or 64-bit version by selecting one of these components:
 - Messaging Server 7 Update 1 for the 32-bit version)
 - Messaging Server (64-bit) 7 Update 1 (for the 64-bit version)

Note: Select Messaging Server only if you are installing Webmail Server on this host.

Make sure that the other components are not selected.

Step 5. Configure the Webmail Server:

Note: Follow these steps if you are installing Webmail Server on this host.

1. Use the following worksheet to gather configuration information for the Webmail Server:
[Messaging Server 7 Update 1 - Configuration Worksheet](#)
2. Run the Messaging Server initial configuration program:

For 32-bit: # `INSTALLROOT/messaging/bin/configure`

For 64-bit: # `INSTALLROOT/messaging64/bin/configure`

For detailed instructions, see [Messaging Server 7 Update 1: Initial Configuration](#).

When the Messaging Server `configure` program lists the components to configure, select

Webmail Server

Make sure that the other components are not selected.

3. Set the following `configutil` parameters. The Webmail Server uses these `configutil` parameters to log in to the back-end IMAP servers:

<code>configutil</code> Parameter	Description
<code>local.service.proxy.admin</code>	Default backend store administrator login name. (Restart of HTTP service required; Restart of IMAP service required). Syntax: string Default: <code>admin</code>
<code>local.service.proxy.adminpass</code>	Default store administrator password. (Restart of HTTP service required; Restart of IMAP service required). Syntax: string Default: <code><admin.password></code>
<code>local.service.imapport</code>	Default IMAP port number for backend store servers. (Restart of HTTP service required; Restart of IMAP service required). Syntax: integer Default: <code>143</code>

Note that the Webmail Server can communicate with multiple back-end IMAP servers. If the IMAP servers use different values for these parameters are different, you must set individual `configutil` parameters for each host, as follows:

<code>local.service.proxy.admin.<i>hostname</i></code>
<code>local.service.proxy.adminpass.<i>hostname</i></code>
<code>local.service.imapport.<i>hostname</i></code>

where *hostname* is the name of the host on which each back-end IMAP server is running.

Examples

For one back-end IMAP server:

```
configutil -o local.service.proxy.admin -v myadmin
configutil -o local.service.proxy.adminpass -v <password>
configutil -o local.service.proxy.imapport -v 143
```

For multiple back-end IMAP servers:

```
configutil -o local.service.proxy.admin.host1.siroe.com -v admin1
configutil -o local.service.proxy.adminpass.host1.siroe.com -v
<password>
configutil -o local.service.proxy.imapport.host1.siroe.com -v 143

configutil -o local.service.proxy.admin.host2.siroe.com -v admin2
configutil -o local.service.proxy.adminpass.host2.siroe.com -v
<password>
configutil -o local.service.proxy.imapport.host2.siroe.com -v 143
```

Step 6. Before you configure Convergence, take these steps:

1. Use the following worksheet to gather configuration information for the Convergence: [Convergence 1 Update 1 - Configuration Worksheet](#)
2. If your Convergence deployment supports Instant Messaging (the chat component), you must

configure the Httpbind JID and Avatar JID on Instant Messaging Server. Perform this step before you run the Convergence configuration program.

For details, see [Configure IM Components to Enable Communication with the Instant Messaging Server](#).

3. Be sure that the back-end servers and web container are up and running:

- Directory Server
- Messaging Server
- Calendar Server
- Application Server 9.1 Update 2

Verify whether users are able to log in to the back-end servers correctly:

- Messaging Server
- Calendar Server

Step 7. Configure Convergence:

1. Run the Convergence initial configuration program:

```
# INSTALLROOT/iwc/init-config
```

2. When you run the initial configuration program, specify the configuration values to connect to the back-end servers supported in your Convergence deployment:

- To support the Convergence mail component, configure values for the Webmail Server.
- To support the Convergence calendar component, configure values for the Calendar Server.
- To support the Convergence chat component, configure values for the IM Server.

For detailed instructions, see [Convergence 1 Update 1: Initial Configuration](#).

Chapter 10. Communications Suite 6 Update 1 Installation Scenario - Delegated Administrator

Communications Suite 6 Update 1 Installation Scenario - Install Delegated Administrator

Assumptions

This scenario shows how to install Delegated Administrator. It is based on the *Install/configure Delegated Admin* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- Delegated Administrator is one functional component of your multi-host deployment.

Delegated Administrator and Access Manager

Delegated Administrator has the following dependencies on Access Manager:

- The Delegated Administrator server requires that Access Manager be installed.
- Delegated Administrator must be deployed to the same web container as Access Manager.

Therefore, in this scenario you must install Delegated Administrator on the host or Solaris zone where you have installed Access Manager. For details about installing and configuring Access Manager, see [Install Access Manager](#).

Which Software Components and Downloads Do You Need?

- Communications Suite: for Delegated Administrator

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

1. [Run the Communications Suite installer](#).

You must install Delegated Administrator on the same host on which Access Manager and the web container (such as Web Server 7.x) are installed.

For details about installing and configuring Access Manager, see [Install Access Manager](#).

2. When the Comms Installer lists the components to install, choose the following component:

Comms Delegated Administrator 6.4

Make sure that the other components are not selected.

3. Use the following worksheet to gather configuration information for the message store: [Delegated Administrator 6.4 - Configuration Worksheet](#)
4. Run the Delegated Administrator initial configuration program:

Run the initial configuration program:

```
# INSTALLROOT/da/sbin/config-commda
```

For detailed instructions, see [Delegated Administrator 6.4: Initial Configuration](#).

5. Restart the web container (such as Web Server 7.x) to which Delegated Administrator and Access Manager are deployed.

Chapter 11. Communications Suite 6 Update 1 Installation Scenario - Directory Server

Communications Suite 6 Update 1 Installation Scenario - Install Directory Server

Assumptions

This scenario shows how to install Directory Server on a separate host. It is based on the *Install/configure Directory Server. Install & run comm_dssetup* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Directory Server installation is one functional component of your multi-host deployment.
- You are installing Directory Server on a separate host or Solaris zone; you are not bundling Directory Server with Communication Suite products on the same host.
- If you are deploying multiple instances of Directory Server across several hosts or zones, you can follow these instructions for each host on which you install Directory Server.

Which Software Components and Downloads Do You Need?

- Directory Server Enterprise Edition 6.3 (or later)
- Communications Suite--for the Directory Server setup script, `comm_dssetup.pl`

Download both of these software files from the Communications Suite download site. For details, see [Get the Software](#).



Which Version of Directory Server Do I Download?

Download Directory Server Enterprise Edition 6.3 (or later) from the Communications Suite download site before you run the JES 5 Update 1 installer. Do not install the Directory Server software bundled with JES 5 Update 1; that is an older version of Directory Server.

If you already started with an older DSEE version, you can still get to the recommended DSEE 6.3; you must apply an upgrade patch as well as other patches to upgrade to DSEE 6.3.

For example, if you obtained the native package format of DSEE on the Solaris 10 x86 or SPARC platform, you must start by installing the DSEE 6.2 version bundled with JES 5 Update 1, then upgrade to DSEE 6.3.

We recommend that you take the easier path: download and install the zip file version of DSEE 6.3 directly from the Communications Suite download site.

Which Task Sequence Do You Follow?

1. [Run the Communications Suite installer](#).
When the Comms Installer lists the components to install, select the Directory Server setup script,

`comm_dssetup.pl`. Do not select other components unless you also plan to install them on this host or zone.

2. Install Directory Server 6.3 (or later). Follow the instructions in the [Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide](#).
1. Run the Directory Server setup script, `comm_dssetup.pl`.



A Note About Installing the Directory Server Setup Script

In the preceding task, you install `comm_dssetup.pl` with the Comms Suite installer before you install Directory Server. If you follow this sequence, you will have the up-to-date version of `comm_dssetup.pl`. The DS installation process does not overwrite the latest version.

If you install or upgrade Directory Server *before* you run the Communications Suite installer, the Directory Server installation process places an outdated version of `comm_dssetup.pl` on your system. You must use the current version of `comm_dssetup.pl` provided by the Communications Suite installer. However, the Comms Suite installer cannot install a new version with the `commpkg install` command. Instead, run the `commpkg upgrade` command to upgrade to the latest version of `comm_dssetup.pl`.

Chapter 12. Communications Suite 6 Update 1 Installation Scenario - Message Transfer Agent

Communications Suite 6 Update 1 Installation Scenario - Message Transfer Agent (MTA)

Assumptions

This scenario shows how to install the Message Transfer Agent (MTA) on a separate host. It is based on the *Install MTA Relay In* and *Install MTA Relay Out* leaves in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This MTA relay in and MTA relay out is one functional component of your multi-host deployment.
- You are installing the MTA on a separate host or Solaris zone; you are not bundling the MTA with other Communication Suite products on the same host.
- If you are distributing multiple instances of the MTA across several hosts or zones, you can follow these instructions for each host on which you install the MTA.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Messaging Server MTA

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

Before you install the MTA, take these steps:

1. You must ensure DNS is running and configured properly. For details, see [DNS configuration](#).
2. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see [Default Port Numbers](#).

Install and configure the MTA:

1. [Run the Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the 32-bit or 64-bit version by selecting one of these components:

Messaging Server 7 Update 1. (The Comms Installer does not explicitly label the 32-bit version as "32-bit.")

Messaging Server (64-bit) 7 Update 1

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the MTA: [Messaging Server 7](#)

[Update 1 - Configuration Worksheet](#)

3. Run the Messaging Server initial configuration program:

For 32-bit: # `INSTALLROOT/messaging/bin/configure`

For 64-bit: # `INSTALLROOT/messaging64/bin/configure`

For detailed instructions, see [Messaging Server 7 Update 1: Initial Configuration](#).

When the Messaging Server `configure` program lists the components to configure, select
Message Transfer Agent

Make sure that the other components are not selected.

Chapter 13. Communications Suite 6 Update 1 Installation Scenario - Webmail Server

Communications Suite 6 Update 1 Installation Scenario - Webmail Server

Assumptions

This scenario shows how to install the Messaging Server Webmail Server (`mshttpd`) on a separate host. The Webmail Server acts as a front end that handles the HTTP protocol retrieval of messages from the message store. This component is used by Convergence and Communication Express to provide web-based access to end users.

This scenario is based on the *Install Webmail Server* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Webmail Server is one functional component of your multi-host deployment.
- You are installing the Webmail Server on a separate host; you are not bundling the Webmail Server with other Communication Suite products on the same host.
- If you are distributing multiple Webmail Servers across several hosts, you can follow these instructions for each host on which you install the Webmail Server.
- You are installing only the Webmail Server front end; you are not installing message store or SMTP functions.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Webmail Server

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

Before you install the Webmail Server:

- Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see [Default Port Numbers](#).

Install and configure the Webmail Server:

1. [Run the Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the 32-bit or 64-bit version by selecting one of these components:

Messaging Server 7 Update 1. (The Comms Installer does not explicitly label the 32-bit version as "32-bit.")

Messaging Server (64-bit) 7 Update 1.

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the Webmail Server:
[Messaging Server 7 Update 1 - Configuration Worksheet](#).

3. Run the Messaging Server initial configuration program:

For 32-bit: # `INSTALLROOT/messaging/bin/configure`

For 64-bit: # `INSTALLROOT/messaging64/bin/configure`

For detailed instructions, see [Messaging Server 7 Update 1: Initial Configuration](#).

When the Messaging Server `configure` program lists the components to configure, select

Webmail Server

Make sure that the other components are not selected.

4. Set the following `configutil` parameters. The Webmail Server uses these `configutil` parameters to log in to the back-end IMAP servers:

configutil Parameter	Description
<code>local.service.proxy.admin</code>	Default backend store administrator login name. (Restart of HTTP service required; Restart of IMAP service required). Syntax: string Default: <code>admin</code>
<code>local.service.proxy.adminpass</code>	Default store administrator password. (Restart of HTTP service required; Restart of IMAP service required). Syntax: string Default: <code><admin.password></code>
<code>local.service.imapport</code>	Default IMAP port number for backend store servers. (Restart of HTTP service required; Restart of IMAP service required). Syntax: integer Default: <code>143</code>

Note that the Webmail Server can communicate with multiple back-end IMAP servers. If the IMAP servers use different values for these parameters are different, you must set individual `configutil` parameters for each host, as follows:

<code>local.service.proxy.admin.<i>hostname</i></code>
<code>local.service.proxy.adminpass.<i>hostname</i></code>
<code>local.service.imapport.<i>hostname</i></code>

where *hostname* is the name of the host on which each back-end IMAP server is running.

Examples

For one back-end IMAP server:

```
configutil -o local.service.proxy.admin -v myadmin
configutil -o local.service.proxy.adminpass -v <password>
configutil -o local.service.proxy.imapport -v 143
```

For multiple back-end IMAP servers:

```
configutil -o local.service.proxy.admin.host1.siroe.com -v admin1
configutil -o local.service.proxy.adminpass.host1.siroe.com -v
<password>
configutil -o local.service.proxy.imapport.host1.siroe.com -v 143

configutil -o local.service.proxy.admin.host2.siroe.com -v admin2
configutil -o local.service.proxy.adminpass.host2.siroe.com -v
<password>
configutil -o local.service.proxy.imapport.host2.siroe.com -v 143
```

Chapter 14. Communications Suite 6 Update 1 Installation Scenario - Instant Messaging Multiplexor

Communications Suite 6 Update 1 Installation Scenario - Install Instant Messaging Multiplexor

Assumptions

This scenario shows how to install an instance of the Instant Messaging multiplexor on a separate host. It is based on the *Install Instant Messaging Multiplexor* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Instant Messaging multiplexor is one functional component of your multi-host deployment.
- You are installing the Instant Messaging multiplexor on a separate host or Solaris zone; you are not bundling Instant Messaging with Communication Suite products on the same host.
- If you are distributing multiple instances of the Instant Messaging multiplexor across several hosts or zones, you can follow these instructions for each host on which you install the Instant Messaging multiplexor.



Deploying an Instant Messaging Multiplexor and Server on One Host

What if you intend to deploy a single-server instance of Instant Messaging (that is, an Instant Messaging deployment with both a multiplexor and IM server running on this host)?

To deploy an Instant Messaging multiplexor and server together: Follow the procedure shown below. However, when you run the Instant Messaging configuration program, do not select the **Disable Server** option.

Which Software Components and Downloads Do You Need?

- Communications Suite: for Instant Messaging

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

To install and configure the Instant Messaging multiplexor, take these steps:

1. [Run the Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the following component:

Instant Messaging 8

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the Instant Messaging multiplexor: [Instant Messaging 8 - Configuration Worksheet](#)
3. Run the Instant Messaging initial configuration program:

```
# INSTALLROOT/im/configure
```

For detailed instructions, see [Instant Messaging 8: Initial Configuration](#).

4. When the Instant Messaging `configure` program runs, enter the **Multiplexor Port Number**.

This is the port number on which the Instant Messaging server listens for incoming requests from Instant Messenger clients. Default: 5222

5. Select the **Disable Server** option.

Select this option if the instance you are installing will act as a multiplexor and not a server. If you select this option, you must provide a value for **Remote Instant Messaging Server Host Name**.

6. When the **Remote Instant Messaging Server Host Name** option appears, enter the host name of the Instant Messaging server for which this multiplexor routes messages.

(If the multiplexor and server are installed on the same host, use `localhost`. (Solaris Only) If you will be configuring High Availability service for Instant Messaging, use the logical host's name.)

Dependencies: This option is not available unless the **Disable Server** parameter has been selected. That is, server functionality must be disabled on this host.

Chapter 15. Communications Suite 6 Update 1 Installation Scenario - Messaging Multiplexor

Communications Suite 6 Update 1 Installation Scenario - Messaging Multiplexor (MMP) Front End

Assumptions

This scenario shows how to install the Messaging Multiplexor (MMP) front-end on a separate host. It is based on the *Install MMP front end* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This MMP front end is one functional component of your multi-host deployment.
- You are installing the MMP on a separate host or Solaris zone; you are not bundling the MMP with other Communication Suite products on the same host.
- If you are distributing multiple instances of the MMP partitions across several hosts or zones, you can follow these instructions for each host on which you install the MMP.
- You are installing only the MMP front end; you are not installing message store or SMTP functions.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Messaging Server MMP front end

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

Before you install the MMP, take these steps:

1. You must ensure DNS is running and configured properly. For details, see [DNS configuration](#).
2. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see [Default Port Numbers](#).

Install and configure the MMP:

1. [Run the Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the 32-bit or 64-bit version by selecting one of these components:

Messaging Server 7 Update 1. (The Comms Installer does not explicitly label the 32-bit version as "32-bit.")

Messaging Server (64-bit) 7 Update 1.

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the MMP: [Messaging Server 7 Update 1 - Configuration Worksheet](#)
3. Run the Messaging Server initial configuration program:

For 32-bit: # `INSTALLROOT/messaging/bin/configure`

For 64-bit: # `INSTALLROOT/messaging64/bin/configure`

For detailed instructions, see [Messaging Server 7 Update 1: Initial Configuration](#).

When the Messaging Server `configure` program lists the components to configure, select

Messaging Multiplexor

Make sure that the other components are not selected.

Chapter 16. Communications Suite 6 Update 1 Installation Scenario - Instant Messaging Server

Communications Suite 6 Update 1 Installation Scenario - Install Instant Messaging Server

Assumptions

This scenario shows how to install an instance of the Instant Messaging server on a separate host. It is based on the *Install Instant Messaging Server* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Instant Messaging server is one functional component of your multi-host deployment.
- You are installing the Instant Messaging server on a separate host or Solaris zone; you are not bundling Instant Messaging with Communication Suite products on the same host.
- If you are distributing multiple instances of the Instant Messaging server across several hosts or zones, you can follow these instructions for each host on which you install the Instant Messaging server.



Deploying an Instant Messaging Multiplexor and Server on One Host

What if you intend to deploy a single-server instance of Instant Messaging (that is, an Instant Messaging deployment with both a multiplexor and IM server running on this host)?

To deploy an Instant Messaging multiplexor and server together: Follow the procedure shown below. However, when you run the Instant Messaging configuration program, do not select the **Disable Server** option.

Which Software Components and Downloads Do You Need?

- Communications Suite: for Instant Messaging

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

To install and configure the Instant Messaging server, take these steps:

1. [Run the Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the following component:

Instant Messaging 8

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the Instant Messaging server:

Instant Messaging 8 - Configuration Worksheet

3. Run the Instant Messaging initial configuration program:

```
# INSTALLROOT/im/configure
```

For detailed instructions, see [Instant Messaging 8: Initial Configuration](#).

4. When the Instant Messaging `configure` program runs, do not enter a **Multiplexor Port Number**

.

This is the port number on which the Instant Messaging server listens for incoming requests from Instant Messenger clients. The **Multiplexor Port Number** should be configured on the hosts on which you deploy the IM multiplexor.

If the **Multiplexor Port Number** option is not configured, the multiplexor will not run on this host.

Reviewers: is the preceding statement true?

5. Do not select the **Disable Server** option.

Chapter 17. Communications Suite 6 Update 1 Installation Scenario - Message Store

Communications Suite 6 Update 1 Installation Scenario - Install Message Store

Assumptions

This scenario shows how to install the Messaging Server back-end message store on a separate host. It is based on the *Install back-end message store* leaf in the [Communications Suite 6 Update 1 Installation Flowchart](#). The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Messaging Server back-end message store is one functional component of your multi-host deployment.
- You are installing the message store on a separate host or Solaris zone; you are not bundling the message store with Communication Suite products on the same host.
- If you are distributing multiple partitions of the message store across several hosts or zones, you can follow these instructions for each host on which you install store partitions.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Messaging Server message store

Download sites: [Get the Software](#).

Which Task Sequence Do You Follow?

Before you install the message store, take these steps:

1. You must ensure DNS is running and configured properly. For details, see [DNS configuration](#).
2. Recommended file systems for the message store are listed [here](#).
3. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see [Default Port Numbers](#).

Install and configure the message store:

1. [Run the Communications Suite installer](#).

When the Comms Installer lists the components to install, choose the 32-bit or 64-bit version by selecting one of these components:

Messaging Server 7 Update 1. (The Comms Installer does not explicitly label the 32-bit version as "32-bit.")

Messaging Server (64-bit) 7 Update 1.

Make sure that the other components are not selected.

2. Use the following worksheet to gather configuration information for the message store: [Messaging Server 7 Update 1 - Configuration Worksheet](#)
3. Run the Messaging Server initial configuration program:

For 32-bit: # `INSTALLROOT/messaging/bin/configure`

For 64-bit: # `INSTALLROOT/messaging64/bin/configure`

For detailed instructions, see [Messaging Server 7 Update 1: Initial Configuration](#).

When the Messaging Server `configure` program lists the components to configure, select these components:

Message Store

Message Transfer Agent (MTA)

You must select both components to successfully configure the message store. Make sure that the other components are not selected.

Chapter 18. Communications Suite 6 Update 1 Installation Scenarios

Communications Suite 6 Update 1 Installation Scenarios

This page automatically lists the installation scenario information you need when installing Communications Suite components in a multiple-host environment. Use the following information to install particular Communications Suite software components on individual machines or Solaris zones in a multiple-host deployment.

Page: [Communications Suite 6 Update 1 Installation Scenario - Access Manager](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Calendar Server Back End](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Calendar Server Front End](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Communications Express](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Convergence](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Delegated Administrator](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Directory Server](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Instant Messaging Multiplexor](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Instant Messaging Server](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Message Store](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Message Transfer Agent](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Messaging Multiplexor](#)

Page: [Communications Suite 6 Update 1 Installation Scenario - Webmail Server](#)

Page: [Communications Suite 6 Update 1 Installation Scenarios](#)

Chapter 19. Communications Suite 6 Update 1 Installation Guide

Sun Java Communications Suite 6 Update 1 Installation Guide

This document contains the following sections:

- [Sun Java Communications Suite 6 Update 1 Installation Overview](#)
- [1. Check That Your Platform and Operating System Support Communications Suite.](#)
- [2. Install the Sun Java System Software Required to Run Communications Suite.](#)
- [3. Define and Set Up Additional Requirements for Individual Communications Suite Products.](#)
- [4. Install Communications Suite 6 Update 1 Products.](#)
- [5. Prepare Directory Server for Communications Suite \(run `comm_dssetup.pl`\).](#)
- [6. Gather Information Needed to Configure Communications Suite Products.](#)
- [7. Create Initial Configurations for the Individual Communications Suite Products.](#)
- [Uninstalling Communications Suite](#)
- [Deployment Examples: Installation](#)
- [Getting Information About Which Products Are Installed](#)

See also:

- [Installing Connector for Microsoft Outlook](#)

Sun Java Communications Suite 6 Update 1 Installation Overview

This document describes how to install specific Communications products on a specific machine (a machine can mean either a computer or a Solaris Zone). It is designed to be a low-level document describing the product installation tasks required for new deployments and upgrades. The following products are available in the installer:

Table 1. Communications Suite 6 Update 1 Products and Components

Product & Version
Convergence 1 Update 1
Messaging Server 7 Update 1 (32-bit/64-bit)
Calendar Server 6.3
Instant Messaging 8
Comms Delegated Administrator 6.4
Communications Express 6.3
Comms DSsetup 6.4
Messaging Server Sun Cluster HA Agent 7.0
Calendar Server Sun Cluster HA Agent
Instant Messaging Sun Cluster HA Agent

The Communications Suite installer does *not* install the Sun Java System Connector for Microsoft

Outlook or Sun Java System Communications Sync, although it will be on the distribution.

- For installation instructions for Connector for Microsoft Outlook, see the [Installing Connector for Microsoft Outlook](#).
- For installation instructions for Communications Sync, see the [Sun Java System Communications Sync 3.0 Release Notes](#).

This document assumes you have already made your architectural and design decisions: for example, which products you want to install, the number of machines in your deployment, and the number of front-end and back-end servers. If you are still in the planning or evaluating process, see the following documents:

- If you do not have an existing architecture or design, refer to the [Sun Java Communications Suite 5 Deployment Planning Guide](#).
- If you are looking for help with upgrading your current Comms Suite Deployment, refer to [Upgrading to Communications Suite 6 Update 1](#).
- If you are looking for a document to help you install and evaluate the product, refer to [Deployment Example: Sun Java Communications Suite 6 on a Single Host](#) or [Deployment Example: Installing Communications Suite 6 on a Solaris Zone](#)
- If you are planning a multi-host deployment, you can also take advantage of a tool developed by Sun deployment engineering: EMRA, a multi-host install and configuration tool. You can also refer to [Deployment Example: Sun Java Communications Suite 6 on Multiple Hosts](#).
- You also can use the [Communications Suite 6 Update 1 Installation Flowchart](#) to guide you to specific installation scenarios. The flowchart can help in the following ways:
 - Provides a decision tree for installing Communications Suite products and the Sun Java System products that support Communications Suite
 - Directs you to specific sets of installation instructions based on your decisions

The remainder of this document describes the steps for product installation, as follows:

1. Check that your system requirements (platform and operating system) support Communications Suite.
2. Install the required Sun Java System Software.
3. Define and set up additional requirements for individual Communications Suite products.
4. Install Communications Suite products one at a time on specific machines in a given sequence.
5. Run the Comm Directory Setup script.
6. Gather information required to configure the Communications Suite products.
7. Perform initial configuration on each product.

1. Check That Your Platform and Operating System Support Communications Suite.

The Sun Java Communications Suite 6 Update 1 runs on SPARC or x86 hardware running Solaris 9 or 10, or Red Hat Linux 3 or 4. The recommended platform is at least Solaris 10 08/07.

For details, see this list of [operating system and platform requirements](#).

In addition, certain Communications Suite products have minimum disk and memory requirements. For details, refer to [Memory and Disk Space Requirements for Communications Suite 6 Update 1](#).

2. Install the Sun Java System Software Required to Run

Communications Suite.

The Communications Suite products require other Sun Java System software products to be installed before you install Communications Suite. The dependencies vary among the Communications products, but many have a common set.

Which Products Do You Need?

- Sun Java System Directory Server Enterprise Edition 5.x or 6.x (6.3 or later is recommended)
- Web container:
 - Sun Java System Web Server 7.0
 - Sun Java System Application Server 9.1 Update 2

Download the following version: Application Server 9.1 Update 2 with High Availability Database (HADB) - Zip/File Based. This version provides shared components needed by Application Server and Communications Suite. Note: You can configure this version of Application Server without using the HADB.

- Sun Java System Access Manager

Access Manager (AM) is required for Delegated Administrator and optional for Convergence, to support AM authentication and/or AM SSO.

The following table shows the software required by each product.

Table 2. Software Requirements for Communications Suite 6 Update 1 Products

Communications Suite Product	Directory Server	Web Container	Access Manager
Convergence	Yes	App Svr 9.1 U2 only	Optional. Required only if you want to use Access Manager for authentication and/or SSO.
Messaging Server	Yes	No	Optional
Calendar Server	Yes	No	Optional
Instant Messaging	Yes	1	Optional
Delegated Administrator	Yes	1	Yes
Communications Express	Yes	1	Yes if want use Schema 2. Optional for Schema 1.

1 - Web Server 7.0 update 1, Application Server 8.2P2, or Application Server 9.1 Update 2 (recommended)

For more information about software product dependencies, see [Product Version Compatibility](#).

For products needed to deploy Convergence, see the [Product Version Compatibility Requirements for Convergence 1 Update 1](#).

- Note: The Communications Suite installer *does* install Message Queue 4.1, Security NSS, and other shared components.

Where Do You Go to Install the Sun Java System Products?

The Communications Suite installer does *not* install these software products. To install these products, perform the following steps:

1. Download the software.

For links to download sites, go to [Get the Software](#).

2. Install Application Server 9.1 Update 2 with High Availability Database (HADB) - Zip/File Based.

This version provides shared components needed by Application Server and Communications Suite. Note: You can configure this version of Application Server without using the HADB.



Download the Application Server software zip file from the Communications Suite download site. Do not install the version of Application Server bundled with JES 5 Update 1. That is an older version of Application Server.

If you are installing the software from the Communications Suite DVD, do not use the Application Server bundled on the DVD. Go to the Communications Suite download site to obtain the correct version of Application Server. (For a link to the site, see [Get the Software](#).)

To obtain a multi-language version of Application Server, go to the Application Server download site. (The Communications Suite download site does not provide a multi-language version.)

Follow the instructions in the *Sun Java System Application Server 9.1 Update 2 Installation Guide*. Install Application Server before you install the other Sun Java System products.

To verify which version of Application Server you have installed, see [Verify Application Server Version](#).

3. Install Directory Server 6.3 or later.



Download Directory Server Enterprise Edition 6.3 (or later) from the Communications Suite download site before you run the JES 5 Update 1 installer. Do not install the Directory Server software bundled with JES 5 Update 1. That is an older version of Directory Server.

If you already started with an older DSEE version, you can still upgrade to the recommended DSEE 6.3. You must apply an upgrade patch as well as other patches to upgrade to DSEE 6.3.

For example, if you obtained the native package format of DSEE on the Solaris 10 x86 or SPARC platform, you must start by installing the DSEE 6.2 version bundled with JES 5 Update 1, then upgrade to DSEE 6.3.

The simplest approach is to download and install the zip file version of DSEE 6.3 directly from the Communications Suite download site.

To install Directory Server, follow the instructions in the [Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide](#).

4. Install the following products by running the JES 5 Update 1 installer:

Access Manager 7.1
Web Server 7.0

To install Access Manager and Web Server, follow the instructions in the [Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX](#).

Here are some other information sources and methods for installing these products:

- [Sun Java System Web Server 7.0 Update 1 Installation and Migration Guide](#)
- Access Manager Server. Either run the JES 5 Update 1 Installer or deploy a single WAR file. For details, see this [Access Manager Configuration Guide](#). You can also find installation instructions in this [Access Manager Deployment Example](#).

 If you are installing Access Manager 7.1 on a Linux system, you should verify that a compatible version of Java Development Kit (JDK) is installed. For details, see [Verifying the Correct JDK Version to Support Access Manager](#).

 If you install Delegated Administrator, do not deploy Access Manager as a single WAR file. This installation method does not support Access Manager Legacy mode, which is required by Delegated Administrator. Instead, install Access Manager with the JES 5 Update 1 Installer.

3. Define and Set Up Additional Requirements for Individual Communications Suite Products.

In addition to the generic suite requirements, some products might have specific requirements. For details about individual product requirements, see the [Communications Suite 6 Update 1 Release Notes](#).

Messaging Server

- You must ensure DNS is running and configured properly. For details, see [DNS configuration](#).
- Recommended file systems for the message store are listed in [Message Store File Systems](#).
- Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see [Default Port Numbers](#).

Calendar Server

- Set up Calendar Server administrator accounts and plan for Calendar Server hosted domains. For details, see [Calendar Server Pre-Installation Considerations](#).

4. Install Communications Suite 6 Update 1 Products.

After the platform and software requirements have been met (as described previously), take these steps:

1. Download the software.

To download Communications Suite, including the installer, go to [Get the Software](#).

2. Run the installer.

The installer is a single unified utility called `commpkg`. It installs (but does not configure) the Communications Suite products. `commpkg` does all the necessary preparation work before installing the product software on the system. Run this command:

```
./commpkg install
```

For step-by-step instructions, see [To Run the Communications Suite Installer](#).

For details about other features of the `commpkg` installer, see these articles:

- [commpkg install Usage](#)
- [Install in Silent Mode](#)
- [Perform Multiple Installations with Alt Root](#)
- [Install on Solaris Zones](#)
- [Communications Suite Installer: General Syntax and Verbs](#)

Note: To install the localization version of Communications Express, you must install a localization patch. For details, see [Installing the Localization Version of Communications Express](#).

Sample Sessions: Running `commpkg`

The following examples document the output of running `commpkg`:

- [Sample Session - Communications Suite 6 Update 1 Simple Install and Uninstall](#).
- [Sample Session - Communications Suite 6 Update 1 Install Using `altroot`](#).
- [Sample Session - Communications Suite 6 Update 1 Upgrade of Messaging Server and DSsetup](#).

5. Prepare Directory Server for Communications Suite (run `comm_dssetup.pl`).

All Communications Suite components require that you run the `comm_dssetup.pl` script against Directory Server. For example:

```
# cd INSTALLROOT/dssetup/sbin
# ./comm_dssetup.pl
```

For detailed instructions, see the following:

- [Communications Suite Directory Server Setup Script: `comm_dssetup.pl`](#)

Note. If you install or upgrade Directory Server *before* you run the Communications Suite installer, the Directory Server installation process places an outdated version of `comm_dssetup.pl` on your system. You must use the current version of `comm_dssetup.pl` provided by the Communications Suite installer. However, the Comms Suite installer cannot install a new version with the `commpkg install` command. Instead, run the `commpkg upgrade` command to upgrade to the latest version of `comm_dssetup.pl`. If you install `comm_dssetup.pl` with the Comms Suite installer before you install Directory Server, you will have the up-to-date version. The DS installation process does not overwrite the latest version.

6. Gather Information Needed to Configure Communications Suite Products.

Before you run a configuration program, you need to gather specific configuration information for each product. Use the following worksheets:

- [Convergence 1 Update 1 - Configuration Worksheet](#)
- [Messaging Server 7 Update 1 - Configuration Worksheet](#)
- [Calendar Server 6.3 - Configuration Worksheet](#)
- [Instant Messaging 8 - Configuration Worksheet](#)
- [Delegated Administrator 6.4 - Configuration Worksheet](#)
- [Communications Express 6.3 - Configuration Worksheet](#)

7. Create Initial Configurations for the Individual Communications Suite Products.

For each Communications Suite product, you must run a separate configuration program. Each configuration program creates an initial runtime configuration to make the product operational. The program provides a generic, functional server configuration, which you can refine by making specific configurations and customizations.

You will typically want to configure the back-end servers before configuring clients. Client configurations require certain server attributes to be defined.

Delegated Administrator 6.4:

Run the initial configuration program:

```
# INSTALLROOT/da/sbin/config-commda
```

For detailed instructions, see [Delegated Administrator 6.4: Initial Configuration](#).

Messaging Server 7 Update 1:

Run the initial configuration program:

```
For 32-bit: # INSTALLROOT/messaging/sbin/configure
```

```
For 64-bit: # INSTALLROOT/messaging64/sbin/configure
```

For detailed instructions, see [Messaging Server 7 Update 1: Initial Configuration](#).

Calendar Server 6.3:

Run the initial configuration program:

```
For Solaris: # INSTALLROOT/calendar/SUNWics5/cal/sbin/csconfigurator.sh
```

```
For Linux: # INSTALLROOT/calendar/calendar/sbin/csconfigurator.sh
```

For detailed instructions, see [Calendar Server 6.3: Initial Configuration](#).

Instant Messaging 8:

Run the initial configuration program:

```
# INSTALLROOT/im/sbin/configure
```

For detailed instructions, see [Instant Messaging 8: Initial Configuration](#).

Convergence 1 Update 1:

Run the initial configuration program:

```
# INSTALLROOT/iwc/sbin/init-config
```

For detailed instructions, see [Convergence 1 Update 1: Initial Configuration](#).

Communications Express 6.3:

Run the initial configuration program:

```
# INSTALLROOT/ce/sbin/config-uwc
```

For detailed instructions, see [Communications Express 6.3: Initial Configuration](#).

Messaging Server Sun Cluster HA Agent 7.0:

Run the initial configuration program:

```
# <msg_scha_base>/bin/init-config
```

This command registers the HA agent with the Sun Cluster HA software. Note that you must have the Sun Cluster HA software installed prior to issuing this command.

For more information about configuring the Messaging Server Sun Cluster HA agent, see [Configuring Messaging Server for High Availability](#).

Calendar Server Sun Cluster HA Agent:

Run the initial configuration program:

```
# <cs_scha_base>/bin/init-config
```

This command registers the HA agent with the Sun Cluster HA software. Note that you must have the Sun Cluster HA software installed prior to issuing this command.

For more information about configuring the Calendar Server Sun Cluster HA agent, see [Configuring Calendar Server Software for High Availability \(Failover Service\)](#).

Instant Messaging Sun Cluster HA Agent:

Run the initial configuration program:

```
# <im_scha_base>/bin/init-config
```

This command registers the HA agent with the Sun Cluster HA software. Note that you must have the Sun Cluster HA software installed prior to issuing this command.

For more information about configuring the Instant Messaging Sun Cluster HA agent, see [Configuring Instant Messaging for High Availability](#).

Uninstalling Communications Suite

To uninstall the Communications Suite products installed on the local machine, run the following command:

```
# cd INSTALLROOT/CommsInstaller/bin  
# ./commpkg uninstall
```

For detailed instructions, see the following:

- [commpkg uninstall Usage](#)
- [Uninstall in Silent Mode](#)
- [Communications Suite Installer: General Syntax and Verbs](#)

Deployment Examples: Installation

The following deployment examples show how to install Communications Suite 6 Update 1 in different scenarios. The examples provide step-by-step records of running the installers and configuration programs.

- [Deployment Example: Sun Java Communications Suite 6 Update 1 on a Single Host](#)
- [Deployment Example: Installing Communications Suite 6 on a Solaris Zone](#)
- [Deployment Example: Sun Java Communications Suite 6 Update 1 on Multiple Hosts](#)

Getting Information About Which Products Are Installed

To determine the Communications Suite software components installed on the machine, run the following command:

```
./commpkg info --verbose
```

This command prints product information installed in the *INSTALLROOTS*. To print information about one product, run this command:

```
./commpkg info --verbose installroot|product name.
```

For details about the `commpkg info` command, see the following:

- [commpkg info Usage](#)
- [Communications Suite Installer: General Syntax and Verbs](#)

To determine which version of Application Server you have installed, see [Verify Application Server Version](#).

Calendar Server Pre-Installation Planning

Calendar Server Pre-Installation Planning

This article describes considerations you need to think about before installing Calendar Server. It contains the following sections:

- [Planning for Calendar Server Administrators](#)
- [Planning for Calendar Server Hosted Domains](#)

Planning for Calendar Server Administrators

Administrators for Calendar Server include:

- [Calendar Server Administrator \(calmaster\)](#)
- [Calendar Server User and Group](#)
- [Superuser \(root\)](#)

Calendar Server Administrator (calmaster)

The Calendar Server administrator is a specific user name with its associated password that can manage Calendar Server. For example, a Calendar Server administrator can start and stop Calendar Server services, add and delete users, create and delete calendars, and so on. This user has administrator privileges for Calendar Server but not necessarily for the directory server.

The default user ID for the Calendar Server administrator is `calmaster`, but you can specify a different user during Calendar Server configuration, if you prefer. After installation you can also specify a different user in the `service.admin.calmaster.userid` parameter in the `ics.conf` file.

The user ID you specify for the Calendar Server administrator must be a valid user account in your directory server. If the Calendar Server administrator user account does not exist in the directory server during configuration, the configuration program can create it for you.

See the [Sun Java System Calendar Server 6.3 Administration Guide](#) for the complete list of Calendar Server administrator configuration parameters in the `ics.conf` file.

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Calendar Server User and Group

On Solaris systems, these special accounts are the user ID and group ID under which Calendar Server runs. Use the default values, `icsuser` and `icsgroup`, which are automatically created by the configuration program, if they do not exist. If you prefer, however, you can specify values other than `icsuser` and `icsgroup` when you run the Calendar Server configuration program. These values are stored in the `local.serveruid` and `local.servergid` parameters, respectively, in the `ics.conf` file.

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Superuser (root)

On machines running Solaris software, you must log in as or become `superuser (root)` to install Calendar Server. You can also run as `superuser` to manage Calendar Server using the command-line

utilities. For some tasks, however, you should run as `icsuser` and `icsgroup` (or the values you have selected) rather than `superuser` to avoid access problems for Calendar Server files.

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Planning for Calendar Server Hosted Domains

Calendar Server supports hosted (or virtual) domains. In a hosted domain installation, each domain shares the same instance of Calendar Server, which enables multiple domains to exist on a single server. Each domain defines a name space within which all users, groups, and resources are unique. Each domain also has a set of attributes and preferences that you specifically set.

To configure hosted domains on a server, you should make these deployment choices:

- Use Schema 2 only.
- Install and configure Directory Server.
- Install and configure a web container: Application Server or Web Server.
- Install and configure Access Manager.
- Install and configure Delegated Administrator as part of the Communications Suite. Use the `compkg` installer to install Delegated Administrator, Calendar Server, and any other Communications Suite components you require.

For instructions on installing and configuring the components listed above, see the related articles in the [Installation Guide](#).

Next, take the following configuration steps:

- Run `comm_dssetup.pl` to prepare Directory Server for Communications Suite before you configure Delegated Administrator and other Communications Suite components.
- Configure Delegated Administrator.
A default domain is created when you configure Delegated Administrator, but the domain entry must be modified to add Calendar (or Mail) services. For details, see [Delegated Administrator Initial Configuration](#).
- Create the domains for your site by using Delegated Administrator.
- Configure Calendar Server.
When you configure Calendar Server, you specify a default domain and site calendar administrator (`calmaster`). For information about (`calmaster`), see [Calendar Server Administrator](#). For instructions on how to specify these items, see [Initial Runtime Configuration Program for Calendar Server](#).
- Set domain configuration parameters for Calendar Server.
For a list of the configuration parameters and their values, see [Calendar Server Domain Configuration Parameters in Sun Java System Calendar Server 6.3 Administration Guide](#).
- Populate your domains with users and resources using Delegated Administrator.
- Start Calendar Server services.
For instructions, see [Starting and Stopping Calendar Server 6.3 Processes in Sun Java System Calendar Server 6.3 Administration Guide](#).



Note

Perform your provisioning for Schema 2 with the Communications Services Delegated Administrator interface.

Schema 1 provisioning tools do not support hosted domains.

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commpkg - General Syntax and Commands

Communications Suite Installer: General Syntax and Commands

The Communications Suite installer, `commpkg`, comprises several commands (verbs) that enable you to install, uninstall, and upgrade Communications Suite products and shared components.

Communications Suite Installer: Syntax

The following syntax applies to the Communications Suite installer in general:

```
commpkg [general options] verb [verb-specific options]
```

Communications Suite Installer: General Options

The *general options* for the installer are:

Option	Description
-? or --help	Displays Help.
-V or --version	Displays the Communications Suite Installer version.
--OSversionOverride	Overrides the operating-system version check.
--fixEntsys [y n]	Fix an invalid Sun Java Enterprise System (Java ES) <code>entsys</code> symlink, making the link point to the latest Java version upgraded by <code>commpkg</code> . The Java ES symlink is located in <code>/usr/jdk/entsys-j2se</code> . Choose <code>--fixEntsys y</code> to fix the Java ES symlink to the Java files. If you do not specify this switch, <code>commpkg</code> prompts you if the symlink is invalid. However, in silent mode, the default is <i>not</i> to fix the symlink (the equivalent of using a value of <code>n</code>). To fix the symlink in silent mode, enter <code>commpkg install --fixEntsys y --silent INPUTFILE</code> on the command-line. NOTE: This feature was not available in the original (RR) version of <code>commpkg</code> .

Communications Suite Installer: Verbs

The *verb* is one of the following:

Verb	Description
install	Performs Communications Suite installation
uninstall	Performs Communications Suite uninstallation
info	Displays Communications Suite information
upgrade	Performs Communications Suite upgrade

Communications Suite Installer: Commands

For information about the `commpkg` commands (verbs) and their options, see

- `commpkg install Usage`
- `commpkg upgrade Usage`
- `commpkg uninstall Usage`
- `commpkg info Usage`

commpkg info Usage

commpkg info Usage

The `commpkg info` command obtains information about

- The paths (`installroots`) where Communication Suite products are installed
- The products that are installed in those paths

You can also use the command to repair the software list by adding known `installroots` and deleting bogus `installroots` in the software list. It is one of the commands available with the Communications Suite installer, `commpkg`.

Communications Suite Installer Verbs

This section lists the commands available with the Communications Suite installer.

Command	Description
<code>commpkg install</code>	Performs Communications Suite installation
<code>commpkg uninstall</code>	Performs Communications Suite uninstallation
<code>commpkg info</code>	Displays Communications Suite information
<code>commpkg upgrade</code>	Performs Communications Suite upgrade

For information about the other `commpkg` commands and their options, see

- [commpkg install Usage](#)
- [commpkg upgrade Usage](#)
- [commpkg uninstall Usage](#)

commpkg info Syntax

```
commpkg info [options] [installroot|name]
```

The `installroot|name` specifies an `installroot` or name from the software list. The name is a friendly, shorthand name in the software list that indicates the `installroot` to use. If you enter a name that does not exist in the software list, an error results. If no `installroot` or name is specified, the `commpkg info` command prints information on all the `installroots` listed in the software list.

If `installroot` is specified and does not exist in the software list, and is a valid alternate root, the `commpkg info` command adds the `installroot` to the software list.

To specify the default root, use `"/` or `"`. The friendly name for the default root is `"`.

commpkg info Options

The following options are used by the `commpkg info` command:

commpkg install options	Description
-? or --help	Displays Help
-V or --version	Displays Version of Communications Suite components
--clean	Removes entries in the software list when the corresponding products are not actually installed. If <i>installroot</i> <i>name</i> is specified, this option removes the entry from the software list. If no <i>installroot</i> <i>name</i> is specified, the option removes all entries from the software list. To add a particular <i>installroot</i> to the software list, just specify it without the --clean option.
--listPackages	Lists the packages that make up each Communications Suite product, shared component, and OS Auxiliary product. This option also displays the mnemonic for each Communications Suite product or component such as <i>comm_dssetup.pl</i> .

commpkg install Usage

Commpkg Install Usage

The `commpkg install` command enables you to install the Communications Suite products and shared components. It is one of the commands available with the Communications Suite installer, `commpkg`.

This command lays down the Communications Suite components' installation bits on your machine, but it does not configure these components. To configure the components after installation, see [Initial Configuration](#).

For information about the `commpkg` general syntax and options, see:

- [Communications Suite Installer: General Syntax and Commands](#)

For information about the other `commpkg` commands and their options, see:

- [commpkg upgrade Usage](#)
- [commpkg uninstall Usage](#)
- [commpkg info Usage](#)



Tip

Installing Only Shared Components: To install just the shared components for a component product, launch the Communications Suite installer then prefix your product selection with a tilde (~). For example, to install only the shared components for Messaging Server 32-bit, at the Product Selection prompt, you would type ~1. You can type multiple selections, using a comma to separate your entries.

Commpkg Install Command: Syntax

```
commpkg install [options] [installroot|name]
```

Using the `installroot/name` Command-Line Argument

If you specify `installroot/name` on the command line, it is equivalent to specifying the `--altroot` and `--installroot` options. That is, the command-line argument implies an `altroot` installation. For example, specifying

```
commpkg install /opt/sun/comms2
```

is equivalent to specifying

```
--altroot --installroot /opt/sun/comms2
```

For details about these options, see [Commpkg Install Command: Options](#), below.

Specifying an `installroot` of `/` is same as specifying the default root. It is the same as using neither the `--installroot` nor the `--altroot` option, or of not specifying the `installroot/name` command-line argument at all.

If you specify the `--installroot` option in addition to the `installroot/name` command-line argument, they must match.

Using the *name* Argument (Instead of *installroot*)

If you specify the *name* command-line argument and it exist in the software list, the the corresponding *installroot* is used and `--altroot` is implied.

If you also specify the `--installroot` option, it must correspond to the entry in the software list. If you specify *name* and it does not exist in the software list, it will be added to the software list.

Specifying any *name* other than "" implies an `--altroot`. A value for *name* of "" is reserved for the default root. Therefore, "" cannot be used with `--altroot`.

Commpkg Install Command: Options

The following options are used by the `commpkg install` command:

<code>commpkg install</code> options	Description
<code>--help</code> or <code>-?</code>	prints help information
<code>--version</code> or <code>-V</code>	prints version information
<code>--excludeOS</code>	Do not apply Operating System patches during product installation
<code>--excludeSC</code>	Do not install, upgrade, or patch any Shared Components
<code>--acceptLicense</code>	Accept the license conditions in the <code>LICENSE.txt</code> file
<code>--altroot [name]</code>	<p>Specify an alternate root directory during a multi-host installation. The <code>INSTALLROOT</code> (the top level installation directory for all products and shared components) will be the alternate root.</p> <p>If you specify a <i>name</i>, it will be a friendly name associated with the altroot that will be registered in the software list. The <i>name</i> option is supported on Solaris only (not on Linux).</p> <p>You can use this option to install multiple instances of Communications Suite products on the same host or Solaris zone. You use this option to perform a side-by-side upgrade of Communications Suite products.</p>
<code>--distro path</code>	<p>Specify the <i>path</i> to packages/patches for the products</p> <p>Default: Location of <code>commpkg</code> script</p>
<code>--installroot path</code>	<p>Specify the <i>path</i> of <code>INSTALLROOT</code>, the top level installation directory for Communications Suite products and shared components.</p> <p>Default <code>INSTALLROOT</code> on Solaris and Linux: <code>opt/sun/comms</code></p> <p>The subdirectories for individual Communications Suite products are installed under the <code>INSTALLROOT</code>. For example, Messaging Server (32-bit) software is installed by default in <code>opt/sun/comms/messaging</code>.</p>

<pre>--silent INPUTFILE</pre>	<p>Run silent installation, taking the inputs from the <i>INPUTFILE</i> and the command line arguments. The command line arguments override entries in the <i>INPUTFILE</i>. Installation proceeds without interactive prompts.</p> <p>Use <code>--dryrun</code> to test silent installation without actually installing the software.</p> <p>When running a silent installation, you must use the <code>--acceptLicense</code> option in the command line or set <code>ACCEPTLICENSE=YES</code> in the <i>INPUTFILE</i>.</p> <p>Specify <code>NONE</code> for <i>INPUTFILE</i> if you want to run in silent mode without using an input file. When you specify <code>NONE</code>, the installation uses default values.</p> <p>For more information about running a silent installation, see Installing Communications Suite in Silent Mode.</p>
<pre>--dry-run or -n</pre>	<p>Does not install Communications Suite components. Performs checks.</p>
<pre>--upgradeSC [y n]</pre>	<p>Indicate whether or not to upgrade shared components as required.</p> <p>Note: If this option is not specified, you will be prompted for each shared component that needs to be upgraded.</p> <p>Default: <code>n</code></p> <div data-bbox="505 856 1378 1037" style="background-color: #ffffcc; padding: 10px; border: 1px solid #ccc;"> <p> Caution Upgrading shared components is irreversible. However, if you do not upgrade required shared components, products might not work as designed.</p> </div> <p>The <code>--excludeSC</code> flag has precedence over this flag.</p>
<pre>--auditDistro</pre>	<p>Audit the installation distribution to verify that the required patches and packages are present and that the packages have the correct versions. Compares the installed distribution to the product files internal to <code>commpkg</code>.</p>
<pre>--pkgOverwrite</pre>	<p>Overwrite the existing installation package. You might use this option when you are installing a shared component in a global zone where either the shared component does not exist in a global zone, or the shared component exists in the whole root zone. The default is not to override the existing package. In general, shared components should be managed in the global zone.</p>
<pre>--components <comp1 comp2 ...></pre>	<p>A space delimited set of component products. Each product has mnemonic associated with it. Use <code>commpkg info --listPackages</code> to see the mnemonic for a product. Do note that in most shells you will need to escape the space between each mnemonic. E.g. by adding double quotes around all the components.</p>

commpkg uninstall Usage

Commpkg Uninstall Usage

The `commpkg uninstall` command enables you to uninstall the Communications Suite products and shared components. It is one of the commands available with the Communications Suite installer, `commpkg`.

For information about the `commpkg` general syntax and options, see

- [Communications Suite Installer: General Syntax and Commands](#)

For information about the other `commpkg` commands and their options, see

- [commpkg upgrade Usage](#)
- [commpkg install Usage](#)
- [commpkg info Usage](#)

Uninstalling Communications Suite Components

To uninstall one or more Communications Suite component, go to the `INSTALLROOT/CommsInstaller/bin/` directory and run `commpkg uninstall`.

This command uninstalls the same products that `commpkg install` installs. However, it does not remove OS patches installed by `commpkg install`. In addition, it does not remove Shared Components.



Note

A fast way to uninstall a Communications Suite component in an alternate root is to simply remove the entire alternate root.

Commpkg Uninstall Command: Syntax

```
commpkg uninstall [options] [installroot|name]
```

If you specify `installroot/name` on the command line, it is equivalent to specifying the `--rootdir` option with either the specified `installroot` or the `installroot` corresponding to `name` in the software list. That is, the value must be consistent.

If you specify `name`, it must exist in the software list. Otherwise, an error is returned immediately. The `name` is looked up in the software list and is used for the `installroot`.

Commpkg Uninstall Command: Options

The following options are used by the `commpkg uninstall` command:

commpkg uninstall options	Description
--silent <i>INPUTFILE</i>	Run the uninstaller silently, taking the inputs from the <i>INPUTFILE</i> and the command line arguments. The command line arguments override entries in the <i>INPUTFILE</i> . Uninstallation proceeds without interactive prompts. Use --dry-run to test silent uninstallation.
--dry-run or -n	Does not uninstall the Communications Suite components. Performs checks. Silent uninstallation <i>INPUTFILE</i> is created in /tmp.
--rootdir <i>path</i>	This option is deprecated in favor of using the <i>installroot</i> or <i>name</i> command-line argument. This option specifies the <i>path</i> of <i>rootdir</i> , the alternate root used for multi-installation. Supported on Solaris only.

Communications Suite Directory Server Setup Script (comm_dssetup.pl)

Communications Suite Directory Server Setup Script (comm_dssetup.pl)

After you install the Communications Suite products and *before* you create initial configurations for these products, you must prepare Directory Server using the Communications Suite Directory Setup Script, (`comm_dssetup.pl`).

This chapter covers the following topics:

- [Before You Run the `comm_dssetup.pl` Script](#)
- [Running the `comm_dssetup.pl` Script](#)
- [Manually Updating Schema Files](#)
- [Resolving Conflicting Calendar Server OID's in the LDAP Schema](#)

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Before You Run the `comm_dssetup.pl` Script

This section covers information you need to understand before running the `comm_dssetup.pl` script, and contains the following topics:

- [What the `comm_dssetup.pl` Script Does](#)
- [Directory Server Considerations for the `comm_dssetup.pl` Script](#)
- [Information You Need to Gather Before you Run the `comm_dssetup.pl` Script](#)
- [About the `comm_dssetup.pl` Script Schema Choices](#)
- [Access Manager Considerations](#)
- [Attribute Indexes Created by the `comm_dssetup.pl` Script](#)

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What the `comm_dssetup.pl` Script Does

The `comm_dssetup.pl` script proceeds through three steps, as follows:

1. Collects your choices for utility options.
For a list of the specific information this step requests, see [Information You Need to Gather Before you Run the `comm_dssetup.pl` Script](#).
2. Generates a shell script and LDIF file from your options choices that will be used to modify the LDAP directory.
If you are not using a Sun product for your directory server, or have customized your Directory Server, stop the process here without running the shell script. For further information, see [Directory Server Considerations for the `comm_dssetup.pl` Script](#) that follows.
3. Runs the shell script created from your options choices. Your directory is modified accordingly.

At the end of each step, the utility asks you if you want to continue. No changes are made to the LDAP directory until the third step.

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Directory Server Considerations for the `comm_dssetup.pl` Script

The following is a list of the considerations for your LDAP directory:

- A directory server must be installed, configured and running before you run the `comm_dssetup.pl` script.
- You must run the `comm_dssetup.pl` script locally from the same machine as your directory server.
- You must run the `comm_dssetup.pl` script on every instance of every directory server that will be used with Comms Suite.
- If you add an additional machine that has Directory Server installed on it (such as a replica), at a future date, run the `comm_dssetup.pl` script against it, too.
- If you have customized your LDAP directory, the following considerations may apply:
 - If you have indexed some attributes, you may have to reindex those attributes after the `comm_dssetup.pl` script runs.
 - If you have added other `.ldif` files (schema definitions), they should not be affected, so no action should be necessary. However, back up your custom schema definition files before running the `comm_dssetup.pl` script.
 - For all customizations, including the first two just listed, stop the `comm_dssetup.pl` script after it generates the script and before it actually updates the LDAP directory. Then inspect the script to evaluate how its proposed actions will affect your LDAP directory. Take whatever actions you think necessary to protect your customizations before running the script against your directory.

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Information You Need to Gather Before you Run the `comm_dssetup.pl` Script

During the first step of the `comm_dssetup.pl` script, it requests information about your Directory Server. Prepare for this by gathering the information shown in the following table. (To help you keep track of this information, use [Directory Server Installation Worksheet](#).)

Information Item Needed	Default Value
Directory Server root path name	/var/opt/mps/serverroot
Which instance of Directory Server to use? (If more than one.)	N/A
Directory Manager Distinguished Name (DN)	"cn=Directory Manager"
Directory Manager's Password	N/A
Directory Server being used for user/group data? (yes), or configuration data only? (no)	yes
User and group root suffix (if yes to previous question)	"o=usergroup"
Schema version? (pick one of the following) 1 Schema 1 1.5 Schema 2 Compatibility Mode 2 Schema 2 Native Mode For more information on how to choose a schema, see About the comm_dssetup.pl script Schema Choices . If you have one version of the schema installed and want to upgrade to a higher level, refer to the Sun Java System Communications Services 6 2005Q4 Schema Migration Guide before running this utility.	1
If you choose Schema 1 or 1.5, you will need a DC tree. If the DC tree does not yet exist, the comm_dssetup.pl script creates only the root suffix node, its does not create the rest of the DC tree. You must create the rest of your DC tree yourself.	o=internet
If this Directory Server is being used for user/group data, this will put the schema files in the config directory.	yes
If you answer yes, the comm_dssetup.pl script does the indexing for Messaging Server and Calendar Server, even if you are not using both of them.	yes

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About the comm_dssetup.pl script Schema Choices

Communications Suite servers support the following schema choices:

- Sun LDAP Schema 2 native mode

Corresponds to comm_dssetup.pl script schema version choice 2. This is the default for a fresh installation.

- Sun LDAP Schema 1

Corresponds to the comm_dssetup.pl script schema version choice 1.

- Sun LDAP Schema 2 compatibility mode

Corresponds to comm_dssetup.pl script schema version choice 1.5.

If you are still trying to decide which schema to use, for further explanation, see [Understanding Schema Choices in Sun Java Communications Suite 6 Deployment Planning Guide](#), and the [Sun Java System Communications Services 6 2005Q4 Schema Migration Guide](#).

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Scheme 2 / Access Manager Considerations

If you are using Schema 2, Access Manager must be installed and configured.

If you select Scheme 2, and Access Manager is not installed, you will receive the following warning:

```
Access Manager has not been configured for this new user/group suffix
You can opt to continue, but you will not be able to use
features that depend on Access Manager
```



Note

Do not use the Access Manager console to administer users. Use Delegated Administrator for administering Messaging and Calendar users.

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Attribute Indexes Created by the `comm_dssetup.pl` Script

Attribute indexes improve the performance of search algorithms. The tool offers to index attributes. If you choose to do so, it will add indexes for the all the Communications Suite products. Therefore, once you have run the indexing for one product, you do not need to reindex for other products. If you try to index the same attributes again, nothing happens. The tool calls `db2index` for each attribute being indexed, but only if the index does not already exist.

The following table lists all the attributes the `comm_dssetup.pl` script indexes, grouped by suffix category. It also lists the type of indexes created for each attribute. For more information about Directory Server indexing, see <http://docs.sun.com/coll/1316.1>.

Suffix	Attributes Indexed	Type of Indexes Added
User/Group	mail	pres, eq, approx, sub
	mailAlternateAddress	pres, eq, approx, sub
	mailEquivalentAddress	pres, eq, approx, sub
	member	eq
	cosspecifier	pres
User/Group (for Access Manager – Schema 2)	inetDomainBaseDN	pres, eq
	sunPreferredDomain	pres, eq
	associatedDomain	pres, eq
	o	pres, eq
	sunOrganizationAlias	pres, eq
DC Tree (for Schema 1)	inetDomainBaseDN	pres, eq
	inetCanonicalDomainName	pres, eq
Personal Address Book (PAB)	memberOfManagedGroup	pres, eq
	memberOfPAB	pres, eq
	memberOfPABGroup	pres, eq
	un	eq
	icsCalendar	pres, eq, approx, sub
	icsCalendarOwned	pres, eq, approx, sub
New PAB	displayName	pres, eq, sub
	MemberOfPiBook	eq
	MemberofPiGroup	eq

Should you decide to add further indexes on your own, instructions for adding indexes can be found in the Directory Server documentation.

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Running the `comm_dssetup.pl` Script

This section covers the following topics:

- To Run the `comm_dssetup.pl` script
- To Run the `comm_dssetup.pl` script in Interactive Mode
- To Run the `comm_dssetup.pl` script in Silent Mode

To Run the `comm_dssetup.pl` Script

1. On the server where Directory Server is installed, login as or become superuser (`root`).
2. Start Directory Server, if necessary.
3. Change to the `/opt/SUNWcomds/sbin` directory.

Or, if you need it, a `.zip` file is available at `/opt/SUNWcomds/lib`.

4. Run the `comm_dssetup.pl` script in either silent mode or in interactive mode.

For further steps, see [To Run the `comm_dssetup.pl` Script in Interactive Mode](#) or [To Run the `comm_dssetup.pl` Script in Silent Mode](#).

To run the tool script, use the version of Perl included as a shared component and automatically installed by the installer. After installation, Perl can be found in the following directory:

```
ds-svr-base/bin/slapd/admin/bin/perl
```

To Run the `comm_dssetup.pl` Script in Interactive Mode

To run the `comm_dssetup.pl` script in interactive mode, run the script without any arguments and then enter your choices for the questions asked.

The following numbered list gives panel by panel instructions on how to use the interactive mode script.

1. Welcome and Introduction Panel

```
# cd /opt/SUNWcomds/sbin
# ./comm_dssetup.pl
Welcome to the comm_dssetup.pl script for
Sun Java System Communications Services.
(Version 6.3 Revision 0.1)
This tool prepares your directory server for use by the
communications services which include Messaging,
Calendar and their components.
The logfile is /var/tmp/dssetup_YYYYMMDDHHSS
Do you want to continue [y]:
```

Press Enter to continue, or type `no` and then press Enter to exit.

2. Installation Root of Directory Server Panel

```
Please enter the full path to the directory where the
Sun Java System Directory Server was installed.
Directory server root [/var/opt/mps/serverroot]
```

Specify the location of the installation root of the Directory Server, or press Enter to accept the default.

3. Directory Server Instance Panel

If multiple instances of the Directory Server reside on this machine, the program lists them and asks you to choose one.

```
Please select a directory server instance from the following list:
[1] slapd--varrius
Which instance do you want [1]:
```

Enter the number corresponding to your choice, and then press Enter. Or, to accept the default, press Enter without entering a number.

4. Directory Manager Distinguished Name (DN) Panel

This screen has two parts, entering the Directory Manager DN and the Directory Manager's password.

4a. First the script asks you for the distinguished name (DN) of the Directory Manager:

```
Please enter the directory manager DN [cn=Directory Manager]:
```

The Directory Manager DN, which defaults to `cn=Directory Manager`, is the administrator responsible for the user and group data in the Organization Tree. Be sure that the Directory Manager DN you specify in this script is the same DN that you set up for your Directory Server installation as well for as your Calendar Server and Messaging Server configuration.

Enter the Directory Manager DN, or press Enter to accept the default.

4b. Then the script asks for the Directory Manager's password.

```
Password:
```

Enter the password for the Directory Manager and press Enter.

The program checks to see if the Directory Server is running and listening on port 389 (the default port).

If successful, it displays the detected version as shown in the example that follows:

```
Detected DS version 5.2
```

If unsuccessful, it tells you that it could not detect a Directory Server running, or listening on port 389. It directs you to fix this problem before allowing you to continue. The script exits. The example below shows this output:

```
Directory Server not running or not listening to port 389.
Detected DS version 0.0
Please correct the problem and re--run this script.
```

5. User and Group Directory Server Panel

```
Will this directory server be used for users/groups [Yes]:
```

Enter `No` if this directory instance is used to store only configuration data, or press Enter to accept the default.

If you enter `No`, then you must also run this script against the directory instance that stores user and group data. (Do this before you run the configuration programs for communications services, like `csconfigurator.sh`.)

If your answer is `Yes`, you must specify a user and group base suffix for your Organization Tree.

6. User and Group Base Suffix Panel

```
Please enter the Users/Groups base suffix [o=usergroup]:
```

The user and group base suffix is the top entry in the LDAP Organization Tree. Be sure that the suffix you select here is the same suffix you specify for Directory Server, Communications Suite servers, and Access Manager.

7. Schema Type Panel

```
There are 3 possible schema types:
1--schema 1 for systems with Calendar or Messaging 5.x data
1.5--schema 2 compatibility for systems with Calendar or Messaging 5.x
    data that has been converted with the Schema Migration
    Utility
    commdirmig
2--schema 2 native for systems using Access Manager
Please enter the Schema Type (1, 1.5, 2) [1]:
```

Enter the schema type, or press `Enter` to accept the default.



Note

To use Schema 2 (options 1.5 or 2), Access Manager must be installed and configured. Otherwise, the `comm_dssetup.pl` script will terminate. You must install Access Manager before rerunning the `comm_dssetup.pl` script.

8. Domain Component (DC) Tree Base Suffix Panel

If you chose Schema 1 or Schema 2 Compatibility Mode, you will be asked to provide your DC tree base suffix.

```
Please enter the DC Tree base suffix [o=internet]:
```

In the Schema Type Panel described earlier, if you chose Schema 1 or Schema 2 Compatibility Mode, you will be asked to provide your DC tree base suffix. If you chose Schema 2 Native Mode, you will not be asked this question.

The DC tree mirrors the local DNS structure and is used by the system as an index to the Organization tree that contains the user and group data entries. The DC tree base suffix is the name of the top entry on the DC tree.

Enter a suffix, or press `Enter` to accept the default.

9. Series of Questions Panel

This next screen asks a series of questions about updates to your directory.

9a. Updating Schema Files

At this point the program checks to see if your schema has the correct schema elements. If your schema is missing some elements, it prints the following message:

```
Detected bad schema elements in 99user.ldif.  
It is recommended that you update the schema.  
Do you want to update the schema files [yes]:
```

Answer `Yes` to add required new elements to your schema. You need to update the directory with the new schema files each time you install a new version of Calendar Server or Messaging Server.

Answer `No` if you want to delay updating the schema files.

9b. Configuring New Indexes

If you chose to update the schema in the previous step, you will be asked if you want to configure new indexes. For more information about indexing attributes, see [Attribute Indexes Created by the comm_dssetup.pl Script](#).

```
Do you want to configure new indexes [yes]:
```

To approve indexing, press `Enter`.

If you have already performed this indexing step for the same attributes, answer `no`.

9c. Reindex Now

You can choose to do the indexing now, or you can do it at a later time. If you choose to defer the indexing, rerun the script with indexing turned on when it is convenient. Indexing can take a long time, but the Directory Server is still functional, that is, is not put into read only mode during indexing.

```
Reindex now [yes]?
```

If you want to do the indexing at a later time, answer `no`, otherwise, press `Enter` and accept the default.

10. Summary of Settings Panel

Before the `comm_dssetup.pl` script updates the Directory Server configuration, it displays a summary of your settings and then asks if you want to continue.

```

Here is a summary of the settings that you chose:
Server Root                : /var/opt/mps/serverroot/
Server Instance           : slapd--varrius
Users/Groups Directory    : yes
Update Schema             : yes
Schema Type               : 1
DC Root                   : o=internet
User/Group Root           : dc=red,dc=sesta,dc=com
Add New Indexes           : yes
Reindex New Indexes Now   : yes
Directory Manager DN      : cn=Directory Manager
Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [Y]:

```

If you chose Schema 2 Native Mode in [Running the comm_dssetup.pl Script](#), the DC Root will be the same value that you entered for the User/Group Root.

To change any of your settings, enter `no` and rerun the script.

If you want to continue, press `Enter`. The `comm_dssetup.pl` script generates an LDIF file and a shell script. The names of the files it creates are as follows:

```
/var/tmp/dssetup_timestamp.ldif
```

```
/var/tmp/dssetup_timestamp.sh
```

If you chose to continue, you will see messages printed out as the program works. The following is an example of the output you will see:

```

Generating files...
Checking to see if Suffixes need to be added
  Will Create suffix o=comms-config
  Will Create suffix o=pab
  Will Create suffix o=PiServerDb

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:mailQA)
    Checking indexes for icsCalendar
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendar
    Checking indexes for mailAlternateAddress
      New indexes and Reindexing required
      ReIndex will happen for index type mailAlternateAddress
    Checking indexes for ou
      No new indexes required
    Checking indexes for uniqueMember
      No new indexes required
    Checking indexes for cosspecifier

```

```

    New indexes and Reindexing required
    ReIndex will happen for index type cosspecifier
Checking indexes for member
    No new indexes required
Checking indexes for mailEquivalentAddress
    New indexes and Reindexing required
    ReIndex will happen for index type mailEquivalentAddress
Checking indexes for inetCos
    New indexes and Reindexing required
    ReIndex will happen for index type inetCos
Checking indexes for mailUserStatus
    New indexes and Reindexing required
    ReIndex will happen for index type mailUserStatus
Checking indexes for memberOf
    New indexes and Reindexing required
    ReIndex will happen for index type memberOf
Checking indexes for icsCalendarOwned
    New indexes and Reindexing required
    ReIndex will happen for index type icsCalendarOwned
Checking indexes for groupid
    New indexes and Reindexing required
    ReIndex will happen for index type groupid
Checking indexes for mail
    New indexes and Reindexing required
    ReIndex will happen for index type mail
Adding Schema2 specific Indexes for User/Group Tree (backend:mailQA)
Checking indexes for inetDomainBaseDN
    New indexes and Reindexing required
    ReIndex will happen for index type inetDomainBaseDN
Checking indexes for mailDomainStatus
    New indexes and Reindexing required
    ReIndex will happen for index type mailDomainStatus
Checking indexes for sunOrganizationAlias
    No new indexes required
Checking indexes for sunPreferredDomain
    No new indexes required
Checking indexes for o
    No new indexes required
Checking indexes for associatedDomain
    No new indexes required
Adding Indexes for PAB Tree (backend:pabdb2)
Checking indexes for memberOfPAB
    New indexes and Reindexing required
    ReIndex will happen for index type memberOfPAB
Checking indexes for memberOfManagedGroup
    New indexes and Reindexing required
    ReIndex will happen for index type memberOfManagedGroup
Checking indexes for un
    New indexes and Reindexing required
    ReIndex will happen for index type un
Checking indexes for memberOfPABGroup
    New indexes and Reindexing required
    ReIndex will happen for index type memberOfPABGroup
Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
Checking indexes for MemberOfPiBook
    New indexes and Reindexing required

```

```
ReIndex will happen for index type MemberOfPiBook
Checking indexes for MemberofPiGroup
New indexes and Reindexing required
ReIndex will happen for index type MemberofPiGroup
Checking indexes for displayname
New indexes and Reindexing required
ReIndex will happen for index type displayname
```

```
Checking to see if DN needs to be created for suffixes
Generating ldif for Creating Search Templates
```

```
Generating ldif for installer metadata
Generating ldif for Adding schema for installer metadata
Generating ldif for Creating DN: o=comms-config
Generating ldif for Creating DN: cn=CommServers,o=comms-config
The following files have been created:
/var/tmp/dssetup_20080825160233.sh
/var/tmp/dssetup_20080825160233.ldif
```

```
Running /var/tmp/dssetup_20080825160233.sh will make changes to the
Directory
```

```
You can run this file now or at a later time
Ready to execute the script now.
```

11. Running the Script

```
Do you want to continue [yes]:
```

Press Enter to accept the default setting (yes). The `dssetup_timestamp.sh` script runs against your LDAP directory. If you do not want to run the script now, enter `No` to exit. If you exit, you can run the `/var/tmp/dssetup_timestamp.sh` script at a later time.

The following is an example of the text output generated while the script is running:

```
Running /var/tmp/dssetup_20080825160233.sh
-D "cn=Directory Manager"
-j /var/tmp/dssetup_20080825160233.pw

Updating Schema files...
Copying 20subscriber.ldif
Copying 50ns-delegated-admin.ldif
Copying 50ns-mail.ldif
Copying 50ns-mlm.ldif
Copying 50ns-msg.ldif
Copying 50ns-value.ldif
Copying 55ims-ical.ldif
Copying 56ims-schema.ldif
Copying 70sun-schema2.ldif
Copying 71sun-am.ldif
Copying 60iplanet-calendar.ldif
Copying 50ns-iabs.ldif
Copying 98ns-dummy-uwc.ldif
Copying 70delgated-admin.ldif
Stopping Directory Server
Directory Server instance '/var/opt/SUNWdsee/dsins1' stopped
Starting Directory Server
Directory Server instance '/var/opt/SUNWdsee/dsins1' started: pid=1234
Creating Suffix o=comms-config
Done Creating o=comms-config
Creating Suffix o=pab
Done Creating o=pab
Creating Suffix o=PiServerDb
Done Creating o=PiServerDb

Applying ldif file /var/tmp/dssetup_20080825160233.ldif
ldap_add: Already exists

modifying entry cn=schema
modifying entry cn=schema
adding new entry o=comms-config
adding new entry cn=CommServers,o=comms-config

rejects to /var/tmp/dssetup_20080825160233.ldif.rej status = 0
ldapmodify returned 0
Done Applying ldif file /var/tmp/dssetup_20080825160233.ldif

....(entries are indexed)....

Successful Completion.
Consult /var/tmp/dssetup_20080825160233.log for details
```

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To Run the `comm_dssetup.pl` Script in Silent Mode

- [comm_dssetup.pl Script Silent Mode Instructions](#)
- [comm_dssetup.pl Script Silent Mode Syntax](#)

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comm_dssetup.pl Script Silent Mode Instructions

To run the `comm_dssetup.pl` script in silent mode, issue the Perl command followed by a string of options using the syntax shown in [comm_dssetup.pl Script Silent Mode Syntax](#). All of the option arguments are required. [Table 8--1](#) describes the options.

The utility creates the following LDIF file and shell script to update the LDAP directory indexes and schema:

```
/var/tmp/dssetup_timestamp.ldif
```

```
/var/tmp/dssetup_timestamp.sh
```

Depending on the option values you pass in, the utility will either proceed to update the Directory Server by executing the new script, or not. If you have chosen not to proceed with the update, you can check the script and make any desired modifications before running the actual update at a later time.

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comm_dssetup.pl Script Silent Mode Syntax

The following are all the options for running in the silent mode:

```
perl comm_dssetup.pl
  -i yes|no
  -R yes|no
  -c DirectoryServerRoot
  -d DirectoryInstance
  -r DCTreeSuffix
  -u UserGroupSuffix
  -s yes|no
  -D DirectoryManagerDN
  -w DirectoryManagerPassword
  -b yes|no --t 1|1.5|2
  -m yes|no
  [-S PathtoSchemaFiles]
```

Explanation of Options for Running `comm_dssetup.pl` Script in Silent Mode

Option and Argument	Description
-i <i>yes</i> <i>no</i>	Answers the question: "Do you want to configure new indexes?" <i>yes</i> - Add new Directory Server indexes. <i>no</i> - Do not add indexes.
-R <i>yes</i> <i>no</i>	Answers the question: "Do you want to reindex now?" The -m option must be <i>yes</i> also for this to take effect.
-c <i>DirectoryServerRoot</i>	Directory Server root path. For example: <code>/var/opt/mps/ldap</code>
-d <i>DirectoryInstance</i>	Directory Server instance subdirectory. For example: <code>slapd-varrius</code>
-r <i>DCTreeSuffix</i>	DC tree root suffix. (for Schema 1 and Schema 2 compatibility modes only) For example: <code>dc=varrius,dc=sesta,dc=com</code>
-u <i>UserGroupSuffix</i>	User and group root suffix. For example: <code>dc:west,dc=sesta,dc=com</code>
-s <i>yes</i> <i>no</i>	Answers the question: "Do you want to update the schema?" <i>yes</i> - Update the schema. You must have a <code>config</code> directory with the schema files. <i>no</i> - Do not update schema.
-D <i>DirectoryManagerDN</i>	Directory Manager Distinguished Name (DN). The value must be enclosed by double quotation marks (" ") to allow the <code>comm_dssetup.pl</code> script to interpret a value with a space correctly. For example: <code>"cn=Directory Manager"</code>
-w <i>DirectoryManagerPassword</i>	Directory Manager DN password.
-b <i>yes</i> <i>no</i>	Answers the question: "Will this directory server be used for users and groups?" <i>yes</i> - Use this directory to store both configuration and user group data. <i>no</i> - Use this directory to store only configuration data.
-m <i>yes</i> <i>no</i>	Answers the question: "Do you want to modify the directory server?" <i>yes</i> Modify the Directory Server without prompting the user. <i>no</i> Do not modify the Directory Server without prompting the user.
-S <i>PathtoSchemaFiles</i>	Path to the directory where the schema files are located. For example: <code>./schema</code>

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Manually Updating Schema Files

If for any reason, you have decided not to run the `comm_dssetup.pl` script generated script, the following directions allow you to manually update your schema files for Sun Java System Directory Server.



Note

If you update your LDAP directory schema manually and then later upgrade Calendar Server, you must manually update the LDAP server schema again. Calendar Server cannot automatically update the schema after the it has previously been updated manually.

To Update Your LDAP Directory Manually

1. Install Calendar Server 6.3.
2. Stop Calendar Server, if it is running.
3. Stop Directory Server, if it is running.
4. Copy the `60iplanet-calendar.ldif` file to the following directory on the machine where your directory server is running:
`dir-svr-base/slaped-hostname/config/schema`
where *dir-svr-base* is the Directory Server installation directory and *hostname* identifies the machine.
5. If you want to index attributes, as the configuration program does, do it at this point.
For a list of the attributes the configuration program indexes, see [Attribute Indexes Created by the `comm_dssetup.pl` Script](#).
6. Restart the Directory Server.

If you receive object identifier (OID) errors, see [Resolving Conflicting Calendar Server OID's in the LDAP Schema](#).

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Resolving Conflicting Calendar Server OID's in the LDAP Schema

If your LDAP schema contains conflicting OID's, the Directory Server does not know which OID to use and returns an error message. For example, the following message indicates a conflicting OID for the `icsCalendarUser` object class:

```
[24/Apr/2004:23:45:28-0700] dse -  
The entry cn=schema in file 99user.ldif is invalid,  
error code 20 (Type or value exists) - object class icscalendaruser:  
  The name does not match the OID.  
  Another object class is already using the name or OID.  
[24/Apr/2004:23:45:28-0700] dse -  
Please edit the file to correct the reported problems  
and then restart the server.
```

This problem can occur when you install Calendar Server 6.3 and you also had an older Calendar Server release that dynamically updated your Directory Server `99user.ldif` file.

To resolve the conflicting OID's, perform the following two steps:

1. Edit the `99user.ldif` file and remove the older OID's. For Calendar Server 6.3, the following table lists the specific OID's that might cause problems.

Object Class	Old OID	New OID
icsCalendarUser	2.16.840.1.113730.3.2.141	1.3.6.1.4.1.42.2.27.9.2.44
icsCalendarResource	2.16.840.1.113730.3.2.143	1.3.6.1.4.1.42.2.27.9.2.45
icsCalendarDomain	2.16.840.1.113730.3.2.144	1.3.6.1.4.1.42.2.27.9.2.4

2. After you edit the `99user.ldif` file, restart the Directory Server.

Configuration Worksheets - Calendar Server

Calendar Server Configuration Script Worksheet

Print and fill out this worksheet to use when responding to the Calendar Server `csconfigurator.sh` script configuration options.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
LDAP Server Host Name	<i>FQDN of your host</i>	
LDAP Server Port	389	
Directory Manager DN	<code>cn=Directory Manager</code>	
Directory Manager Password	–	
Enable Virtual Domains support	Checked	
Virtual Domains setting: Default domain	<i>your domain</i>	
Calendar Administrator Username	<code>calmaster</code>	
Calendar Administrator Password	–	
Calendar Administrator Email address	<code>calmaster@your domain</code>	
Site administrator	Yes	
Set up a Front End/Back End deployment	Unchecked	
Email Alarms	Enabled	
Administrator Email Address	<code>calmaster@your domain</code>	
SMTP Host Name	<i>your domain</i>	
Service Port	80	
Maximum Sessions	5000	
Maximum Threads	20	
Number of server processes	4	
Runtime User ID	<code>icsuser</code>	
Runtime Group ID	<code>icsgroup</code>	

Start Calendar Server after Successful Configuration	Unchecked	
Start Calendar Serve on System Startup	Checked	
Configuration Directory	/etc/opt/calendar/SUNWics5/config	
Database Directory	/var/opt/calendar/SUNWics5/csdb	
Attachment Store Directory	/var/opt/calendar/SUNWics5/astore	
Logs Directory	/var/opt/calendar/SUNWics5/logs	
Temporary Files Directory	/var/opt/calendar/SUNWics5/tmp	
Enable Archive	Checked	
Archive Directory	/var/opt/calendar/SUNWics5/csdb/archive	
Enable Hot Backup	Checked	
Hot Backup Directory	/var/opt/calendar/SUNWics5/csdb/hotbackup	
Keep archives for (in days)	Minimum: 3, Maximum: 6	
Keep hot backups for (in days)	Minimum: 3, Maximum: 6	
Same as archive checkbox	Checked	



Note

Do not change the location or names of the logs and temporary files directories.

Configuration Worksheets - Communications Express

config-uwc Script Worksheet

Print and fill out this worksheet to use when responding to the `config-uwc` script configuration options. You use `config-uwc` to configure Communications Express.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Directory to store configuration and data files	<i>uwc-deployed-dir</i> , e /var/opt/sun/comms/ce	
Hostname	<i>your hostname</i>	
DNS Domain	<i>your DNS domain</i>	
Web Container	<i>your web container</i>	
Application Server Installation Directory	/opt/SUNWappserver	
Application Server Domain Directory	/opt/SUNWappserver/domains/domain1	
Application Server Document Root Directory	/opt/SUNWappserver/domains/domain1/docroot	
Server Target Name	server	
Virtual Server Identifier	server	
HTTP Port	80	
Administration Server Port	8800	
Administrator User ID	admin	
Administrator Password	–	
Secure Administration Server Instance	Unchecked	
Web Container User ID	<i>your web container user ID</i>	
Web Container Group IP	<i>your web container group ID</i>	
URI Path	/uwc	
Enable Hosted Domain Support	Checked	
URL of Directory Server	ldap:// <i>your host</i> :389/	
Bind DN	cn=Directory Manager	
Password	–	

DC Tree suffix	<i>your suffix</i>	
Default Domain	<i>your domain</i>	
Enable Access Manager for Single Sign-On	Unchecked	
Webmail Server Host Name	<i>_FQDN of your host</i>	
Webmail Server Port Number	8990	
Enable login in secure mode	Unchecked	
Webmail Server SSL Port Number	8991	
Webmail Admin User ID	–	
Admin Password	–	
Calendar Server Hostname	<i>FQDN of your host</i>	
Calendar Server Port	9004	
Calendar Admin User ID	<code>calmaster</code>	
Calendar Administrator User Password	–	
URL of PAB Directory Server	<code>ldap://FQDN of your host:389/</code>	
Bind As	<code>cn=Directory Manager</code>	
Password	–	

Configuration Worksheets - Convergence

Sun Convergence Configuration Worksheets

Before you configure Convergence, you should gather configuration information.

[Worksheet 1-1](#) lists the configuration options required for Convergence.

[Worksheet 1-2](#) lists the configuration options required by Convergence to be deployed to Sun Java™ System Application Server 9.1 Update 2.

Print and fill out these worksheets to use when responding to the Convergence `init-config` script configuration options.

Worksheet 1-1. Convergence: Configuration Options

Option	Description and Default Value	Fill in Your Site's Value (to Respond to the Script)
Configuration Directory	Directory to store configuration and data files. Default directory (on Solaris and Linux): <code>/var/opt/sun/comms/iwc</code> . This directory should be different than the <code>iwc-base</code> directory. (On Solaris and Linux, this is <code>/opt/sun/comms/iwc</code> by default).	
Convergence server host name	Host name of the machine where the Convergence software is installed. For example: <code>mymachine</code> .	
DNS domain name	The DNS domain for the host machine where the Convergence software is installed. For example: <code>siroe.com</code> .	
Convergence URL	URL where Convergence will be deployed. Enter the portion of the URI following the <code>host name:port number</code> For example: <code>/iwc</code> .	
Hosted domain support?	Select this option only if you have configured hosted domain support for Calendar Server.	
User/Group LDAP URL	Enter the Directory Server host and port where the User/Group is located. The URL should be in the format: <code>ldap://LDAP host name with FQDN:LDAP port number</code> . For example: <code>ldap://siroe.com:389</code>	
Bind DN	Enter the LDAP DN to be used to bind to the Directory Server managing the User/Group data. This is the User/Group Directory Manager. For example: <code>"cn=Directory Manager"</code> .	
Bind password	Password for the Bind DN. Use the password defined in Directory Server for the Bind DN.	

DC Tree suffix	For Schema 1 configurations, this option specifies the base distinguished name (DN) of the DC Tree root suffix. For Schema 2 configurations, this option specifies the base DN of the root suffix under which the User/Group tree is located. You must enter a value for this option whether you are using Schema 1 or Schema 2. For example: <code>o=isp</code>	
Default domain name	When a user logs in to Convergence without including a mail domain component in the user name, this domain is used by default to supply the fully qualified domain name. For example: <code>sesta.com</code> . In this example, if a user logs in as <code>fred</code> , the user name is qualified as <code>fred@sesta.com</code> .	
Webmail host name	Host name where Messaging Server is installed. For example: <code>ms.sesta.com</code> .	
Webmail port number	Messaging Server HTTP (<code>mshttpd</code>) port number. For example, the default is: <code>8990</code> .	
Webmail SSL port number	Messaging Server SSL port number. Only needed if you enable login in secure mode.	
Webmail Admin user ID and password	Messaging Server administrator user ID and password. For example: <code>admin</code> .	
Calendar Server host name	Host name where Calendar Server is installed. For example: <code>cs.siroe.com</code> .	
Calendar Server port number	Calendar Server HTTP port number. For example: <code>8004</code> . Default: <code>80</code> .	
Calendar Server SSL port number	Calendar Server SSL port number. Only needed if you enable login in secure mode.	
Calendar Server Admin user ID and password	Calendar Server administrator user ID and password. For example: <code>calmaster</code> .	
IM domain name	Domain name of the Instant Messaging Server. For example <code>varrius.com</code> .	
IM host name	Host name where Instant Messaging is installed. For example: <code>im.varrius.com</code> .	
IM port number	Instant Messaging HTTP port number. For example: <code>5269</code> . Default: <code>5269</code> .	
IM Httpbind Component JID	Instant Messaging Server <code>httpbind</code> component jid. For example: <code>httpbind.varrius.com</code> .	
IM Httpbind Component password	Instant Messaging Server <code>httpbind</code> component password.	

IM Avatar Component JID	Instant Messaging Server avatar component jid. For example: <code>avatar.varrius.com</code> .	
IM Avatar Component password	Instant Messaging Server avatar component password.	
Convergence administrator username	Administrator username. For example <code>admin</code> .	
Convergence administrator password	Administrator password.	

Worksheet 1-2. Sun Java System Application Server 9.1 Update 2 Configuration Options

These are the Application Server-specific options you are asked to enter when you run the Convergence `init-config` script.

Option	Description	Fill in Your Site's Value (to Respond to the Script)
Application Server 9.1 installation directory	Directory where Application Server is installed. By default, this directory is <code>/opt/SUNWappserver</code> .	
Application Server 9.1 domain directory	By default, this directory is <code>/opt/SUNWappserver/domains/domain1</code> .	
Application Server 9.1 document root directory	By default, this directory is <code>/opt/SUNWappserver/domains/domain1/docroot</code>	
Application Server 9.1 target name	Name of the instance. For example: <code>server</code> .	
Virtual server identifier	Name of the Application Server 9.1 virtual server identifier. For example: <code>server</code> .	
Application Server 9.1 server instance HTTP port number	HTTP port number for the Application Server server instance (target). Default port number: 8080.	
Administration Server port number	Port number for the Administration Server instance for Application Server 9.1. For example: 4848.	
Administrator Server user ID and password.	User ID and password for the Administration Server administrator. User ID example: <code>admin</code>	
Secure Administration Server Instance	You will need to specify whether the HTTP access to the Administration Server instance is secure (HTTPS) or not (HTTP). By default, the Secure Administration Server Instance box shown in the Convergence <code>init-config</code> program is checked. If your access is not secure, uncheck the box.	

Configuration Worksheets - Delegated Administrator

Configuration Worksheets - Delegated Administrator

Print and fill out this worksheet to use when responding to the `config-commda` script configuration options. You use `config-commda` to configure the Delegated Administrator console and utility, which provide user management.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
AM Hostname	<i>FQDN of your host</i>	
AM Port	8080	
Default Domain	<i>your domain</i>	
Default SSL Port	443	
Web Container	WEB	
Web Container Install Root Directory (for DA Console)	<code>/opt/SUNWwbsvr7</code>	
Instance Root Directory	<code>/var/opt/SUNWwbsvr7</code>	
Server Instance Identifier	<i>FQDN of your host</i>	
Virtual Server Identifier	<i>FQDN of your host</i>	
Web Server HTTP Port	80	
Administration Server Port	8800	
Administrator User ID	admin	
Administrator Password	–	
Secure Administration Server Instance?	Unchecked	
Default Domain Separator	@	
Access Manager Base Directory	<code>/opt/SUNWam</code>	
Web Container Install Root Directory (for DA Server)	<code>/opt/SUNWwbsvr7</code>	
Instance Root Directory	<code>/var/opt/SUNWwbsvr7</code>	
Server Instance Identifier	<i>FQDN of your host</i>	
Virtual Server Identifier	<i>FQDN of your host</i>	
Web Server HTTP Port	80	
Administration Server Port	8800	
Administrator User ID	admin	
Administrator Password	–	

Secure Administration Server Instance?	Unchecked	
URL of Directory Server	ldap://FQDN_of_your_host_:389	
Bind As	cn=Directory Manager	
Password	–	
AM Top level admin	amadmin	<i>this value is hard-coded by AM</i>
AM admin password	–	
Access Manager Internal LDAP Auth Username	amldapuser	<i>this value is hard-coded by AM</i>
AM Internal LDAP Auth Password for amldapuser	–	
Organization DN	o= <i>yourDefaultDomain</i> ,o=ug_root_suffix_	
Top Level Admin for Delegated Administrator	admin	
Password	–	
Load Sample Service Packages	Y	
Load Sample Organizations	Y	
Preferred Mailhost for Sample	<i>FQDN of your host</i>	

Configuration Worksheets - Instant Messaging

Configuration Worksheets - Instant Messaging

You should gather this information before you begin. You will be prompted for some or all of the information depending on the components you installed.

Print out the following worksheet and write the values for your deployment in the space provided. You can reuse this checklist for multiple installations of Instant Messaging. This table contains passwords and other sensitive information, so you should store this information in a safe place.

(Solaris Only) If you will be configuring High Availability service for Instant Messaging, see [Instant Messaging HA Overview](#) for specific information about values you can use for these parameters and additional parameters for your checklist.

Configuration Parameters for Instant Messaging

Parameter	Description	Your Value
Installation Directory	<p><i>im-svr-base</i></p> <p>Directory in which Instant Messaging is installed. By default, Instant Messaging is installed into the <code>/opt</code> directory as follows:</p> <p>Solaris and Linux: <code>/opt/sun/comms/im</code></p> <p>(Solaris Only) If you will be configuring High Availability service for Instant Messaging, see Selecting the Installation Directory (im-svr-base) for information about choosing an installation directory.</p>	
Instant Messaging Server Domain Name	<p>Domain name for the users being served by this server.</p> <p>Default: None</p>	
Multiplexor Port Number (Multiplexor Configuration Only)	<p>The port number on which the Instant Messaging Server listens for incoming requests from Instant Messenger clients.</p> <p>Default: 5222</p>	
Multiplexed XMPP Port	<p>Port on which the server listens for multiplexor connections</p> <p>Default: 45222</p>	
Disable Server	<p>Select this option if the instance you installed will act as a multiplexor and not a server. If you select this option, you must provide a value for Remote Instant Messaging Server Host Name.</p>	

Remote Instant Messaging Server Host Name (Multiplexor Configuration Only)	<p>The host name of the Instant Messaging Server for which this multiplexor routes messages. If the multiplexor and server are installed on the same host, use <code>localhost</code>. (Solaris Only) If you will be configuring High Availability service for Instant Messaging, use the logical host's name.</p> <p>Dependencies: The Disable Server parameter must be selected, that is, server functionality is disabled.</p>	
Enable Email Integration, Enable Email Archiving (Optional)	<p>If selected, enables Instant Messaging email archiving. Sun Java System Portal Server search-based archiving for Instant Messaging.</p> <p>Dependencies: SMTP Server such as Sun Java System Messaging Server</p> <p>Alternatively, you can manually enable Sun Java System Portal Server search-based archiving for Instant Messaging.</p> <p>Dependencies: Sun Java System Portal Server and Sun Java System Access Manager.</p>	
LDAP Host Name	<p>In a deployment with an LDAP server, the host name of the LDAP server that contains user and group information for Instant Messaging. For example, <code>directory.siroe.com</code>.</p> <p>Dependencies: LDAP server such as Sun Java System Directory Server.</p>	
LDAP Port Number	<p>In a deployment with an LDAP server, the port number on which the directory server listens for incoming requests. For example, <code>389</code></p> <p>Dependencies: LDAP server such as Sun Java System Directory Server.</p>	
Bind DN	<p>In a deployment with Sun Java System Access Manager, during installation, you must provide the Directory Manager Bind DN and password. This Bind DN is used to update the directory schema with the Instant Messaging and presence service templates and attributes only. This requires Directory Manager access. The Directory Manager Bind DN and password are not saved or used beyond installation and initial configuration.</p> <p>In a deployment with an LDAP server but without Access Manager, Instant Messaging uses this Bind DN to search users and groups in the directory. Leave this blank if the directory can be searched anonymously. You can change the bind credentials later if required as described in To Configure Bind Credentials for the Instant Messaging Server.</p> <p>Dependencies: LDAP server such as Sun Java System Directory Server.</p>	
Bind Password	<p>In a deployment with an LDAP server, the Bind DN password.</p>	
SMTP Server Host Name (Optional)	<p>The host name of the SMTP server used to send email notification of messages to offline users. For example, <code>mail.siroe.com</code>. If the SMTP server does not use port 25, specify the port along with the host name. For example, if the SMTP server uses port 1025:</p> <p><code>mail.siroe.com:1025</code></p> <p>Dependencies: SMTP server such as Sun Java System Messaging Server.</p>	

<p>Database, Logs, and Runtime Files Pathname</p>	<p>The location where the runtime files, database, and logs are stored. Also referred to as <i>im-runtime-base</i>. Runtime files are read, created, and modified by the server during its normal operations. Some examples include log files, and persistent state information tied to client actions such as alert messages, roster information, conferences, news channels, and so on.</p> <p>If you are configuring High Availability (HA) for Instant Messaging, this path must be globally available. See Chapter 4, Configuring Instant Messaging for High Availability (Solaris Only) for more information about HA.</p> <p>The <code>configure</code> utility appends a directory (<code>/default</code>) to the path you provide for the runtime files. The name of this directory is the instance to which the runtime files apply. Later, you can create multiple instances of Instant Messaging by creating additional instance directories with different names (for example <code>/secure</code>) and copying over files from the <code>/default</code> instance runtime directory. See Creating Multiple Instances from a Single Instant Messaging Installation for specific instructions.</p> <p>If you accept the following defaults when you run <code>configure</code>:</p> <p>Solaris and Linux: <code>/var/opt/sun/comms/im/</code></p> <p>The <code>configure</code> utility creates the following directories for the runtime files:</p> <p>Solaris and Linux: <code>/var/opt/sun/comms/im/default</code></p> <p>In addition, the following two subdirectories are created under the runtime directory.</p> <p>The database directory (<i>im-db-base</i>) defaults are as follows:</p> <p>Solaris and Linux: <code>/var/opt/sun/comms/im/default/db</code></p> <p>The log directory defaults are as follows:</p> <p>Solaris and Linux: <code>/var/opt/sun/comms/im/default/log</code></p>	
<p>Resources, Help Files, and HTTP Gateway Pathname</p>	<p>Resource Directory.</p> <p>The directory in which the resource files, online help, and the XMPP/HTTP Gateway are installed.</p> <p>If you want to customize the resource files for your deployment, you should run <code>configure</code> utility, customize the files, then redeploy the resource files. You need to run <code>configure</code> first because the <code>configure</code> utility creates some of the index and <code>.jnlp</code> files that you can customize. See Redeploying Resource Files for information.</p> <p>Default: <code>im-svr-base/html</code></p>	

<p>XMPP/HTTP Gateway Deployment</p>	<p>Determines whether or not the XMPP/HTTP gateway will be deployed. If you choose to deploy the gateway, the <code>configure</code> utility creates a default gateway configuration file (<code>httpbind.conf</code>) in the default Instant Messaging server instance's <code>im-cfg-base</code> directory if one does not already exist. If <code>httpbind.conf</code> already exists, the <code>configure</code> utility does not alter or overwrite the file.</p> <p>Default:</p> <p>True (gateway is deployed)</p> <div style="background-color: #ffffcc; padding: 10px; margin-top: 10px;"> <p> Note: If you are configuring the Instant Messaging Server to support Convergence, do not enable the XMPP/HTTP Gateway Deployment here. Set this value to <code>false</code>. The XMPP/HTTP Gateway is deployed through the Convergence server; its value is set when you configure Convergence.</p> </div>	
<p>XMPP/HTTP Gateway URI</p>	<p>Defines the URI for the HTTP component of the XMPP/HTTP gateway.</p> <p>Default:</p> <p><code>http://web-svr-host:80/httpbind</code></p>	
<p>Codebase</p>	<p>The URL from which Instant Messenger accesses resources, including the start page for initial downloads of the Instant Messaging client.</p> <p>The installation program installs the resource files into the following locations:</p> <p>Solaris and Linux: <code>//opt/sun/comms/im/html</code></p> <p>The <code>configure</code> utility uses the codebase to determine which web container instance to use. If it succeeds, the <code>configure</code> utility deploys the Instant Messenger resources as a web application in the web container, according to the URL provided. If no supported web container is detected, you will be prompted for a file system location in which to copy or link the resources.</p> <p>See your web container documentation for more information about deploying resource files as a web application. See Changing the Codebase if you need to modify the location of the resource files after initial configuration.</p>	

Configuration Worksheets - Messaging Server

Messaging Server configure Script Worksheet

Print and fill out this worksheet to use when responding to the Messaging Server `configure` script configuration options.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Fully Qualified Host Name (FQHN)	<i>your host.your domain</i> For example: <code>myhost.west.sesta.com</code>	
Directory to store Messaging Server configuration and data files	<code>/var/msg-svr-base</code>	
System user name that will own the configuration files	<code>mailsrv</code>	
System group that will own the configuration files	<code>mail</code>	
User/Group Server LDAP	<code>ldap://your host:389</code>	
Bind As	<code>cn=Directory Manager</code>	
Password	–	
Postmaster email address	–	
Password for Messaging Server accounts	–	
Default email Domain	<i>your domain</i>	
Organization DN	<code>o=your domain,o=suffix</code> Marc, is this correct?	

Configuring a Host to be Multi-Homed

Configuring a Host to be Multi-Homed

In a multiple installation of the same Communications Suite product on the same host, the different instances of the product are initially configured to use the same ports. If you run both instances of the product simultaneously, the ports will conflict.

One solution is to use a different IP address for each installation and configure the host to be multi-homed (accepting multiple IP addresses).

To Change the IP Address for Each Installation

Run the `ha_ip_config` utility. Note that you must configure each installation to use a specific IP address, since the out-of-the-box default is to respond to any IP address (`INADDR_ANY`).

Note: The ENS service that needs a separate step in order to change the IP address it responds to. A workaround for now is to either disable the ENS server for one of the installations (use `local.ens.enable`), or to change the port used by the ENS server. If you don't do this, one of the ENS servers will not start up. This may not be a huge issue at this time since the other ENS server will handle requests.

To Configure the Host to be Multi-Homed

My guess is to edit `/etc/hosts`. For Solaris 10, also edit `/etc/inet/ipnodes`. Next, plumb the IP addresses to the ethernet addresses by using (`ifconfig`). This procedure would be similar on Linux systems.

Next, update your naming service (`/etc/hosts`, `/etc/inet/ipnodes`, NIS, and/or DNS) to recognize the new IP address.

For more information, see the [Solaris 2 FAQ](#).

To Configure Multiple Addresses Per Interface

Solaris 2.x provides a feature in `ifconfig` that allows having more than one IP address per interface. This feature is undocumented but prior to Solaris 2.5 but it exists; it is documented in versions 2.5 and later.

Syntax

```
# This command is only required in later releases
ifconfig IF:N plumb
ifconfig IF:N ip-address up
```

where "IF" is an interface (for example, `1e0`) and N is a number between 1 and .

To remove the pseudo interface and associated address, perform the following:

```
ifconfig IF:N 0.0.0.0 down
# In newer release you must use the following command, but
# beware that this unplumbs your real interface on older
# releases, so try the above command first.
ifconfig IF:N unplumb
```

As with physical interfaces, all you need to do is make the appropriate `/etc/hostname.IF:X` file.

The maximum number of virtual interfaces, above, is 255 in Solaris releases prior to 2.6. Solaris 2.6 and Solaris 2.5.1 with the Solaris Internet Server Supplement (SISS) allow you to set this value with `ndd`, up to a hard maximum of 8192.

```
/usr/sbin/ndd -set /dev/ip ip_addrs_per_if 4000
```

There is no limit inspired by the code; so if you bring out `adb` you can increase the maximum even further.

Multi-Home Example

In the following example creates a multi-home on the host `myhost`.

Begin by creating the new interface:

```
# ifconfig -a
lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL> mtu
8232 index 1
    inet 127.0.0.1 netmask ff000000
e1000g0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
    inet 10.1.110.114 netmask ffffffff80 broadcast 10.1.110.127
    ether 0:c:f1:8e:fb:4
# ifconfig e1000g0:1 plumb
# ifconfig -a
lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL> mtu
8232 index 1
    inet 127.0.0.1 netmask ff000000
e1000g0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
    inet 10.1.110.114 netmask ffffffff80 broadcast 10.1.110.127
    ether 0:c:f1:8e:fb:4
e1000g0:1: flags=1000842<BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
    inet 0.0.0.0 netmask 0
# ifconfig e1000g0:1 10.1.110.16 up
```

Set the IP address for the Messaging Server on the alternate root (on `/var/tmp/altroot/opt/SUNWmsg2` in the following example):

```
# cd /var/tmp/altroot/opt/SUNWmsg2
# sbin/ha_ip_config

Please specify the IP address assigned to the HA logical host name. Use
dotted decimal form, a.b.c.d

Logical IP address: 10.1.110.16

Please specify the path to the top level directory in which iMS is
installed.

iMS server root: /var/tmp/altroot/opt/SUNWmsg2

The iMS server root directory does not contain any slapd-*
subdirectories.
Skipping configuration of LDAP servers.

    Logical IP address: 10.1.110.16
    iMS server root: /var/tmp/altroot/opt/SUNWmsg2

Do you wish to change any of the above choices (yes/no) [no]?

Updating the file /var/tmp/altroot/opt/SUNWmsg2/config/dispatcher.cnf
Updating the file
/var/tmp/altroot/opt/SUNWmsg2/config/job_controller.cnf
Setting the service.listenaddr configutil parameter
Setting the service.http.smtphost configutil parameter
Setting the local.watcher.enable configutil parameter
Setting the local.autorestart configutil parameter
Configuration successfully updated
```

Do the same for the Messaging Server on the default root.

```
# cd /opt/SUNWmsg
# sbin/ha_ip_config

Please specify the IP address assigned to the HA logical host name. Use
dotted decimal form, a.b.c.d

Logical IP address: 10.1.110.114

Please specify the path to the top level directory in which iMS is
installed.

iMS server root: /opt/SUNWmsg

The iMS server root directory does not contain any slapd-*
subdirectories.
Skipping configuration of LDAP servers.

        Logical IP address: 10.1.110.114
        iMS server root: /opt/SUNWmsg

Do you wish to change any of the above choices (yes/no) [no]?

Updating the file /opt/SUNWmsg/config/dispatcher.cnf
Updating the file /opt/SUNWmsg/config/job_controller.cnf
Setting the service.listenaddr configutil parameter
Setting the service.http.smtphost configutil parameter
Setting the local.watcher.enable configutil parameter
Setting the local.autorestart configutil parameter
Configuration successfully updated
```

Disable the ENS server on one of the installation by setting local.ens.enable to 0:

```
sbin/configutil -o local.ens.enable -v 0
```

Configure the netmask and broadcast on the new IP address:

```

# ifconfig e1000g0:1 down
# ifconfig e1000g0:1 netmask 0xffffffff80
# ifconfig e1000g0:1
e1000g0:1: flags=1000842<BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
    inet 10.1.110.16 netmask ffffffff80 broadcast 10.255.255.255
# ifconfig e1000g0:1 broadcast 10.1.110.127
# ifconfig -a
lo: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL> mtu
8232 index 1
    inet 127.0.0.1 netmask ff000000
e1000g0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
    inet 10.1.110.114 netmask ffffffff80 broadcast 10.1.110.127
    ether 0:c:f1:8e:fb:4
e1000g0:1: flags=1000842<BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
    inet 10.1.110.16 netmask ffffffff80 broadcast 10.1.110.127
# ifconfig e1000g0:1 up

```

Edit `/etc/hosts` to add the new IP address 10.1.110.16 to it:

```

# cat /etc/hosts
127.0.0.1    localhost
10.1.110.114 myhost.west.sesta.com myhost    loghost
10.1.110.4    elegit.west.sesta.com
# multi-home - second IP address on ethernet port
10.1.110.16    myhost2.west.sesta.com myhost2

```

Configuring Individual Ports

Configuring Individual Ports for Multiple Installations of the Same Product on One Host

In a multiple installation of the same Communications Suite product on the same host, the different instances of the product are initially configured to use the same ports. If you run both instances of the product simultaneously, the ports will conflict.

One solution is to configure the individual ports on each installation so that they are different.

For example, for Messaging Server, you need to change the following ports in one instance:

- SMTP
- IMAP
- POP
- HTTPD
- ENS
- job_controller
- watcher

The ports have SSL versions, too. Also, there may be other ports to use like SMTP SUBMIT.

The best place to look for MTA-related processes is the `dispatcher.cnf` file. `store` and `mshttpd` ports are probably in `configutil`. MMP ports may be in `configutil` and/or its configuration files.

In addition, you can identify ports by taking these actions:

- See [Default Port Numbers](#) in the *Communications Suite Component Products Release Notes*.
- See "Configuring POP, IMAP, and HTTP Services" in the *Messaging Server Administration Guide*.
- You can `grep` the `masterconfig` file (`lib/config.meta`) for "port".
- Query the following `configutil` variables:

Service	configutil variable	default	comments
watcher	local.watcher.port	49994	
metermaid	metermaid.config.port	63837	
IMAP	service.imap.port	143	
IMAP SSL	service.imap.sslport	993	
POP	service.pop.port	110	
POP over SSL	service.pop.sslport	995	
Webmail	service.http.port	80	
Webmail SSL	service.http.sslport	443	
ens	local.store.notifyplugin.ensport	7997	
jmq	local.store.notifyplugin.jmqport	7676	

Connector for Microsoft Outlook 7.3 Update 1 Installation Guide

Sun Java System Connector for Microsoft Outlook 7.3 Update 1 Installation Guide

This guide describes how to install the Sun Java System Connector for Microsoft Outlook. This guide includes the following topics:

- [Installing the Desktop Deployment Toolkit](#)

For upgrade information, refer to [Connector for Microsoft Outlook Upgrade Guide](#) .

Installation Worksheets - Directory Server

Directory Server Settings Worksheet

Print and fill out this worksheet to use when responding to the Directory Server configuration options in the Communications Suite Installer.

Option	Default Value	Fill in Your Site's Value (to Respond to the Installer)
Create a Directory Instance?	Yes	
Instance Directory	<code>/var/opt/SUNWdsee/dsins1</code>	
Directory Instance Port	389	
Directory Instance SSL Port	636	
Directory Manager DN	<code>cn=Directory Manager</code>	
System User	<code>root</code>	
System Group	<code>root</code>	
Directory Manager Password	<i>password from Accounts Preference Panel</i>	
Suffix	<i>dc=your domain,dc=your suffix</i>	

Installing Communications Suite in Silent Mode

Installing Communications Suite in Silent Mode

If you run the installer in Silent mode, you are running a non-interactive session. The installation inputs are taken from a silent installation file (also known as a state file), from command line arguments, or defaults.

You can use silent mode to install multiple instances of the same software component/configuration without having to manually run an interactive installation for each instance.

To run a silent installation, follow these steps:

1. Run an interactive installation session. (See [To Begin Installation](#).) A state file similar to `/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358` is automatically created for every run of the installation.

You can create a silent state file without actually installing the software during the interactive session by using the `--dry-run` option, then modifying the state file. For example:

```
# commpkg install --acceptLicense --dry-run
```

2. Copy the state file to each host machine and edit the file as needed. See [Silent Mode File Format](#).

3. Run the silent installation on each host. For example:

```
# commpkg install --acceptLicense --silent <Input File>
```

where *Input File* is the path and name of the silent state file. For example:

`/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358`.

For details about the `--silent` option, see the silent installation usage in [commpkg usage](#).



Note

Command-line arguments override the values and arguments in the state file.

About Upgrading Shared Components

By default, shared components are not upgraded when you run a silent installation. The option to upgrade shared components in the silent state file is automatically disabled. That is, the option is set to `UPGRADESC=No`. This is true *even* if you explicitly asked to upgrade shared components when you ran the interactive installation that generated the silent state file. That is, you ran `commpkg install --upgradeSC y`.

The reason to disable upgrading shared components in the silent state file is this: the other hosts on which you are propagating the installation may have different shared components installed, or different versions of the shared components. These versions may be required for other applications running on the different hosts. Therefore, it is safer not to upgrade the shared components by default.

You can upgrade shared components when you run a silent installation by taking either of these actions:

- Use the `--upgradeSC y` option when you run the silent installation. (The command-line argument overrides the argument in the state file.)
- Edit the `UPGRADESC=No` option in the silent state file to: `UPGRADESC=Yes`.

Silent Mode File Format

The silent mode file (also known as a state file) is formatted like a property file: blank lines begin with a number sign (#) and properties are key/value pairs separated by an equals (=) sign. You can change the following parameters:

- `VERB`— indicate which function to perform. For example `VERB=install`

You can add CLI arguments described in [commpkg usage](#), however the `--dry-run` argument cannot be added to the `install` function in the state file.

- `ALTDISTROPATH`— indicate an alternate distro path if `--distro` is not specified. For example, `ALTDISTROPATH=SunOS5.10_i86pc_DBG.OBJ/release`
- `PKGOVERWRITE`— set this flag if you want to overwrite the existing installation packages. For example, `PKGOVERWRITE=YES`
- `INSTALLROOT`— specify installation root. For example, `INSTALLROOT=/opt/sun/comms`
- `ALTROOT`— set this flag if you want to use an alternate root. For example, `ALTROOT=yes`
- `EXCLUDEEOS`— set this flag if you don't want to upgrade Operating System patches. For example, `EXCLUDEEOS=YES`
- `COMPONENTS`— list the components you want to install.* For example:
 - `COMPONENTS=MS64` for 64-bit Messaging Server.
 - `COMPONENTS=MS64_L10N` for localized 64-bit Messaging Server.
 - `COMPONENTS=MS` for 32-bit Messaging Server.
 - `COMPONENTS=MS_L10N` for localized 32-bit Messaging Server.
 - `COMPONENTS=CS` for Calendar Server.
- `ACCEPTLICENSE`— indicate whether or not to accept license. For example, `ACCEPTLICENSE=yes`.

This property must be specified either in the state file or as a command line argument.

- `UPGRADESC`— indicate whether all shared components should or should not be upgraded without prompting. For example, `UPGRADESC=no`

* To display a complete list of the product names (such as MS, MS64, CS) to use with the `COMPONENTS` property, run the `commpkg info --listPackages` command. This command displays the mnemonics for each product.

Installing Communications Suite on Solaris Zones

Installing Communications Suite on Solaris Zones

This section explains how to install Communications Suite on Solaris 10 Zones. For an overview of Solaris 10 with Communications Suite, see [Overview of Solaris Zones](#) in *Sun Java Communications Suite 5 Installation Guide*.

This page includes the following topics:

- [Installing on Solaris 10 Zones: Best Practices](#)
- [Solaris 10 Zones Installation Sequences](#)
- [Guidelines for Using SunCluster HA Packages in a Non-Global Zone](#)

Installing on Solaris 10 Zones: Best Practices

You can install Communications Suite components in the global zone, whole root non-global zones, and sparse non-global zones. Follow these guidelines:

- Treat the global zone as an "administration zone". Install shared components and OS patches there that will be shared among all zones. But don't install and run products from the global zone.
- You can have different shared component versions in the whole root non-global zone, but it isn't entirely insulated. If you do a packaging/patch operation in the global zone for a shared component, that operation will be attempted in the whole root zone. So if you really want different shared component versions then an alternate root would be one way to go. Unfortunately, you can't use alternate root for this purpose because of a bug (6548217) in Messaging Server.
- You could try just having whole root zones and never ever installing and patching shared components in the global zone. I don't know how realistic it is to believe that you'll never have to install or patch a shared component in the global zone. For example, NSS is a shared component, but it is part of Solaris. So to say you'll never install and patch it in the global zone seems unrealistic, especially given it is a security component.
- In sparse non-global zones, shared components can not be installed into the default root because many of them install into a readonly shared filesystem (/usr). Thus you must run the installer in the global zone to install shared components into the default root. Prepend your selection with ~ in the global zone to install only the dependencies (i.e. shared components). You do not have to install in the global zone first before installing in the sparse zone, the installer will allow you to continue even when you don't install all the dependencies.

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Solaris 10 Zones Installation Sequences

This section describes how to install Communications Suite components in the four Solaris 10 Zone scenarios:

- Global zone with existing non-global zones
- Global zone with no existing non-global zones
- Non-global whole root zone
- Non-global sparse root zone

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Global zone with existing non-global zones



Note

This Zone scenario is not recommended for Communications Suite implementation. It requires the same version of shared components be running on each zone. Furthermore, the global zone should be reserved for administrative zone support.

If you install Communications Suite components in a global zone with existing non-global zones, you install the appropriate OS patches, shared component patches, and Communications Suite components into the global zone. It will propagate the shared component patches into the non-global zones. To install Communications Suite in a global zone with existing non-global zones:

1. Follow pre-installation requirements as described in [Installation Overview](#).
2. Run the installer in the global zone by following the steps in [To Begin Installation](#).

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Global zone with no existing non-global zones

If you install Messaging Server in a global zone with no existing non-global zones, you need to prepare your installation as if you might add non-global zones in the future. Modifying your deployment at a later time becomes difficult if you don't plan for this step. To do this, follow the steps in [Global zone with existing non-global zones](#).

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Non-global whole root zone

The non-global whole root zone scenario is the equivalent of installing Messaging Server on a single box with no zones. Simply install Communications Suite as described in [To Begin Installation](#).



Caution

Any operations performed in the global zone (such as installations, uninstallations, and patching) affects the whole root zones.

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Non-global sparse root zone

To install Communications Suite in a non-global sparse root zone, you first need to install/upgrade the applicable OS patches and shared components in the global zone. You are unable to do so in the sparse root zone, because the `/usr` directory (where the shared components reside) is a read-only directory in the sparse root zone.

1. Follow pre-installation requirements as described in [Installation Overview](#).
2. Verify that you are about to install the shared components and OS patches in the global zone and not the sparse root zone.
3. Run the installer in the global zone and only install/upgrade the OS patches and the Shared Components:

```
commpkg install -upgradeSC y
```

4. Do not install Communications Suite components in the global zone. To do this, add a `~` (tilde) to the component number you want to install in the sparse zone. For example, if you plan to install Messaging Server in the sparse zone, you select `~3` during the global zone installation. The installer will know to only install dependencies and not the product itself.

5. Once you have the shared components and OS patches installed, install Communications Suite components in the sparse root zone by following the steps in the [To Begin Installation](#) section.

Guidelines for Using SunCluster HA Packages in a Non-Global Zone

Take the following steps to install the Communications Suite 6 Update 1 Sun Cluster HA agent in non-global zones:

1. Run the Communications Suite command in the global zone only:

```
# commpkg install
```

This command installs the Sun Cluster HA Agent package on global zone and all non-global zones.



Note

In case of IM_SCHA, run the command from global and non-global zones.

2. Run the Sun Cluster HA Agent pre-configuration command in the global zone only:

```
# <scha_base>/bin/init-config
```

Performing Multiple Installations with an Alternate Root

Performing Multiple Installations with an Alternate Root

The Communications Suite installer allows multiple installations of the same product version on the same machine or Solaris zone by using different *INSTALLROOTS*. By using the `altroot` option of the `commpkg install` command, you can create multiple *INSTALLROOTS* on the same machine.

This document contains the following sections:

- [Using Multiple Installations in a Side-by-Side Upgrade Scenario](#)
- [To Install a Communications Suite Product in an Alternate Root](#)
- [Understanding *INSTALLROOT* and Altroot](#)
- [Running Multiple Installations of the Same Product on One Host: Conflicting Ports](#)

Using Multiple Installations in a Side-by-Side Upgrade Scenario

The multiple-installation feature lets you perform side-by-side upgrades of some Communications Suite products.

In a side-by-side upgrade, the existing software on the host can continue to run while you install the new versions of the products on an alternate root on the same host. This approach minimizes downtime, so that end users can have continuous (or near-continuous) access to their email, calendars, and so on.

Summary of Side-by-Side Upgrade Steps

In a side-by-side upgrade scenario, you perform the following tasks:

1. Install the new Communications Suite software on the same host as the earlier versions. You can use the `commpkg install` commands shown in [To Install a Communications Suite Product in an Alternate Root](#).
2. Configure the new software. Run the configuration script for the product.
3. Migrate data to the new directories under the alternate root's *INSTALLROOT*.
4. Configure alternate ports for the new installation under the alternate root. Alternatively, configure the host as a multi-home. For details, see [Running Multiple Installations of the Same Product on One Host - Conflicting Ports](#).
5. Test the new software.
6. Switch end users to the new environment.

For more information about the side-by-side upgrade scenario, see [Using the Side-by-Side Strategy to Upgrade Messaging Server](#).

To Install a Communications Suite Product in an Alternate Root

Install the product in the alternate root with the `-altroot` option:

1. Install OS patches and Shared Components in the default *INSTALLROOT*. See [To Begin Installation](#).

To install only the shared components, you can run `commpkg install` without `--altroot` and select the product you want to install. You select a product by entering the number displayed next to it in the install list. Add a `~` (tilde) in front of the product number.

For example, if you plan to install Messaging Server in the alternate root, you select `~3` during the default installation. This tells the installer to install the dependencies but not the product itself.

Note
OS patches are always applied in the default `INSTALLROOT`, never in the alternate root.

2. Install the product in the `altroot`, as in the following example:

```
commpkg install --altroot --installroot /opt/sun/comms2
```

Be sure to use `--installroot` with `--altroot` to specify the alternate root.

You can also avoid installing the shared components in the `altroot` by using the `--excludeSC` option, as in the following example:

```
commpkg install --excludeSC --altroot --installroot /opt/sun/comms2
```

You may create as many alternate roots as you like. However, you should manually keep track of all the alternate roots you have created.

Understanding *INSTALLROOT* and *Altroot*

The following concepts define an `altroot`:

- An `altroot` is an alternate root directory.
- The `altroot` is used for multiple installations of Communications Suite products on the same host.
- The default root is the standard root directory, which can be indicated with a `/`.
- An `altroot` implies the existence of a default root.

The following concepts define an *INSTALLROOT*:

- An *INSTALLROOT* is the top-level installation path for the Communications Suite products and shared components.
- There is an *INSTALLROOT* (an installation path) for each instance of the installed products. That is, if your system has a default root and an `altroot`, the default root has one *INSTALLROOT*, and the `altroot` must have a different *INSTALLROOT*.

Now let's put them together:

- You *define* an `altroot` by specifying its `INSTALLROOT` and using the `--altroot` option with the `commpkg install` command.

What's the Default?

If you use the default root and the default `INSTALLROOT`, the `commpkg install` command installs products under the following top-level directory:

```
/opt/sun/comms/
```

An Example

Now suppose you want to install one instance of the products in `/opt/sun/mycompany/comms/`; and another instance of the same products in `/opt/sun/mycompany/comms2/`. You would use the following commands:

For the default root:

```
commpkg install --installroot /opt/sun/mycompany/comms/
```

For the `altroot`:

```
commpkg install --altroot --installroot /opt/sun/mycompany/comms2/
```

Running Multiple Installations of the Same Product on One Host: Conflicting Ports

By default, after you initially configure the product on alternate roots, the ports used by the different product installations are the same and thus conflict with each other.

This is not a problem if you install multiple installations of the same product on the same host but only intend to have one instance running at one time. For example, you may perform a side-by-side upgrade scenario in which you plan to stop the old instance before you start the new instance.

However, you may plan to test the new instance while the old instance is still running (and supporting end users). In this scenario, the ports are used simultaneously.

There are two ways to resolve this conflict:

- Configure individual ports
- Use a multi-home configuration

These approaches are described in the following sections.

Configuring Individual Ports

See [Configuring Individual Ports for Multiple Installations of the Same Product](#).

Configuring a Host to Be Multi-Homed

See [Configuring a Host to be Multi-Homed](#).

Sample Session - Communications Suite 6 Update 1 Install Using altroot

Sample Session - Communications Suite 6 Update 1 Install Using altroot

This sample session shows an install and uninstall of Communications Suite 6 Update 1 by running the Communications Suite installer, `commpkg`, with the `altroot` option. Note that you can uninstall an `altroot` simply by removing the entire `altroot`.

This document contains the following topics:

- [Summary of Commands Run](#)
- [Session](#)
- [Comments](#)

Summary of Commands Run

```
(70 root) ./commpkg info
(71 root) cat /etc/softlist.xml
(72 root) ./commpkg install --acceptLicense /opt/altroot
(73 root) cat /etc/softlist.xml
(74 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20090120102227
(75 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120102227
root) cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20090120102227.log
root) ./commpkg info
(78 root) ./commpkg uninstall /opt/altroot
(79 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120102227
root) cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_200901201022831.log
root) ./commpkg info
(82 root) cat /etc/softlist.xml
(83 root) ls /opt/altroot
(84 root) \rm -rf /opt/altroot
(85 root) ./commpkg info
(86 root) cat /etc/softlist.xml
```

Session

```
(70 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090120102203.log
=====
Detecting Installed Products...
Detecting Installed Patches...
```

```

NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTRoot: /
        NAME: <none>

(71 root) cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
<!-- Last Update: Tue Jan 20 10:11:27 PST 2009 -->
<!-- By: /var/tmp/ci61 ./commpkg -->

<multi-inst-list>
  <install root="/" suite="comms" />
</multi-inst-list>
(72 root) ./commpkg install --acceptLicense /opt/altroot
-- LOGFILE: /tmp/CommsInstaller_20090120102227.log
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone

CommsInstaller version 6.1-0.01 built on Wed Dec 10 12:33:59 PST 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

=====
INFO: altroot mode is activated.
-- Creating /opt/altroot
=====
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
          has not been applied. Specifically the following
          patches are missing:
          119254-58 120011-14
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster
Do you want to continue ? [yes] :
=====
Product Selection:

Shared Components (not shown) will be installed as required.
  you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Services Products:

```

Item	Description
1	Messaging Server 7u1 (7.0-3.01)
2	Messaging Server (64bit) 7u1 (7.0-3.01)
3	Comms DSsetup 6.4 (6.4-3.01)
4	Comms Delegated Administrator 6.4 (6.4-3.01)
5	Calendar Server 6.3 (6.3-11.01)
6	Instant Messaging 8 (8.0-00.06)
7	Communications Express 6.3 (6.3-11.01)
8	Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
9	Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
10	Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
11	Convergence 1 (1.0-4.01)

Enter the items you wish to install. Enter q to quit.
 Prefix an item with ~ to indicate you only want
 to install shared component dependencies of that product
 You can enter multiple items using commas to separate them.
 For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]:

=====

Generating list of things to install...

Checking for Shared Component Upgrade Requirements...

=====

```

WILL INSTALL: Instant Messaging API 8
WILL INSTALL: LDAPJDK 4.19
WILL INSTALL: International Components for Unicode ICU2,ICU3
WILL INSTALL: NSS/NSPR/JSS 4.2.6
WILL INSTALL: LDAPCSDK6 6.0
WILL INSTALL: LDAPCSDK6 Tools 6.0
                to /opt/altroot/directory
WILL INSTALL: Simple Authentication and Security Layer 2.19
WILL INSTALL: Messaging Server 7u1 (7.0-3.01)
                to /opt/altroot/messaging
WILL INSTALL: Messaging Server (64bit) 7u1 (7.0-3.01)
                to /opt/altroot/messaging64
WILL INSTALL: Comms DSsetup 6.4 (6.4-3.01)
                to /opt/altroot/dssetup
WILL INSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
                to /opt/altroot/da
WILL INSTALL: Calendar Server 6.3 (6.3-11.01)
                to /opt/altroot/calendar
WILL INSTALL: Instant Messaging 8 (8.0-00.06)
                to /opt/altroot/im
WILL INSTALL: Communications Express 6.3 (6.3-11.01)
                to /opt/altroot/ce
WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                to /opt/altroot/msg_scha
WILL INSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
                to /opt/altroot/cs_scha
WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                to /opt/altroot/im_scha
WILL INSTALL: Convergence 1 (1.0-4.01)

```

```

        to /opt/altroot/iwc
WILL INSTALL: CommsInstaller 6u1 (6.1-0.01)
        to /opt/altroot/CommsInstaller
WILL INSTALL: JDK 1.6.0
WILL INSTALL: Java Help Runtime 2.0
WILL INSTALL: Message Queue 4.1
=====
Ready to install

Do you want to continue ? [yes] :

=====
Installing Instant Messaging API 8...
----- Executing Task 1 of 52 ...

=====
Installing LDAPJDK 4.19...
----- Executing Task 2 of 52 ...

=====
Installing International Components for Unicode ICU2,ICU3...
----- Executing Task 3 of 52 ...

=====
Installing NSS/NSPR/JSS 4.2.6...
----- Executing Task 4 of 52 ...
----- Executing Task 5 of 52 ...
----- Executing Task 6 of 52 ...
----- Executing Task 7 of 52 ...
----- Executing Task 8 of 52 ...
----- Executing Task 9 of 52 ...

=====
Installing LDAPCSDK6 6.0...
----- Executing Task 10 of 52 ...
----- Executing Task 11 of 52 ...

=====
Installing LDAPCSDK6 Tools 6.0...
----- Executing Task 12 of 52 ...

=====
Installing Simple Authentication and Security Layer 2.19...
----- Executing Task 13 of 52 ...

=====
Installing Messaging Server 7u1 (7.0-3.01)...
----- Executing Task 14 of 52 ...

=====
Installing Messaging Server (64bit) 7u1 (7.0-3.01)...
----- Executing Task 15 of 52 ...

=====
Installing Comms DSsetup 6.4 (6.4-3.01)...
----- Executing Task 16 of 52 ...

```

```

=====
Installing Comms Delegated Administrator 6.4 (6.4-3.01)...
----- Executing Task 17 of 52 ...
----- Executing Task 18 of 52 ...

=====
Installing Calendar Server 6.3 (6.3-11.01)...
----- Executing Task 19 of 52 ...
----- Executing Task 20 of 52 ...

=====
Installing Instant Messaging 8 (8.0-00.06)...
----- Executing Task 21 of 52 ...
----- Executing Task 22 of 52 ...
----- Executing Task 23 of 52 ...
----- Executing Task 24 of 52 ...
----- Executing Task 25 of 52 ...
----- Executing Task 26 of 52 ...
----- Executing Task 27 of 52 ...
----- Executing Task 28 of 52 ...

=====
Installing Communications Express 6.3 (6.3-11.01)...
----- Executing Task 29 of 52 ...

=====
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
----- Executing Task 30 of 52 ...

=====
Installing Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)...
----- Executing Task 31 of 52 ...

=====
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
----- Executing Task 32 of 52 ...

=====
Installing Convergence 1 (1.0-4.01)...
----- Executing Task 33 of 52 ...

=====
Installing CommsInstaller 6u1 (6.1-0.01)...
----- Executing Task 34 of 52 ...

=====
Installing JDK 1.6.0...
----- Executing Task 35 of 52 ...
----- Executing Task 36 of 52 ...
----- Executing Task 37 of 52 ...
----- Executing Task 38 of 52 ...
----- Executing Task 39 of 52 ...

=====
Installing Java Help Runtime 2.0...

```

```

----- Executing Task 40 of 52 ...
----- Executing Task 41 of 52 ...
----- Executing Task 42 of 52 ...
----- Executing Task 43 of 52 ...

=====
Installing Message Queue 4.1...
----- Executing Task 44 of 52 ...
----- Executing Task 45 of 52 ...
----- Executing Task 46 of 52 ...
----- Executing Task 47 of 52 ...
----- Executing Task 48 of 52 ...
----- Executing Task 49 of 52 ...
----- Executing Task 50 of 52 ...
----- Executing Task 51 of 52 ...
----- Executing Task 52 of 52 ...
-----
SUMMARY:

All tasks PASSED

Checking JES java symlink...
INFO: /etc/softlist.xml updated

Hit Return to Continue:
=====

NOTICE: To undo the installation, run the commands in:

/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20090120102227

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120102227
LOGFILE created in:

/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20090120102227.log
root) cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
<!-- Last Update: Tue Jan 20 10:26:40 PST 2009 -->
<!-- By: /var/tmp/ci61 ./commpkg -->

<multi-inst-list>
  <install root="/" suite="comms" />
  <install root="/opt/altroot" suite="comms" />
</multi-inst-list>
(74 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20090120102227
#! /bin/sh
# Note that only tasks that PASSED are undone
# For reference, tasks that FAILED or are irreversible are in comments
# WARNING WARNING WARNING
# Executing irreversible tasks may result in a non-functional system!!!
ADMIN=/opt/altroot/var/opt/CommsInstaller/logs/admin.quiet

```

```

set -v
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqcdv
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqcrt
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqfs
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqjx
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqum
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqdc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqr
#####
# Finished Undo of: Installing Message Queue 4.1...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhdoc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhdem
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhdev
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhrt
#####
# Finished Undo of: Installing Java Help Runtime 2.0...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWj6cfg
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWj6dvx
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWj6dev
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWj6rtx
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWj6rt
#####
# Finished Undo of: Installing JDK 1.6.0...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWcomms
#####
# Finished Undo of: Installing CommsInstaller 6ul (6.1-0.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiwc
#####
# Finished Undo of: Installing Convergence 1 (1.0-4.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimsc
#####
# Finished Undo of: Installing Instant Messaging Sun Cluster HA agent
7.3 (7.3-01.02)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWscics
#####
# Finished Undo of: Installing Calendar Server Sun Cluster HA agent 6.3
(6.3-1.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWmessaging-server-scha
#####
# Finished Undo of: Installing Messaging Server Sun Cluster HA agent 7.0
(7.0-0.03)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWuwc
#####
# Finished Undo of: Installing Communications Express 6.3 (6.3-11.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimgw

```

```

pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimd
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimc
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimid
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimjd
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimm
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimin
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiim
#####
# Finished Undo of: Installing Instant Messaging 8 (8.0-00.06)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWica5
pkgrm -R /opt/altroot -n -a $ADMIN SUNWics5
#####
# Finished Undo of: Installing Calendar Server 6.3 (6.3-11.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWcomis
pkgrm -R /opt/altroot -n -a $ADMIN SUNWcomic
#####
# Finished Undo of: Installing Comms Delegated Administrator 6.4
(6.4-3.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWcomds
#####
# Finished Undo of: Installing Comms DSsetup 6.4 (6.4-3.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWmessaging-server-64
#####
# Finished Undo of: Installing Messaging Server (64bit) 7ul
(7.0-3.01)...
#####
pkgrm -R /opt/altroot -n -a $ADMIN SUNWmessaging-server
#####
# Finished Undo of: Installing Messaging Server 7ul (7.0-3.01)...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWsas1
#####
# Finished Undo of: Installing Simple Authentication and Security Layer
2.19...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWldapcsdk-tools
#####
# Finished Undo of: Installing LDAPCSK6 Tools 6.0...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWldapcsdk-dev
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWldapcsdk-libs
#####
# Finished Undo of: Installing LDAPCSK6 6.0...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWtlsu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWtlsd
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWtls
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWprd
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWpr
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjss
#####
# Finished Undo of: Installing NSS/NSPR/JSS 4.2.6...

```

```

#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWicu
#####
# Finished Undo of: Installing International Components for Unicode
ICU2,ICU3...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWljdk
#####
# Finished Undo of: Installing LDAPJDK 4.19...
#####
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimdv
#####
# Finished Undo of: Installing Instant Messaging API 8...
#####
(75 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_200901201022
Silent File for CommsInstaller 6.1-0.01
# Generated on 20090120102227
#

#
# NOTE: You must set ACCEPTLICENSE=yes below or alternatively
#       use --acceptLicense on the command line
#
#
# verb used to create this silent file
#
VERB=install

#
# alternate distro path if not found where compkg resides
#   and no --distro switch specified is
#
ALTDISTROPATH=/var/tmp/ci61

#
# The installation root
#
INSTALLROOT=/opt/altroot

#
# flag to indicate whether to use alternate root install mode
#
ALTROOT=yes

#
# flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEEOS=no

```

```

#
# flag to indicate whether to exclude shared components
#
EXCLUDEESC=no

#
# flag to indicate acceptance of the software license
#
ACCEPTLICENSE=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADEESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# list of components (using mnemonics)
# A ~ in front of the product indicates that only the shared
# components are installed
#
COMPONENTS=MS MS64 DSSETUP DA CS IM CE MS_SCHA CS_SCHA IM_SCHA IWC
COMPONENT_VERSIONS=
(76 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20090120102227.log
LOGFILE started Tue Jan 20 10:22:27 2009 =====
LOGFILE = /tmp/CommsInstaller_20090120102227.log
Running /usr/bin/perl ./commpkg --acceptLicense /opt/altroot
-- /usr/bin/perl ./commpkg install --acceptLicense /opt/altroot
-- perl version: 5.008004 pid: 14363
-- basetime: 1232475747 Tue Jan 20 10:22:27 2009
-- scriptDir: /var/tmp/ci61
-- LOGFILE: /tmp/CommsInstaller_20090120102227.log
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
-- Exit status: 0
!!! ENV
$VAR1 = {
    'CAPSAVE' => '/home/dl111122/.termcap',
    'PS1' => '# ',
    'LINES' => '55',
    'COLUMNS' => '80',
    'PWD' => '/var/tmp/ci61',
    'USER' => 'dl111122',
    'VISUAL' => 'gnuclient',
    'LOGNAME' => 'dl111122',
    'EMACS' => 't',
    'REMOTE' => '/home/dl111122/.remote',
    'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc:./:/home/dl111122/bin:/new/local/bin

```

```

'EMACS_TYPE' => 'pc',
      'EMACSPACKAGEPATH' => '/new/local/lib/xemacs/xemacs-packages',
      'MORE' => '-c',
      'TERM' => 'emacs',
      'PAGER' => 'cat',
      'LM_LICENSE_FILE' =>
'/usr/dist/share/devpro_lic,v1.0/license_dir/sunpro.lic.site,1',
      'HOME' => '/home/dl111122',
      'LD_LIBRARY_PATH' => '/usr/dt/lib:/usr/openwin/lib',
      'MANPATH' =>
'/usr/cluster/man:/tools/ns/man:/usr/openwin/man:/usr/man',
      'TERMSAVE' => 'emacs',
      'CDPATH' => '.....:/home/dl111122',
      'EDITOR' => 'gnuclient',
      'MAIL' => '/var/mail/dl111122',
      'TZ' => 'US/Pacific',
      'ESHELL' => '/bin/csh',
      'INFOPATH' =>
'/new/local/info:/new/local-generic/share/emacs/19.34/info:/usr/local/info'
'MOTIFHOME' => '/usr/dt',
      'CVSROOT' =>
':pserver:dl111122@redcvs.red.iplanet.com:/m/src',
      'OPENWINHOME' => '/usr/openwin',
      'RCSINIT' => '-zLT',
      'SHELL' => '/bin/csh',
      'HZ' => '100',
      'TERMCAP' => '/home/dl111122/.termcap'
};
cat /etc/release 2>&1

                Solaris 10 6/06 s10s_u2wos_08 SPARC
                Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
                Use is subject to license terms.
                Assembled 01 May 2006

-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
$VAR1 = [
      'MS',
      'MS64',
      'DSSETUP',
      'DA',
      'CS',
      'IM',
      'CE',
      'MS_SCHA',
      'CS_SCHA',
      'IM_SCHA',
      'IWC'
];
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0

```

```

is_global_zone=0
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=1
is_path_writable=1
is_running_system=0
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=1
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 0
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone
Reading Product Files...
Reading /var/tmp/ci61/.install/Product/NSS/NSS.in...
mapFile /var/tmp/ci61/.install/Product/NSS/NSS.map does not exist...
Reading /var/tmp/ci61/.install/Product/SASL/SASL.in...
mapFile /var/tmp/ci61/.install/Product/SASL/SASL.map does not exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.map does not
exist...
Reading
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.in...
mapFile
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ICU/ICU.in...
mapFile /var/tmp/ci61/.install/Product/ICU/ICU.map does not exist...
Reading /var/tmp/ci61/.install/Product/JDK/JDK.in...
mapFile /var/tmp/ci61/.install/Product/JDK/JDK.map does not exist...
Reading /var/tmp/ci61/.install/Product/JHRT/JHRT.in...
mapFile /var/tmp/ci61/.install/Product/JHRT/JHRT.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ/MQ.in...
mapFile /var/tmp/ci61/.install/Product/MQ/MQ.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.in...
mapFile /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.in...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.map...
Reading /var/tmp/ci61/.install/Product/LIBTMALLOC/LIBTMALLOC.in...
mapFile /var/tmp/ci61/.install/Product/LIBTMALLOC/LIBTMALLOC.map does
not exist...
Reading /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.in...
mapFile /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.map
does not exist...
Reading /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.in...
mapFile /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.map does
not exist...

```

```
Reading /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.in...
mapFile /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/SNMP/SNMP.in...
mapFile /var/tmp/ci61/.install/Product/SNMP/SNMP.map does not exist...
Reading /var/tmp/ci61/.install/Product/BZIP/BZIP.in...
mapFile /var/tmp/ci61/.install/Product/BZIP/BZIP.map does not exist...
Reading /var/tmp/ci61/.install/Product/SSH/SSH.in...
mapFile /var/tmp/ci61/.install/Product/SSH/SSH.map does not exist...
Reading /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.in...
mapFile /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ST/ST.in...
mapFile /var/tmp/ci61/.install/Product/ST/ST.map does not exist...
Reading /var/tmp/ci61/.install/Product/CI/CI.in...
Reading /var/tmp/ci61/.install/Product/CI/CI.map...
Reading /var/tmp/ci61/.install/Product/MS/MS.in...
Reading /var/tmp/ci61/.install/Product/MS/MS.map...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.in...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.map...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.in...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.map...
Reading /var/tmp/ci61/.install/Product/DA/DA.in...
Reading /var/tmp/ci61/.install/Product/DA/DA.map...
Reading /var/tmp/ci61/.install/Product/CS/CS.in...
Reading /var/tmp/ci61/.install/Product/CS/CS.map...
Reading /var/tmp/ci61/.install/Product/IM/IM.in...
Reading /var/tmp/ci61/.install/Product/IM/IM.map...
Reading /var/tmp/ci61/.install/Product/CE/CE.in...
Reading /var/tmp/ci61/.install/Product/CE/CE.map...
Reading /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.in...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.map...
Reading OLD /var/tmp/ci61/.install/Product/MS/6.3/MS.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.0/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.3/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_SCHA/6.0/MS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_SCHA/6.0/CS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_SCHA/7.0/IM_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.2/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.3/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS64_L10N/6.3/MS64_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.2/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.3/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.0/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.2/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.2/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.3/CE_L10N.in...
```

```

Reading OLD /var/tmp/ci61/.install/Product/JDK/1.5.0/JDK.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ/3.7/MQ.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ_L10N/3.7/MQ_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.0/IMAPI.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.3/IMAPI.in...
===== QQQ findGetVersion =====
!!! getVersion
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '/var/tmp/ci61/SunOS_sparc/IWC/CI/getVersion',
    'MS64_L10N' => 'none',
    'MS' => '/var/tmp/ci61/SunOS_sparc/MS/CI/getVersion',
    'DSSETUP' =>
'/var/tmp/ci61/SunOS_sparc/DSSETUP/CI/getVersion',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '/var/tmp/ci61/SunOS_sparc/MS64/CI/getVersion',
    'LDAPCSDK' => 'none',
    'LDAPCSDK6' => 'none',
    'JDK' => 'none',
    'CE' => '/var/tmp/ci61/SunOS_sparc/CE/CI/getVersion',
    'PATCHUTILS' => 'none',
    'MQ' => 'none',
    'IMAPI' => 'none',
    'CI' =>
'/var/tmp/ci61/.install/Product/CI/SunOS_sparc/getVersion',
    'LDAPCSDK6_TOOLS' => 'none',
    'NSS' => 'none',
    'CS_L10N' => 'none',
    'ST' => 'none',
    'IM' => '/var/tmp/ci61/SunOS_sparc/IM/CI/getVersion',
    'RECOMMENDED' => 'none',
    'IM_L10N' => 'none',
    'CS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion',
    'LDAPJDK' => 'none',
    'BZIP' => 'none',
    'IM_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/IM_SCHA/CI/getVersion',
    'MS_L10N' => 'none',
    'LIBCPLUSPLUS' => 'none',
    'SNMP' => 'none',
    'MS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/MS_SCHA/CI/getVersion',
    'CS' => '/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion',
    'JHRT' => 'none',
    'CE_L10N' => 'none',
    'SSH' => 'none',
    'DA' => '/var/tmp/ci61/SunOS_sparc/DA/CI/getVersion'
};
!!! prod_getVers
$VAR1 = {
    'SASL' => 0,
    'IWC' => '1.0-4.01',

```

```

'MS64_L10N' => 0,
'MS' => '7.0-3.01',
'DSSETUP' => '6.4-3.01',
'PKGINSTALL' => 0,
'LIBMTMALLOC' => 0,
'MQ_L10N' => 0,
'ICU' => 0,
'MS64' => '7.0-3.01',
'LDAPCSDK' => 0,
'LDAPCSDK6' => 0,
'JDK' => 0,
'CE' => '6.3-11.01',
'PATCHUTILS' => 0,
'MQ' => 0,
'IMAPI' => 0,
'CI' => '6.1-0.01',
'LDAPCSDK6_TOOLS' => 0,
'NSS' => 0,
'CS_L10N' => 0,
'ST' => 0,
'IM' => '8.0-00.06',
'RECOMMENDED' => 0,
'IM_L10N' => 0,
'CS_SCHA' => '6.3-1.01',
'LDAPJDK' => 0,
'BZIP' => 0,
'IM_SCHA' => '7.3-01.02',
'MS_L10N' => 0,
'LIBCPLUSPLUS' => 0,
'SNMP' => 0,
'MS_SCHA' => '7.0-0.03',
'CS' => '6.3-11.01',
'JHRT' => 0,
'CE_L10N' => 0,
'SSH' => 0,
'DA' => '6.4-3.01'
};
!!! prod_builddate
$VAR1 = {
  'SASL' => 'none',
  'IWC' => '20081208',
  'MS64_L10N' => 'none',
  'MS' => '20081209',
  'DSSETUP' => '20080729',
  'PKGINSTALL' => 'none',
  'LIBMTMALLOC' => 'none',
  'MQ_L10N' => 'none',
  'ICU' => 'none',
  'MS64' => '20081209',
  'LDAPCSDK' => 'none',
  'LDAPCSDK6' => 'none',
  'JDK' => 'none',
  'CE' => '20081203',
  'PATCHUTILS' => 'none',
  'MQ' => 'none',
  'IMAPI' => 'none',

```

```

        'CI' => '20081210',
        'LDAPCSDK6_TOOLS' => 'none',
        'NSS' => 'none',
        'CS_L10N' => 'none',
        'ST' => 'none',
        'IM' => '20081204',
        'RECOMMENDED' => 'none',
        'IM_L10N' => 'none',
        'CS_SCHA' => '20080331',
        'LDAPJDK' => 'none',
        'BZIP' => 'none',
        'IM_SCHA' => '20080403',
        'MS_L10N' => 'none',
        'LIBCPLUSPLUS' => 'none',
        'SNMP' => 'none',
        'MS_SCHA' => '20080519',
        'CS' => '20081122',
        'JHRT' => 'none',
        'CE_L10N' => 'none',
        'SSH' => 'none',
        'DA' => '20081022'
    };
===== End QQQ findGetVersion =====
INFO: prod_mktVers{NSS} (no map) = 4.2.6
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK} (no map) = 5.0
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.1
INFO: prod_mktVers{MQ_L10N} (no map) = 4.1
INFO: prod_mktVers{LDAPJDK} (no map) = 4.19
INFO: prod_mktVers{IMAPI} (w/ map) = 8
INFO: prod_mktVers{LIBMTMALLOC} (no map) = 11.9.0
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PKGINSTALL} (no map) = Unknown
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{SNMP} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{SSH} (no map) = 11.9.0
INFO: prod_mktVers{RECOMMENDED} (no map) = 2008.10.09
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 6u1
INFO: prod_mktVers{MS} (w/ map) = 7u1
INFO: prod_mktVers{MS64} (w/ map) = 7u1
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DA} (w/ map) = 6.4
INFO: prod_mktVers{CS} (w/ map) = 6.3
INFO: prod_mktVers{IM} (w/ map) = 8
INFO: prod_mktVers{CE} (w/ map) = 6.3
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{CS_SCHA} (no map) = 6.3
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
INFO: prod_mktVers{IWC} (w/ map) = 1

```

CommsInstaller version 6.1-0.01 built on Wed Dec 10 12:33:59 PST 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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Use is subject to license terms.

```
-----  
INFO: altroot mode is activated.  
-- Creating /opt/altroot  
-- Setting owner:group for /opt/altroot to bin:bin  
/bin/chown bin:bin /opt/altroot 2>&1  
-- Exit status: 0  
-- Setting permission for /opt/altroot to 755  
/bin/chmod 755 /opt/altroot 2>&1  
-- Exit status: 0  
-----  
mkdir -p /opt/altroot/var/sadm/system/admin 2>&1  
-- Exit status: 0  
Detecting Installed Products...  
Checking LIBMTMALLOC 11.9.0 ...  
  LIBMTMALLOC 11.9.0 is not present.  
Checking LIBCPLUSPLUS 5.9 ...  
  Checking pkg SUNWlibC... already present.  
  LIBCPLUSPLUS 5.9 is already present.  
Checking PKGINSTALL Unknown ...  
  Checking pkg SUNWcsr... already present.  
  PKGINSTALL Unknown is already present.  
Checking PATCHUTILS Unknown ...  
  Checking pkg SUNWpkgcmds... already present.  
  Checking pkg SUNWswmt... already present.  
  Checking pkg SUNWinstall-patch-utils-root... already present.  
  Checking pkg SUNWcsr... already present.  
  Checking pkg SUNWdtrc... already present.  
  Checking pkg SUNWzoneu... already present.  
  PATCHUTILS Unknown is already present.  
Checking SNMP Unknown ...  
  SNMP Unknown is not present.  
Checking BZIP 11.10 ...  
  Checking pkg SUNWbzip... already present.  
  BZIP 11.10 is already present.  
Checking SSH 11.9.0 ...  
  SSH 11.9.0 is not present.  
Checking RECOMMENDED 2008.10.09 ...  
  RECOMMENDED 2008.10.09 is not present.  
Checking ST 1.1.4 ...  
  Checking pkg SUNWservicetagr... already present.  
  Checking pkg SUNWservicetagu... already present.  
  Checking pkg SUNWstosreg... already present.  
  ST 1.1.4 is already present.  
Checking NSS 4.2.6 ...
```

```

Checking pkg SUNWjss... not present.
Checking pkg SUNWpr... not present.
Checking pkg SUNWprd... not present.
Checking pkg SUNWtls... not present.
Checking pkg SUNWtlsd... not present.
Checking pkg SUNWtlsu... not present.
NSS 4.2.6 is not present.
Checking SASL 2.19 ...
  Checking pkg SUNWsas1... not present.
  SASL 2.19 is not present.
Checking LDAPCSDK 5.0 ...
  Checking pkg SUNWldk... not present.
  Checking pkg SUNWldkx... not present.
  LDAPCSDK 5.0 is not present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... not present.
  Checking pkg SUNWldapcsdk-dev... not present.
  LDAPCSDK6 6.0 is not present.
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... not present.
  LDAPCSDK6_TOOLS 6.0 is not present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... not present.
  ICU ICU2,ICU3 is not present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... not present.
  Checking pkg SUNWj6rtx... not present.
  Checking pkg SUNWj6dev... not present.
  Checking pkg SUNWj6dvx... not present.
  Checking pkg SUNWj6cfg... not present.
  JDK 1.6.0 is not present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... not present.
  Checking pkg SUNWj5rtx... not present.
  Checking pkg SUNWj5cfg... not present.
  JDK 1.5.0 is not present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... not present.
  Checking pkg SUNWjhdev... not present.
  Checking pkg SUNWjhdev... not present.
  Checking pkg SUNWjhdoc... not present.
  JHRT 2.0 is not present.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  MQ 4.1 is not present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.

```

```
Checking pkg SUNWiqpl... not present.
Checking pkg SUNWiqdoc... not present.
Checking pkg SUNWiquc... not present.
Checking pkg SUNWiqum... not present.
Checking pkg SUNWiqjx... not present.
Checking pkg SUNWiqfs... not present.
Checking pkg SUNWiqcrt... not present.
Checking pkg SUNWiqcdv... not present.
Checking pkg SUNWiqlen... not present.
MQ 3.7 is not present.
Checking MQ_L10N 4.1 ...
Checking pkg SUNWfiqu... not present.
Checking pkg SUNWfiquc... not present.
Checking pkg SUNWdiqu... not present.
Checking pkg SUNWdiquc... not present.
Checking pkg SUNWjiqu... not present.
Checking pkg SUNWjiquc... not present.
Checking pkg SUNWeiqu... not present.
Checking pkg SUNWeiquc... not present.
Checking pkg SUNWkiqu... not present.
Checking pkg SUNWkiquc... not present.
Checking pkg SUNWciqu... not present.
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 4.1 is not present.
Checking MQ_L10N 3.7 ...
Checking pkg SUNWfiqu... not present.
Checking pkg SUNWfiquc... not present.
Checking pkg SUNWdiqu... not present.
Checking pkg SUNWdiquc... not present.
Checking pkg SUNWjiqu... not present.
Checking pkg SUNWjiquc... not present.
Checking pkg SUNWeiqu... not present.
Checking pkg SUNWeiquc... not present.
Checking pkg SUNWkiqu... not present.
Checking pkg SUNWkiquc... not present.
Checking pkg SUNWciqu... not present.
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 3.7 is not present.
Checking LDAPJDK 4.19 ...
Checking pkg SUNWljdk... not present.
LDAPJDK 4.19 is not present.
Checking IMAPI 8.0 ...
Checking pkg SUNWiimd... not present.
IMAPI 8.0 is not present.
Checking IMAPI 7.0 ...
Checking pkg SUNWiimd... not present.
IMAPI 7.0 is not present.
Checking IMAPI 7.3 ...
Checking pkg SUNWiimd... not present.
IMAPI 7.3 is not present.
Checking CI 6.1 ...
Checking pkg SUNWcomms... not present.
```

```
CI 6.1 is not present.
Checking MS 7.0 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.0 is not present.
Checking MS 6.3 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3 is not present.
Checking MS64 7.0 ...
  Checking pkg SUNWmessaging-server-64... not present.
  MS64 7.0 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds... not present.
  DSSETUP 6.4 is not present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking IM 8.0 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... not present.
  IM 8.0 is not present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.0 is not present.
Checking IM 7.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
```

```
IM 7.3 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuw... not present.
  CE 6.3 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha... not present.
  MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.0 is not present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 1.0 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
```

```

Checking pkg SUNWeiimc... not present.
Checking pkg SUNWeiimd... not present.
Checking pkg SUNWeiimin... not present.
Checking pkg SUNWeimid... not present.
Checking pkg SUNWfiimc... not present.
Checking pkg SUNWfiimd... not present.
Checking pkg SUNWfiimin... not present.
Checking pkg SUNWfimid... not present.
Checking pkg SUNWjiimc... not present.
Checking pkg SUNWjiimd... not present.
Checking pkg SUNWjiimin... not present.
Checking pkg SUNWjimid... not present.
Checking pkg SUNWkiimc... not present.
Checking pkg SUNWkiimd... not present.
Checking pkg SUNWkiimin... not present.
Checking pkg SUNWkimid... not present.
Checking pkg SUNWciimc... not present.
Checking pkg SUNWciimd... not present.
Checking pkg SUNWciimin... not present.
Checking pkg SUNWcimid... not present.
Checking pkg SUNWhiimc... not present.
Checking pkg SUNWhiimd... not present.
Checking pkg SUNWhiimin... not present.
Checking pkg SUNWhimid... not present.
IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
Checking pkg SUNWiimc-l10n... not present.
Checking pkg SUNWiimd-l10n... not present.
Checking pkg SUNWiimid-l10n... not present.
Checking pkg SUNWiimin-l10n... not present.
IM_L10N 7.2 is not present.
Checking CE_L10N 6.2 ...
Checking pkg SUNWduwc... not present.
Checking pkg SUNWeuwc... not present.
Checking pkg SUNWfuwc... not present.
Checking pkg SUNWjuwc... not present.
Checking pkg SUNWkuwc... not present.
Checking pkg SUNWcuwc... not present.
Checking pkg SUNWhuwc... not present.
CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
Checking pkg SUNWuwc-l10n... not present.
CE_L10N 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-12 /tmp/.patchout_20090120102227.14363
-- Running patchadd -p report...
-- Generating /tmp/.patchout_20090120102227.14363
patchadd -p > /tmp/.patchout_20090120102227.14363 2>>
/tmp/CommsInstaller_20090120102227.log 2>&1
-- Exit status: 0
-- older version at lineno 143 found 119963-05 - not acceptable
-- Exact match found at line 144
-- Final return status: 1
LIBCPLUSPLUS patch 119963-12 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20090120102227.14363
-- Exact match found at line 85

```

```

-- Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20090120102227.14363
-- Exact match found at line 88
-- Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-45 /tmp/.patchout_20090120102227.14363
-- Exact match found at line 170
-- Final return status: 1
  PATCHUTILS patch 119254-45 is already present.
-- chk4patch 126868-02 /tmp/.patchout_20090120102227.14363
-- older version at lineno 131 found 126868-01 - not acceptable
-- Exact match found at line 132
-- Final return status: 1
  BZIP patch 126868-02 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20090120102227.14363
-- Exact match found at line 133
-- Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-58 /tmp/.patchout_20090120102227.14363
-- older version at lineno 170 found 119254-45 - not acceptable
-- older version at lineno 171 found 119254-26 - not acceptable
-- older version at lineno 172 found 119254-23 - not acceptable
-- older version at lineno 173 found 119254-54 - not acceptable
-- Final return status: 0
  RECOMMENDED patch 119254-58 is not present.
-- chk4patch 118833-36 /tmp/.patchout_20090120102227.14363
-- older version at lineno 3 found 118833-11 - not acceptable
-- Exact match found at line 5
-- Final return status: 1
  RECOMMENDED patch 118833-36 is already present.
-- chk4patch 120011-14 /tmp/.patchout_20090120102227.14363
-- Final return status: 0
  RECOMMENDED patch 120011-14 is not present.
-- chk4patch 125358-06 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
-- Running patchadd -R /opt/altroot -p report...
-- Generating /tmp/.patchout_altroot_20090120102227.14363
patchadd -R /opt/altroot -p >
/tmp/.patchout_altroot_20090120102227.14363 2>>
/tmp/CommsInstaller_20090120102227.log 2>&1
-- Exit status: 0
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
  NSS patch 125358-06 is not present.
-- chk4patch 119345-05 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
  SASL patch 119345-05 is not present.

```

```

-- chk4patch 136798-01 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   LDAPSDK6_TOOLS patch 136798-01 is not present.
-- chk4patch 119810-05 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   ICU patch 119810-05 is not present.
-- chk4patch 125136-09 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   JDK patch 125136-09 is not present.
-- chk4patch 125137-09 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   JDK patch 125137-09 is not present.
-- chk4patch 127411-01 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   MQ patch 127411-01 is not present.
-- chk4patch 127412-01 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   MQ patch 127412-01 is not present.
-- chk4patch 119725-04 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   LDAPJDK patch 119725-04 is not present.

```

```

-- chk4patch 137201-03 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
MS patch 137201-03 is not present.
-- chk4patch 137204-03 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
MS64 patch 137204-03 is not present.
-- chk4patch 118242-03 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
DSSETUP patch 118242-03 is not present.
-- chk4patch 118245-19 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
DSSETUP patch 118245-19 is not present.
-- chk4patch 121581-19 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
DA patch 121581-19 is not present.
-- chk4patch 121657-32 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
CS patch 121657-32 is not present.
-- chk4patch 137571-01 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
IM_SCHA patch 137571-01 is not present.

```

```

-- chk4patch 137631-04 /tmp/.patchout_altroot_20090120102227.14363
/opt/altroot -R /opt/altroot
INFO: line 2 unexpected output line from patchadd: Cannot check name
/opt/altroot/var/sadm/pkg.
INFO: line 3 unexpected output line from patchadd: Cannot open input
/opt/altroot
-- Final return status: 0
   IWC patch 137631-04 is not present.
===== QQQ detectProducts =====
QQQ Dumper
!!! present
$VAR1 = {
    '137571-01' => 'NOT_PRESENT',
    'DSSETUP' => {
        '6.4' => 'NOT_PRESENT'
    },
    'MQ_L10N' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    '119345-05' => 'NOT_PRESENT',
    'ICU' => {
        'ICU2,ICU3' => 'NOT_PRESENT'
    },
    'MS64' => {
        '7.0' => 'NOT_PRESENT'
    },
    '137631-04' => 'NOT_PRESENT',
    'LDAPCSDK' => {
        '5.0' => 'NOT_PRESENT'
    },
    'CE' => {
        '6.3' => 'NOT_PRESENT'
    },
    'MQ' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    'PATCHUTILS' => {
        'Unknown' => 'PRESENT'
    },
    'IMAPI' => {
        '8.0' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT',
        '7.3' => 'NOT_PRESENT'
    },
    '121581-19' => 'NOT_PRESENT',
    'LDAPCSDK6_TOOLS' => {
        '6.0' => 'NOT_PRESENT'
    },
    'ST' => {
        '1.1.4' => 'PRESENT'
    },
    '121657-32' => 'NOT_PRESENT',
    '118833-36' => 'PRESENT',
    'IM_L10N' => {

```

```

        '7.2' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT'
    },
'119725-04' => 'NOT_PRESENT',
'LDAPJDK' => {
    '4.19' => 'NOT_PRESENT'
},
'BZIP' => {
    '11.10' => 'PRESENT'
},
'119254-58' => 'NOT_PRESENT',
'IM_SCHA' => {
    '7.0' => 'NOT_PRESENT',
    '7.3' => 'NOT_PRESENT'
},
'126868-02' => 'PRESENT',
'SNMP' => {
    'Unknown' => 'NOT_PRESENT'
},
'MS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT'
},
'125358-06' => 'NOT_PRESENT',
'JHRT' => {
    '2.0' => 'NOT_PRESENT'
},
'CE_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'136798-01' => 'NOT_PRESENT',
'119810-05' => 'NOT_PRESENT',
'SASL' => {
    '2.19' => 'NOT_PRESENT'
},
'IWC' => {
    '1.0' => 'NOT_PRESENT'
},
'MS64_L10N' => {
    '6.3' => 'NOT_PRESENT'
},
'125137-09' => 'NOT_PRESENT',
'MS' => {
    '7.0' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'PKGINSTALL' => {
    'Unknown' => 'PRESENT'
},
'LIBMTMALLOC' => {
    '11.9.0' => 'NOT_PRESENT'
},
'120900-04' => 'PRESENT',
'127411-01' => 'NOT_PRESENT',
'120011-14' => 'NOT_PRESENT',

```

```

'LDAPCSDK6' => {
    '6.0' => 'NOT_PRESENT'
},
'119963-12' => 'PRESENT',
'JDK' => {
    '1.6.0' => 'NOT_PRESENT',
    '1.5.0' => 'NOT_PRESENT'
},
'CI' => {
    '6.1' => 'NOT_PRESENT'
},
'137321-01' => 'PRESENT',
'119254-45' => 'PRESENT',
'NSS' => {
    '4.2.6' => 'NOT_PRESENT'
},
'IM' => {
    '8.0' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT',
    '7.3' => 'NOT_PRESENT'
},
'CS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'125136-09' => 'NOT_PRESENT',
'RECOMMENDED' => {
    '2008.10.09' => 'NOT_PRESENT'
},
'CS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'137201-03' => 'NOT_PRESENT',
'118245-19' => 'NOT_PRESENT',
'MS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'LIBCPLUSPLUS' => {
    '5.9' => 'PRESENT'
},
'137204-03' => 'NOT_PRESENT',
'121133-02' => 'PRESENT',
'118242-03' => 'NOT_PRESENT',
'CS' => {
    '6.3' => 'NOT_PRESENT'
},
'SSH' => {
    '11.9.0' => 'NOT_PRESENT'
},
'DA' => {
    '6.4' => 'NOT_PRESENT'
},
'127412-01' => 'NOT_PRESENT'
};

```

```

!!! pkgparams
$VAR1 = {
    'SUNWica5' => {},
    'SUNWmsgja' => {},
    'SUNWcomic' => {},
    'SUNWservicetagu' => {
        '1.1.4,REV=2008.03.21.07.54' => [
            'SUNWservicetagu',
            '/',
            '1.1.4.1'
        ]
    },
    'SUNWjimid' => {},
    'SUNWdiquc' => {},
    'SUNWmsgko' => {},
    'SUNWmessaging-server-l10n-64' => {},
    'SUNWics5' => {},
    'SUNWiqlpl' => {},
    'SUNWmsgco' => {},
    'SUNWfiquc' => {},
    'SUNWjhdem' => {},
    'SUNWiqfs' => {},
    'SUNWfimid' => {},
    'SUNWcomds' => {},
    'SUNWjhdev' => {},
    'SUNWj6rtx' => {},
    'SUNWiqum' => {},
    'SUNWduwc' => {},
    'SUNWhiimin' => {},
    'SUNWkiimin' => {},
    'SUNWeiimd' => {},
    'SUNWj6rt' => {},
    'SUNWj5rt' => {},
    'SUNWiimc-l10n' => {},
    'SUNWhiimc' => {},
    'SUNWmsg-l10n' => {},
    'SUNWfrics' => {},
    'SUNWciqu' => {},
    'SUNWkoics' => {},
    'SUNWdimid' => {},
    'SUNWjiquc' => {},
    'SUNWiimgw' => {},
    'SUNWiimd-l10n' => {},
    'SUNWhiquc' => {},
    'SUNWzhics' => {},
    'SUNWkiimd' => {},
    'SUNWmsgmp' => {},
    'SUNWuwc' => {},
    'SUNWscics' => {},
    'SUNWiimc' => {},
    'SUNWhiimd' => {},
    'SUNWmessaging-server-scha' => {},
    'SUNWmsglb' => {},
    'SUNWt1s' => {},

```

```

'SUNWj6dvx' => {},
'SUNWfuwc' => {},
'SUNWlibc' => {
    '5.10,REV=2004.12.22' => [
        'SUNWlibc',
        '/',
        '5.10'
    ]
},
'SUNWjiimin' => {},
'SUNWscims' => {},
'SUNWiimjd' => {},
'SUNWciimd' => {},
'SUNWldapcsdk-dev' => {},
'SUNWiqlen' => {},
'SUNWiimid-110n' => {},
'SUNWiqr' => {},
'SUNWdiimc' => {},
'SUNWmsgwm' => {},
'SUNWmessaging-server-64' => {},
'SUNWeiquc' => {},
'SUNWj5cfg' => {},
'SUNWhiqu' => {},
'SUNWiimd' => {},
'SUNWfiimd' => {},
'SUNWj5rtx' => {},
'SUNWiquc' => {},
'SUNWiimid' => {},
'SUNWmsgmt' => {},
'SUNWljdk' => {},
'SUNWcuwc' => {},
'SUNWldapcsdk-libs' => {},
'SUNWservicetagr' => {
    '1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagr',
                                                                    '/',
'1.1.4.1'
                                                                    ]
    },
'SUNWciimc' => {},
'SUNWjhrt' => {},
'SUNWt1sd' => {},
'SUNWmsgin' => {},
'SUNWdtrc' => {
    '11.10.0,REV=2005.01.21.15.53' => [
'SUNWdtrc',
                                                                    '/',
'5.10/Generic'
                                                                    ]
    },
'SUNWhuwc' => {},
'SUNWiqdoc' => {},

```

```

'SUNWjiimd' => {},
'SUNWjuwc' => {},
'SUNWiimd' => {},
'SUNWiqcrt' => {},
'SUNWmsgzh' => {},
'SUNWprd' => {},
'SUNWmsgen' => {},
'SUNWldk' => {},
'SUNWiwc' => {},
'SUNWiimin-110n' => {},
'SUNWiimsc' => {},
'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'SNAG Development'

]

},

'SUNWiimin' => {},
'SUNWuwc-110n' => {},
'SUNWmsgst' => {},
'SUNWiqu' => {},
'SUNWkiimc' => {},
'SUNWiim' => {},
'SUNWeiimin' => {},
'SUNWcimid' => {},
'SUNWiqcdv' => {},
'SUNWldapcsdk-tools' => {},
'SUNWjss' => {},
'SUNWdiqu' => {},
'SUNWj6cfg' => {},
'SUNWhimid' => {},
'SUNWciquc' => {},
'SUNWcomms' => {},
'SUNWjiqu' => {},
'SUNWkiqu' => {},
'SUNWkuwc' => {},
'SUNWics-110n' => {},
'SUNWeiqu' => {},
'SUNWmessaging-server' => {},
'SUNWmsgtw' => {},
'SUNWeiimc' => {},
'SUNWjaics' => {},
'SUNWpkgcmdsu' => {

'11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',

'/',

'SNAG

Development'

]

```

```

    },
    'SUNWldkx' => {},
    'SUNWjiimc' => {},
    'SUNWiqjx' => {},
    'SUNWjhdoc' => {},
    'SUNWj6dev' => {},
    'SUNWeimid' => {},
    'SUNWmsges' => {},
    'SUNWpr' => {},
    'SUNWmsgmf' => {},
    'SUNWkimid' => {},
    'SUNWicu' => {},
    'SUNWfiimin' => {},
    'SUNWswmt' => {
        '11.10,REV=2005.01.10.17.19' => [
            'SUNWswmt',
            '/',
            'SNAG
Development '
        ]
    },
    'SUNWcomis' => {},
    'SUNWdeics' => {},
    'SUNWtwics' => {},
    'SUNWciimin' => {},
    'SUNWmsgfr' => {},
    'SUNWdiimd' => {},
    'SUNWeuwc' => {},
    'SUNWkiquc' => {},
    'SUNWstosreg' => {
        '1.1.4,REV=2008.03.21.07.54' => [
            'SUNWstosreg',
            '/',
            '1.1.4.1'
        ]
    },
    'SUNWmsgde' => {},
    'SUNWbzip' => {
        '11.10.0,REV=2005.01.08.05.16' => [
            'SUNWbzip',
            '/',
            '5.10/SunOS Development '
        ]
    },
    'SUNWtisu' => {},
    'SUNWfiqu' => {},
    'SUNWsas1' => {},
    'SUNWzoneu' => {
        '11.10.0,REV=2005.01.21.15.53' => [
            'SUNWzoneu',
            '/',

```

```

'5.10/Generic'
]
    },
    'SUNWcsr' => {
        '11.10.0,REV=2005.01.21.15.53' => [
            'SUNWcsr',
            '/',
        ]
    }
]
'5.10/Generic'
]
    },
    'SUNWfiimc' => {},
    'SUNWesics' => {},
    'SUNWiimm' => {}
};
!!! installedprod
$VAR1 = {
    'PATCHUTILS' => {
        'Unknown' => [
            '/opt/altroot/',
            'SNAG Development',
            'none',
            'Unknown'
        ]
    },
    'ST' => {
        '1.1.4' => [
            '/opt/altroot/',
            '1.1.4.1',
            'none',
            '1.1.4'
        ]
    },
    'LIBCPLUSPLUS' => {
        '5.9' => [
            '/opt/altroot/',
            '5.10',
            'none',
            '5.9'
        ]
    },
    'BZIP' => {
        '11.10' => [
            '/opt/altroot/',
            '5.10/SunOS Development',
            'none',
            '11.10'
        ]
    },
    'PKGINSTALL' => {
        'Unknown' => [
            '/opt/altroot/',
            '5.10/Generic',
            'none',
            'Unknown'
        ]
    }
}
]

```

```

        }
    };
===== End QQQ detectProducts =====
-- Checking for RECOMMENDED patch 119254-58
patch 119254-58: NOT_PRESENT
-- Checking for RECOMMENDED patch 118833-36
patch is PRESENT
-- Checking for RECOMMENDED patch 120011-14
patch 120011-14: NOT_PRESENT
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
Do you want to continue ? [yes] :
-----
===== QQQ =====
QQQ Dumper
!!! isUpgradable
$VAR1 = {};
!!! usePkgUpgradeFlag
$VAR1 = {};
Product Selection:

Shared Components (not shown) will be installed as required.
you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Services Products:

Item  Description
----  -
1  Messaging Server 7u1 (7.0-3.01)
2  Messaging Server (64bit) 7u1 (7.0-3.01)
3  Comms DSsetup 6.4 (6.4-3.01)
4  Comms Delegated Administrator 6.4 (6.4-3.01)
5  Calendar Server 6.3 (6.3-11.01)
6  Instant Messaging 8 (8.0-00.06)
7  Communications Express 6.3 (6.3-11.01)
8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
9  Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
10 Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
11 Convergence 1 (1.0-4.01)

Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,
9, 10, 11]:
-----
QQQ selections: 0 MS 0 MS64 0 DSSETUP 0 DA 0 CS 0 IM 0 CE 0 MS_SCHA 0

```

```

CS_SCHA 0 IM_SCHA 0 IWC
Generating list of things to install...
NOTICE: toInstall - IMAPI LDAPJDK ICU PATCHUTILS NSS BZIP LIBCPLUSPLUS
LDAPCSKD6 LDAPCSKD6_TOOLS SASL MS MS64 DSSETUP DA CS IM CE MS_SCHA
CS_SCHA IM_SCHA IWC CI ST JDK JHRT MQ
Checking for Shared Component Upgrade Requirements...
=====
WILL INSTALL: Instant Messaging API 8
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IMAPI/Packages -r
/tmp/.response_IMAPI_20090120102227 SUNWiimdV
WILL INSTALL: LDAPJDK 4.19
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPJDK/Packages -r
/tmp/.response_LDAPJDK_20090120102227 SUNWljdk
WILL INSTALL: International Components for Unicode ICU2,ICU3
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/ICU/Packages/SunOS5.10_sparc
-r /tmp/.response_ICU_20090120102227 SUNWicu
WILL INSTALL: NSS/NSPR/JSS 4.2.6
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWjss
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWpr
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWprd
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWtls
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWtlsd
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWtlsu
WILL INSTALL: LDAPCSKD6 6.0
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPCSKD6/Packages -r
/tmp/.response_LDAPCSKD6_20090120102227 SUNWldapcsdk-libs
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPCSKD6/Packages -r
/tmp/.response_LDAPCSKD6_20090120102227 SUNWldapcsdk-dev
WILL INSTALL: LDAPCSKD6 Tools 6.0
to /opt/altroot/directory
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPCSKD6_TOOLS/Packages -r
/tmp/.response_LDAPCSKD6_TOOLS_20090120102227 SUNWldapcsdk-tools
WILL INSTALL: Simple Authentication and Security Layer 2.19
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/SASL/Packages/SunOS5.10_sparc
-r /tmp/.response_SASL_20090120102227 SUNWsas1
WILL INSTALL: Messaging Server 7ul (7.0-3.01)
to /opt/altroot/messaging

```

```

Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20090120102227 SUNWmessaging-server
WILL INSTALL: Messaging Server (64bit) 7u1 (7.0-3.01)
to /opt/altroot/messaging64
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MS64/Packages -r
/tmp/.response_MS64_20090120102227 SUNWmessaging-server-64
WILL INSTALL: Comms DSsetup 6.4 (6.4-3.01)
to /opt/altroot/dssetup
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/DSSETUP/Packages -r
/tmp/.response_DSSETUP_20090120102227 SUNWcomds
WILL INSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
to /opt/altroot/da
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090120102227 SUNWcomic
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090120102227 SUNWcomis
WILL INSTALL: Calendar Server 6.3 (6.3-11.01)
to /opt/altroot/calendar
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090120102227 SUNWics5
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090120102227 SUNWica5
WILL INSTALL: Instant Messaging 8 (8.0-00.06)
to /opt/altroot/im
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiim
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimin
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimm
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimjd
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimid
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimc
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimd
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimgw
WILL INSTALL: Communications Express 6.3 (6.3-11.01)

```

```

        to /opt/altroot/ce
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/CE/Packages -r
/tmp/.response_CE_20090120102227 SUNWuwc
    WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
        to /opt/altroot/msg_scha
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MS_SCHA/Packages -r
/tmp/.response_MS_SCHA_20090120102227 SUNWmessaging-server-scha
    WILL INSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
        to /opt/altroot/cs_scha
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/CS_SCHA/Packages -r
/tmp/.response_CS_SCHA_20090120102227 SUNWscics
    WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
        to /opt/altroot/im_scha
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM_SCHA/Packages -r
/tmp/.response_IM_SCHA_20090120102227 SUNWiimsc
    WILL INSTALL: Convergence 1 (1.0-4.01)
        to /opt/altroot/iwc
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IWC/Packages -r
/tmp/.response_IWC_20090120102227 SUNWiwc
    WILL INSTALL: CommsInstaller 6u1 (6.1-0.01)
        to /opt/altroot/CommsInstaller
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090120102227 SUNWcomms
    WILL INSTALL: JDK 1.6.0
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6rt
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6rtx
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6dev
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6dvx
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6cfg
    WILL INSTALL: Java Help Runtime 2.0
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhrt
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhdev
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhdem
    Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R

```

```

/opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhdoc
  WILL INSTALL: Message Queue 4.1
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqr
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqu
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqdoc
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiquc
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqum
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqjx
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqfs
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqcrt
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqcdv
=====
Ready to install

Do you want to continue ? [yes] :

=====
Installing Instant Messaging API 8...
----- Executing Task 1 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/IMAPI/Packages -r
/tmp/.response_IMAPI_20090120102227 SUNWiimdv 2>&1
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Installation of <SUNWiimdv> was successful.
-- Exit status: 0

=====
Installing LDAPJDK 4.19...
----- Executing Task 2 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/LDAPJDK/Packages -r
/tmp/.response_LDAPJDK_20090120102227 SUNWljdk 2>&1
516 blocks

Installation of <SUNWljdk> was successful.

```

```

-- Exit status: 0

=====
Installing International Components for Unicode ICU2,ICU3...
----- Executing Task 3 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/ICU/Packages/SunOS5.10_sparc -r
/tmp/.response_ICU_20090120102227 SUNWicu 2>&1
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96793 blocks

Installation of <SUNWicu> was successful.
-- Exit status: 0

=====
Installing NSS/NSPR/JSS 4.2.6...
----- Executing Task 4 of 52 ...

```

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWjss 2>&1
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```

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```
Installation of <SUNWjss> was successful.
-- Exit status: 0
----- Executing Task 5 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWpr 2>&1
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```

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Installation of <SUNWpr> was successful.

-- Exit status: 0

----- Executing Task 6 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r /tmp/.response_NSS_20090120102227 SUNWprd 2>&1
```

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```
Installation of <SUNWprd> was successful.
-- Exit status: 0
----- Executing Task 7 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWt1s 2>&1
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```

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```
Installation of <SUNWtls> was successful.  
-- Exit status: 0  
----- Executing Task 8 of 52 ...  
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d  
/var/tmp/ci61/SunOS_sparc/NSS/Packages -r  
/tmp/.response_NSS_20090120102227 SUNWtlsd 2>&1  
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Installation of <SUNWt1sd> was successful.

-- Exit status: 0

----- Executing Task 9 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/NSS/Packages -r

/tmp/.response_NSS_20090120102227 SUNWt1su 2>&1

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Installation of <SUNWt1su> was successful.

-- Exit status: 0

=====

Installing LDAPCSDK6 6.0...

----- Executing Task 10 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/LDAPCSDK6/Packages -r

/tmp/.response_LDAPCSDK6_20090120102227 SUNWldapcsdk-libs 2>&1

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Installation of <SUNWldapcsdk-libs> was successful.

-- Exit status: 0

----- Executing Task 11 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/LDAPCSDK6/Packages -r

/tmp/.response_LDAPCSDK6_20090120102227 SUNWldapcsdk-dev 2>&1

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Installation of <SUNWldapcsdk-dev> was successful.

-- Exit status: 0

=====

Installing LDAPCSDK6 Tools 6.0...

----- Executing Task 12 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/LDAPCSDK6_TOOLS/Packages -r
/tmp/.response_LDAPCSDK6_TOOLS_20090120102227 SUNWldapcsdk-tools 2>&1
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```

```
Installation of <SUNWldapcsdk-tools> was successful.
-- Exit status: 0
```

```
=====
Installing Simple Authentication and Security Layer 2.19...
----- Executing Task 13 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/SASL/Packages/SunOS5.10_sparc -r
/tmp/.response_SASL_20090120102227 SUNWsas1 2>&1
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1093 blocks
```

```
Installation of <SUNWsas1> was successful.
-- Exit status: 0
```

```
=====
Installing Messaging Server 7u1 (7.0-3.01)...
----- Executing Task 14 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20090120102227 SUNWmessaging-server 2>&1
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```

```
Installation of <SUNWmessaging-server> was successful.
-- Exit status: 0
```

```
=====
Installing Messaging Server (64bit) 7u1 (7.0-3.01)...
----- Executing Task 15 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/MS64/Packages -r
/tmp/.response_MS64_20090120102227 SUNWmessaging-server-64 2>&1
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```

```
Installation of <SUNWmessaging-server-64> was successful.
-- Exit status: 0
```

```
=====
Installing Comms DSsetup 6.4 (6.4-3.01)...
----- Executing Task 16 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/DSSETUP/Packages -r
/tmp/.response_DSSETUP_20090120102227 SUNWcomds 2>&1
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```

```
Installation of <SUNWcomds> was successful.
-- Exit status: 0
```

```

=====
Installing Comms Delegated Administrator 6.4 (6.4-3.01)...
----- Executing Task 17 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090120102227 SUNWcomic 2>&1
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22234 blocks

Installation of <SUNWcomic> was successful.
-- Exit status: 0
----- Executing Task 18 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090120102227 SUNWcomis 2>&1
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23456 blocks

Installation of <SUNWcomis> was successful.
-- Exit status: 0

=====
Installing Calendar Server 6.3 (6.3-11.01)...
----- Executing Task 19 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090120102227 SUNWics5 2>&1
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Checking for existence of /calendar/SUNWics5/cal/bin/config
/calendar/SUNWics5/cal/bin/config is clean

Checking for existence of /calendar/SUNWics5/cal/config
/calendar/SUNWics5/cal/config is clean

Checking for existence of /calendar/SUNWics5/cal/bin/html
/calendar/SUNWics5/cal/bin/html is clean

Checking for existence of /calendar/SUNWics5/cal/bin/data
/calendar/SUNWics5/cal/bin/data is clean

Checking for any files in /calendar/SUNWics5/cal/bin/
/calendar/SUNWics5/cal/bin is clean

Installation of <SUNWics5> was successful.
-- Exit status: 0
----- Executing Task 20 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090120102227 SUNWica5 2>&1
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```

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Installation of <SUNWica5> was successful.

-- Exit status: 0

=====

Installing Instant Messaging 8 (8.0-00.06)...

----- Executing Task 21 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot

-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r

/tmp/.response_IM_20090120102227 SUNWiim 2>&1

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Installation of <SUNWiim> was successful.

-- Exit status: 0

----- Executing Task 22 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot

-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r

/tmp/.response_IM_20090120102227 SUNWiimin 2>&1

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Installation of <SUNWiimin> was successful.

-- Exit status: 0

----- Executing Task 23 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot

-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r

/tmp/.response_IM_20090120102227 SUNWiimm 2>&1

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Installation of <SUNWiimm> was successful.

-- Exit status: 0

----- Executing Task 24 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot

-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r

/tmp/.response_IM_20090120102227 SUNWiimjd 2>&1

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Installation of <SUNWiimjd> was successful.

-- Exit status: 0

----- Executing Task 25 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot

-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r

/tmp/.response_IM_20090120102227 SUNWiimid 2>&1

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Installation of <SUNWiimid> was successful.

-- Exit status: 0

----- Executing Task 26 of 52 ...

pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot

-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r

/tmp/.response_IM_20090120102227 SUNWiimc 2>&1

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Installation of <SUNWiimc> was successful.

-- Exit status: 0

----- Executing Task 27 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot  
-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r  
/tmp/.response_IM_20090120102227 SUNWiimd 2>&1
```

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Installation of <SUNWiimd> was successful.

-- Exit status: 0

----- Executing Task 28 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot  
-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r  
/tmp/.response_IM_20090120102227 SUNWiimgw 2>&1
```

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Installation of <SUNWiimgw> was successful.

-- Exit status: 0

=====

Installing Communications Express 6.3 (6.3-11.01)...

----- Executing Task 29 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot  
-d /var/tmp/ci61/SunOS_sparc/CE/Packages -r  
/tmp/.response_CE_20090120102227 SUNWuwc 2>&1
```

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92397 blocks

Installation of <SUNWuwc> was successful.

-- Exit status: 0

=====

Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...

----- Executing Task 30 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d  
/var/tmp/ci61/SunOS_sparc/MS_SCHA/Packages -r  
/tmp/.response_MS_SCHA_20090120102227 SUNWmessaging-server-scha 2>&1
```

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Installation of <SUNWmessaging-server-scha> was successful.

-- Exit status: 0

=====

Installing Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)...

----- Executing Task 31 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d  
/var/tmp/ci61/SunOS_sparc/CS_SCHA/Packages -r  
/tmp/.response_CS_SCHA_20090120102227 SUNWscics 2>&1
```

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```
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ln: cannot create /opt/altroot/usr/cluster/lib/rgm/rtreg/SUNW.scics: No
such file or directory
```

```
Attempting to set following in ics.conf
  local.server.ha.enabled="yes"
  local.server.ha.agent="SUNWscics"
```

```
Sun Cluster 3.0_u1 Agent for iCS 5.1 Note
```

```
-----
Remember to add the following to the ics.conf file
  local.server.ha.enabled="yes"
  local.server.ha.agent="SUNWscics"
```

```
Installation of <SUNWscics> was successful.
-- Exit status: 0
```

```
=====
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
----- Executing Task 32 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/IM_SCHA/Packages -r
/tmp/.response_IM_SCHA_20090120102227 SUNWiimsc 2>&1
Copyright (c) 2006 Sun Microsystems, Inc. All rights reserved.
```

```
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```

```
Installation of <SUNWiimsc> was successful.
-- Exit status: 0
```

```
=====
Installing Convergence 1 (1.0-4.01)...
----- Executing Task 33 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/IWC/Packages -r
/tmp/.response_IWC_20090120102227 SUNWiwc 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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```

```
Installation of <SUNWiwc> was successful.
-- Exit status: 0
```

```
=====
Installing CommsInstaller 6ul (6.1-0.01)...
----- Executing Task 34 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -R /opt/altroot
-d /var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090120102227 SUNWcomms 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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```

```
Installation of <SUNWcomms> was successful.
-- Exit status: 0
```

```

=====
Installing JDK 1.6.0...
----- Executing Task 35 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6rt 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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Installation of <SUNWj6rt> was successful.
-- Exit status: 0
----- Executing Task 36 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6rtx 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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Installation of <SUNWj6rtx> was successful.
-- Exit status: 0
----- Executing Task 37 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6dev 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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Installation of <SUNWj6dev> was successful.
-- Exit status: 0
----- Executing Task 38 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6dvx 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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Installation of <SUNWj6dvx> was successful.
-- Exit status: 0
----- Executing Task 39 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6cfg 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWj6cfg> was successful.
-- Exit status: 0

=====
Installing Java Help Runtime 2.0...
----- Executing Task 40 of 52 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhrt 2>&1
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```

1127 blocks

Installation of <SUNWjhrt> was successful.

-- Exit status: 0

----- Executing Task 41 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
```

```
/tmp/.response_JHRT_20090120102227 SUNWjhdev 2>&1
```

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709 blocks

Installation of <SUNWjhdev> was successful.

-- Exit status: 0

----- Executing Task 42 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
```

```
/tmp/.response_JHRT_20090120102227 SUNWjhdem 2>&1
```

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6466 blocks

Installation of <SUNWjhdem> was successful.

-- Exit status: 0

----- Executing Task 43 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
```

```
/tmp/.response_JHRT_20090120102227 SUNWjhdoc 2>&1
```

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10385 blocks

Installation of <SUNWjhdoc> was successful.

-- Exit status: 0

=====

Installing Message Queue 4.1...

----- Executing Task 44 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
```

```
/tmp/.response_MQ_20090120102227 SUNWiqr 2>&1
```

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Installation of <SUNWiqr> was successful.

-- Exit status: 0

----- Executing Task 45 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
```

```
/tmp/.response_MQ_20090120102227 SUNWiqu 2>&1
```

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Installation of <SUNWiqu> was successful.

-- Exit status: 0

----- Executing Task 46 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqdoc 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
```

Installation of <SUNWiqdoc> was successful.

-- Exit status: 0

----- Executing Task 47 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiquc 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
```

Installation of <SUNWiquc> was successful.

-- Exit status: 0

----- Executing Task 48 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqum 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
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```

Installation of <SUNWiqum> was successful.

-- Exit status: 0

----- Executing Task 49 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqjx 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
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```

Installation of <SUNWiqjx> was successful.

-- Exit status: 0

----- Executing Task 50 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqfs 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
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```

Installation of <SUNWiqfs> was successful.

-- Exit status: 0

----- Executing Task 51 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqcrt 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
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```

Installation of <SUNWiqcrt> was successful.

-- Exit status: 0

----- Executing Task 52 of 52 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
```

```
/tmp/.response_MQ_20090120102227 SUNWiqcdv 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
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```

```
Installation of <SUNWiqcdv> was successful.
```

```
-- Exit status: 0
```

```
=====
```

```
SUMMARY:
```

```
PASSED: Task 1: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/IMAPI/Packages -r
/tmp/.response_IMAPI_20090120102227 SUNWiimdvdv
PASSED: Task 2: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPJDK/Packages -r
/tmp/.response_LDAPJDK_20090120102227 SUNWljdk
PASSED: Task 3: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/ICU/Packages/SunOS5.10_sparc
-r /tmp/.response_ICU_20090120102227 SUNWicu
PASSED: Task 4: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWjss
PASSED: Task 5: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWpr
PASSED: Task 6: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWprd
PASSED: Task 7: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWtls
PASSED: Task 8: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWtlsd
PASSED: Task 9: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -R
/opt/altroot -d /var/tmp/ci61/SunOS_sparc/NSS/Packages -r
/tmp/.response_NSS_20090120102227 SUNWtlsu
PASSED: Task 10: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPCSDK6/Packages -r
/tmp/.response_LDAPCSDK6_20090120102227 SUNWldapcsdk-libs
PASSED: Task 11: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPCSDK6/Packages -r
/tmp/.response_LDAPCSDK6_20090120102227 SUNWldapcsdk-dev
PASSED: Task 12: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/LDAPCSDK6_TOOLS/Packages -r
/tmp/.response_LDAPCSDK6_TOOLS_20090120102227 SUNWldapcsdk-tools
PASSED: Task 13: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d
/var/tmp/ci61/SunOS_sparc/SASL/Packages/SunOS5.10_sparc -r
/tmp/.response_SASL_20090120102227 SUNWsas1
PASSED: Task 14: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20090120102227 SUNWmessaging-server
PASSED: Task 15: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MS64/Packages -r
/tmp/.response_MS64_20090120102227 SUNWmessaging-server-64
PASSED: Task 16: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
```

```

-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/DSSETUP/Packages -r
/tmp/.response_DSSETUP_20090120102227 SUNWcomds
PASSED: Task 17: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090120102227 SUNWcomic
PASSED: Task 18: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090120102227 SUNWcomis
PASSED: Task 19: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090120102227 SUNWics5
PASSED: Task 20: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090120102227 SUNWica5
PASSED: Task 21: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiim
PASSED: Task 22: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimin
PASSED: Task 23: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimm
PASSED: Task 24: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimjd
PASSED: Task 25: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimid
PASSED: Task 26: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimc
PASSED: Task 27: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimd
PASSED: Task 28: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090120102227 SUNWiimgw
PASSED: Task 29: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/CE/Packages -r
/tmp/.response_CE_20090120102227 SUNWuwc
PASSED: Task 30: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MS_SCHA/Packages -r
/tmp/.response_MS_SCHA_20090120102227 SUNWmessaging-server-scha
PASSED: Task 31: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/CS_SCHA/Packages -r
/tmp/.response_CS_SCHA_20090120102227 SUNWscics
PASSED: Task 32: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IM_SCHA/Packages -r
/tmp/.response_IM_SCHA_20090120102227 SUNWiimsc
PASSED: Task 33: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/IWC/Packages -r
/tmp/.response_IWC_20090120102227 SUNWiwc
PASSED: Task 34: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090120102227 SUNWcomms

```

```
PASSED: Task 35: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6rt
PASSED: Task 36: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6rtx
PASSED: Task 37: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6dev
PASSED: Task 38: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6dvx
PASSED: Task 39: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120102227 SUNWj6cfg
PASSED: Task 40: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhrt
PASSED: Task 41: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhdev
PASSED: Task 42: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhdem
PASSED: Task 43: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120102227 SUNWjhdoc
PASSED: Task 44: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqr
PASSED: Task 45: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqu
PASSED: Task 46: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqdoc
PASSED: Task 47: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiquc
PASSED: Task 48: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqum
PASSED: Task 49: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqjx
PASSED: Task 50: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqfs
PASSED: Task 51: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqcrt
PASSED: Task 52: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-R /opt/altroot -d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090120102227 SUNWiqcdv
```

All tasks PASSED

```

Checking JES java symlink...
ls -l /usr/jdk /usr/java 2>&1
/usr/java:
total 2
drwxr-xr-x  3 root    root          512 Feb 12  2007 jre

/usr/jdk:
total 14
lrwxrwxrwx  1 root    root          27 Mar  1  2007 entsys-j2se ->
/usr/jdk/instances/jdk1.5.0
drwxr-xr-x  4 root    bin           512 Sep 17 12:44 instances
lrwxrwxrwx  1 root    other         7 Feb 12  2007 j2sdk1.4.2_11 ->
../j2se
lrwxrwxrwx  1 root    other        18 Oct  3 14:57 jdk1.5.0_09 ->
instances/jdk1.5.0
lrwxrwxrwx  1 root    other        18 Sep 17 12:45 jdk1.6.0_07 ->
instances/jdk1.6.0
lrwxrwxrwx  1 root    other        11 Sep 17 12:45 latest ->
jdk1.6.0_07
drwxr-xr-x  8 root    bin           512 Dec 10 11:28 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
lrwxrwxrwx  1 root    root          27 Mar  1  2007
/usr/jdk/entsys-j2se -> /usr/jdk/instances/jdk1.5.0
lrwxrwxrwx  1 root    other         11 Sep 17 12:45 /usr/jdk/latest ->
jdk1.6.0_07
-- Exit status: 0
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se:
total 34398
-rw-r--r--  1 root    bin           2487 Oct 12  2006 COPYRIGHT
-rw-r--r--  1 root    bin          17293 Oct 12  2006 LICENSE
-rw-r--r--  1 root    bin          20415 Oct 12  2006 README.html
drwxr-xr-x  3 root    bin           1024 Dec 10 11:28 bin
drwxr-xr-x  9 root    bin           512 Oct  3 14:59 demo
drwxr-xr-x  3 root    bin           512 Oct  3 14:58 include
drwxr-xr-x  6 root    bin           512 Oct  3 14:57 jre
drwxr-xr-x  2 root    bin           512 Oct  3 14:58 lib
drwxr-xr-x  6 root    bin           512 Oct  3 14:59 man
drwxr-xr-x  4 root    bin           512 Oct  3 14:59 sample
-rw-r--r--  1 root    bin          17537249 Oct 12  2006 src.zip

/usr/jdk/latest:
total 37258
-rw-r--r--  1 root    bin           4137 Jun 10  2008 COPYRIGHT
-rw-r--r--  1 root    bin          17058 Jun 10  2008 LICENSE
-rw-r--r--  1 root    bin          28599 Jun 10  2008 README.html
-rw-r--r--  1 root    bin          24132 Jun 10  2008 README_ja.html
-rw-r--r--  1 root    bin          18329 Jun 10  2008 README_zh_CN.html
-rw-r--r--  1 root    bin          190102 Jun 10  2008
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x  3 root    bin           1024 Dec 10 11:28 bin
drwxr-xr-x  3 root    bin           512 Sep 17 12:47 include
drwxr-xr-x  6 root    bin           512 Sep 17 12:44 jre
drwxr-xr-x  3 root    bin           512 Sep 17 12:47 lib

```

```
-r--r--r-- 1 root      other      6655 Sep 17 12:46 register.html
-r--r--r-- 1 root      other      7087 Sep 17 12:46 register_ja.html
-r--r--r-- 1 root      other      6265 Sep 17 12:46
register_zh_CN.html
-rw-r--r-- 1 root      bin        18719038 Jun 10 2008 src.zip
-- Exit status: 0
INFO: /etc/softlist.xml updated
```

Hit Return to Continue:

```
=====
-- unlink /tmp/.response_IMAPI_20090120102227
-- unlink /tmp/.response_LDAPJDK_20090120102227
-- unlink /tmp/.response_ICU_20090120102227
-- unlink /tmp/.response_NSS_20090120102227
-- unlink /tmp/.response_LDAPCSDK6_20090120102227
-- unlink /tmp/.response_LDAPCSDK6_TOOLS_20090120102227
-- unlink /tmp/.response_SASL_20090120102227
-- unlink /tmp/.response_MS_20090120102227
-- unlink /tmp/.response_MS64_20090120102227
-- unlink /tmp/.response_DSSETUP_20090120102227
-- unlink /tmp/.response_DA_20090120102227
-- unlink /tmp/.response_CS_20090120102227
-- unlink /tmp/.response_IM_20090120102227
-- unlink /tmp/.response_CE_20090120102227
-- unlink /tmp/.response_MS_SCHA_20090120102227
-- unlink /tmp/.response_CS_SCHA_20090120102227
-- unlink /tmp/.response_IM_SCHA_20090120102227
-- unlink /tmp/.response_IWC_20090120102227
-- unlink /tmp/.response_CI_20090120102227
-- unlink /tmp/.response_JDK_20090120102227
-- unlink /tmp/.response_JHRT_20090120102227
-- unlink /tmp/.response_MQ_20090120102227
-- unlink /tmp/.patchout_20090120102227.14363
-- unlink /tmp/.patchout_altroot_20090120102227.14363
mkdir -p /opt/altroot/var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0
```

NOTICE: To undo the installation, run the commands in:

```
/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20090120102227
```

NOTICE: silent file created in:

```
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120102227
Closing the log at Tue Jan 20 10:27:12 2009
```

```
(77 root) ./commpkg info
```

```
-- LOGFILE: /tmp/CommsInstaller_20090120102804.log
```

```
=====
```

```
Detecting Installed Products...
```

```
Detecting Installed Patches...
```

```
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
has not been applied. Specifically the following
patches are missing:
```

```
119254-58 120011-14
```

```
NOTICE: It is highly recommended that you apply the
latest OS Recommended Patch Cluster
```

```

ALTROOT: /
NAME: <none>

=====
Detecting Installed Products...
Detecting Installed Patches...
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTROOT: /opt/altroot
NAME: <none>
Product: Messaging Server 7u1
        Version: 7.0-3.01
        Basedir: /opt/altroot/messaging
        Build Date: 20081209
Product: Messaging Server (64bit) 7u1
        Version: 7.0-3.01
        Basedir: /opt/altroot/messaging64
        Build Date: 20081209
Product: Comms DSsetup 6.4
        Version: 6.4-3.01
        Basedir: /opt/altroot/dssetup
        Build Date: 20080729
Product: Comms Delegated Administrator 6.4
        Version: 6.4-3.01
        Basedir: /opt/altroot/da
        Build Date: 20081022
Product: Calendar Server 6.3
        Version: 6.3-11.01
        Basedir: /opt/altroot/calendar
        Build Date: 20081122
Product: Instant Messaging 8
        Version: 8.0-00.06
        Basedir: /opt/altroot/im
        Build Date: 20081204
Product: Communications Express 6.3
        Version: 6.3-11.01
        Basedir: /opt/altroot/ce
        Build Date: 20081203
Product: Messaging Server Sun Cluster HA agent 7.0
        Version: 7.0-0.03
        Basedir: /opt/altroot/msg_scha
        Build Date: 20080519
Product: Calendar Server Sun Cluster HA agent 6.3
        Version: 6.3-1.01
        Basedir: /opt/altroot/cs_scha
        Build Date: 20080331
Product: Instant Messaging Sun Cluster HA agent 7.3
        Version: 7.3-01.02
        Basedir: /opt/altroot/im_scha
        Build Date: 20080403
Product: Convergence 1
        Version: 1.0-4.01

```

```
Basedir: /opt/altroot/iwc
Build Date: 20081208
```

```
(78 root) ./commpkg uninstall /opt/altroot
-- LOGFILE: /tmp/CommsInstaller_20090120102831.log
Detecting Installed Products...
Detecting Installed Patches...
```

```
=====
```

```
Product Selection:
```

```
Communication Services Products:
```

Item	Description
1	Messaging Server 7u1 (7.0-3.01) Installed Version at /opt/altroot/messaging
2	Messaging Server (64bit) 7u1 (7.0-3.01) Installed Version at /opt/altroot/messaging64
3	Comms DSsetup 6.4 (6.4-3.01) Installed Version at /opt/altroot/dssetup
4	Comms Delegated Administrator 6.4 (6.4-3.01) Installed Version at /opt/altroot/da
5	Calendar Server 6.3 (6.3-11.01) Installed Version at /opt/altroot/calendar
6	Instant Messaging 8 (8.0-00.06) Installed Version at /opt/altroot/im
7	Communications Express 6.3 (6.3-11.01) Installed Version at /opt/altroot/ce
8	Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) Installed Version at /opt/altroot/msg_scha
9	Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01) Installed Version at /opt/altroot/cs_scha
10	Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02) Installed Version at /opt/altroot/im_scha
11	Convergence 1 (1.0-4.01) Installed Version at /opt/altroot/iwc

```
Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2
```

```
Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7,
8, 9, 10, 11]:
```

```
=====
```

```
WILL UNINSTALL: Messaging Server 7u1 (7.0-3.01)
                  at /opt/altroot/messaging)
WILL UNINSTALL: Messaging Server (64bit) 7u1 (7.0-3.01)
                  at /opt/altroot/messaging64)
WILL UNINSTALL: Comms DSsetup 6.4 (6.4-3.01)
                  at /opt/altroot/dssetup)
WILL UNINSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
                  at /opt/altroot/da)
WILL UNINSTALL: Calendar Server 6.3 (6.3-11.01)
                  at /opt/altroot/calendar)
WILL UNINSTALL: Instant Messaging 8 (8.0-00.06)
                  at /opt/altroot/im)
```

```

WILL UNINSTALL: Communications Express 6.3 (6.3-11.01)
                  at /opt/altroot/ce)
WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  at /opt/altroot/msg_scha)
WILL UNINSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
                  at /opt/altroot/cs_scha)
WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                  at /opt/altroot/im_scha)
WILL UNINSTALL: Convergence 1 (1.0-4.01)
                  at /opt/altroot/iwc)
=====
Ready to uninstall

Do you want to continue ? [yes] :

=====
Uninstalling Messaging Server 7u1 (7.0-3.01 at
/opt/altroot/messaging)...
----- Executing Task 1 of 20 ...

=====
Uninstalling Messaging Server (64bit) 7u1 (7.0-3.01 at
/opt/altroot/messaging64)...
----- Executing Task 2 of 20 ...

=====
Uninstalling Comms DSsetup 6.4 (6.4-3.01 at /opt/altroot/dssetup)...
----- Executing Task 3 of 20 ...

=====
Uninstalling Comms Delegated Administrator 6.4 (6.4-3.01 at
/opt/altroot/da)...
----- Executing Task 4 of 20 ...
----- Executing Task 5 of 20 ...

=====
Uninstalling Calendar Server 6.3 (6.3-11.01 at /opt/altroot/calendar)...
----- Executing Task 6 of 20 ...
----- Executing Task 7 of 20 ...

=====
Uninstalling Instant Messaging 8 (8.0-00.06 at /opt/altroot/im)...
----- Executing Task 8 of 20 ...
----- Executing Task 9 of 20 ...
----- Executing Task 10 of 20 ...
----- Executing Task 11 of 20 ...
----- Executing Task 12 of 20 ...
----- Executing Task 13 of 20 ...
----- Executing Task 14 of 20 ...
----- Executing Task 15 of 20 ...

=====
Uninstalling Communications Express 6.3 (6.3-11.01 at
/opt/altroot/ce)...
----- Executing Task 16 of 20 ...

```

```

=====
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03 at
/opt/altroot/msg_scha)...
----- Executing Task 17 of 20 ...

=====
Uninstalling Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01 at
/opt/altroot/cs_scha)...
----- Executing Task 18 of 20 ...

=====
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02 at
/opt/altroot/im_scha)...
----- Executing Task 19 of 20 ...

=====
Uninstalling Convergence 1 (1.0-4.01 at /opt/altroot/iwc)...
----- Executing Task 20 of 20 ...
=====
SUMMARY:

All tasks PASSED

Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_200901201028
LOGFILE created in:

/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20090120102831.log
root) cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_200901201028
Silent File for CommsInstaller 6.1-0.01
# Generated on 20090120102831
#
#
#
# verb used to create this silent file
VERB=uninstall
#
# root directory
#
ROOTDIR=/opt/altroot
#
# list of components (using mnemonics)
# WARNING: for verb=uninstall, when there are multiple
# instances, the latest known version found is uninstalled

```

```

#
COMPONENTS=MS MS64 DSSETUP DA CS IM CE MS_SCHA CS_SCHA IM_SCHA IWC
COMPONENT_VERSIONS= 7.0 7.0 6.4 6.4 6.3 8.0 6.3 7.0 6.3 7.3 1.0
(80 root) cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20090120102831.log
LOGFILE started Tue Jan 20 10:28:31 2009 =====
LOGFILE = /tmp/CommsInstaller_20090120102831.log
Running /usr/bin/perl ./commpkg /opt/altroot
-- /usr/bin/perl ./commpkg uninstall /opt/altroot
-- perl version: 5.008004 pid: 16087
-- basetime: 1232476111 Tue Jan 20 10:28:31 2009
-- scriptDir: /var/tmp/ci61
-- LOGFILE: /tmp/CommsInstaller_20090120102831.log
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
-- Exit status: 0
!!! ENV
$VAR1 = {
    'CAPSAVE' => '/home/dl111122/.termcap',
    'PS1' => '# ',
    'LINES' => '55',
    'COLUMNS' => '80',
    'PWD' => '/var/tmp/ci61',
    'USER' => 'dl111122',
    'VISUAL' => 'gnuclient',
    'LOGNAME' => 'dl111122',
    'EMACS' => 't',
    'REMOTE' => '/home/dl111122/.remote',
    'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc:./home/dl111122/bin:/new/local/bin',
    'EMACS_TYPE' => 'pc',
    'EMACSPACKAGEPATH' => '/new/local/lib/xemacs/xemacs-packages',
    'MORE' => '-c',
    'TERM' => 'emacs',
    'PAGER' => 'cat',
    'LM_LICENSE_FILE' =>
'/usr/dist/share/devpro_lic,v1.0/license_dir/sunpro.lic.site,1',
    'HOME' => '/home/dl111122',
    'LD_LIBRARY_PATH' => '/usr/dt/lib:/usr/openwin/lib',
    'MANPATH' =>
'/usr/cluster/man:/tools/ns/man:/usr/openwin/man:/usr/man',
    'TERMSAVE' => 'emacs',
    'CDPATH' => '...../home/dl111122',
    'EDITOR' => 'gnuclient',
    'MAIL' => '/var/mail/dl111122',
    'TZ' => 'US/Pacific',
    'ESHELL' => '/bin/csh',
    'INFOPATH' =>
'/new/local/info:/new/local-generic/share/emacs/19.34/info:/usr/local/info',
    'MOTIFHOME' => '/usr/dt',
    'CVSROOT' =>
':pserver:dl111122@redcvs.red.iplanet.com:/m/src',
    'OPENWINHOME' => '/usr/openwin',
    'RCSINIT' => '-zLT',
    'SHELL' => '/bin/csh',

```

```

        'HZ' => '100',
        'TERMCAP' => '/home/dl111122/.termcap'
    };
cat /etc/release 2>&1
                Solaris 10 6/06 s10s_u2wos_08 SPARC
                Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
                Use is subject to license terms.
                Assembled 01 May 2006

-- Exit status: 0
-- Recognized OS_VERS
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=0
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=1
is_path_writable=1
is_running_system=0
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=1
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 0
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading /var/tmp/ci61/.install/Product/NSS/NSS.in...
mapFile /var/tmp/ci61/.install/Product/NSS/NSS.map does not exist...
Reading /var/tmp/ci61/.install/Product/SASL/SASL.in...
mapFile /var/tmp/ci61/.install/Product/SASL/SASL.map does not exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSKD/LDAPCSKD.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSKD/LDAPCSKD.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSKD6/LDAPCSKD6.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSKD6/LDAPCSKD6.map does not
exist...
Reading
/var/tmp/ci61/.install/Product/LDAPCSKD6_TOOLS/LDAPCSKD6_TOOLS.in...
mapFile
/var/tmp/ci61/.install/Product/LDAPCSKD6_TOOLS/LDAPCSKD6_TOOLS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ICU/ICU.in...
mapFile /var/tmp/ci61/.install/Product/ICU/ICU.map does not exist...
Reading /var/tmp/ci61/.install/Product/JDK/JDK.in...
mapFile /var/tmp/ci61/.install/Product/JDK/JDK.map does not exist...
Reading /var/tmp/ci61/.install/Product/JHRT/JHRT.in...
mapFile /var/tmp/ci61/.install/Product/JHRT/JHRT.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ/MQ.in...
mapFile /var/tmp/ci61/.install/Product/MQ/MQ.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.in...
mapFile /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.map does not

```

```
exist...
Reading /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.in...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.map...
Reading /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.in...
mapFile /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.map does
not exist...
Reading /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.in...
mapFile /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.map
does not exist...
Reading /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.in...
mapFile /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.map does
not exist...
Reading /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.in...
mapFile /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/SNMP/SNMP.in...
mapFile /var/tmp/ci61/.install/Product/SNMP/SNMP.map does not exist...
Reading /var/tmp/ci61/.install/Product/BZIP/BZIP.in...
mapFile /var/tmp/ci61/.install/Product/BZIP/BZIP.map does not exist...
Reading /var/tmp/ci61/.install/Product/SSH/SSH.in...
mapFile /var/tmp/ci61/.install/Product/SSH/SSH.map does not exist...
Reading /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.in...
mapFile /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ST/ST.in...
mapFile /var/tmp/ci61/.install/Product/ST/ST.map does not exist...
Reading /var/tmp/ci61/.install/Product/CI/CI.in...
Reading /var/tmp/ci61/.install/Product/CI/CI.map...
Reading /var/tmp/ci61/.install/Product/MS/MS.in...
Reading /var/tmp/ci61/.install/Product/MS/MS.map...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.in...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.map...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.in...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.map...
Reading /var/tmp/ci61/.install/Product/DA/DA.in...
Reading /var/tmp/ci61/.install/Product/DA/DA.map...
Reading /var/tmp/ci61/.install/Product/CS/CS.in...
Reading /var/tmp/ci61/.install/Product/CS/CS.map...
Reading /var/tmp/ci61/.install/Product/IM/IM.in...
Reading /var/tmp/ci61/.install/Product/IM/IM.map...
Reading /var/tmp/ci61/.install/Product/CE/CE.in...
Reading /var/tmp/ci61/.install/Product/CE/CE.map...
Reading /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.in...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.map...
```

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Reading OLD /var/tmp/ci61/.install/Product/MS/6.3/MS.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.0/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.3/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_SCHA/6.0/MS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_SCHA/6.0/CS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_SCHA/7.0/IM_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.2/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.3/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS64_L10N/6.3/MS64_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.2/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.3/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.0/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.2/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.2/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.3/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/JDK/1.5.0/JDK.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ/3.7/MQ.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ_L10N/3.7/MQ_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.0/IMAPI.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.3/IMAPI.in...
===== QQQ findGetVersion =====
!!! getVersion
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '/var/tmp/ci61/SunOS_sparc/IWC/CI/getVersion',
    'MS64_L10N' => 'none',
    'MS' => '/var/tmp/ci61/SunOS_sparc/MS/CI/getVersion',
    'DSSETUP' =>
'/var/tmp/ci61/SunOS_sparc/DSSETUP/CI/getVersion',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '/var/tmp/ci61/SunOS_sparc/MS64/CI/getVersion',
    'LDAPCSDK' => 'none',
    'LDAPCSDK6' => 'none',
    'JDK' => 'none',
    'CE' => '/var/tmp/ci61/SunOS_sparc/CE/CI/getVersion',
    'PATCHUTILS' => 'none',
    'MQ' => 'none',
    'IMAPI' => 'none',
    'CI' =>
'/var/tmp/ci61/.install/Product/CI/SunOS_sparc/getVersion',
    'LDAPCSDK6_TOOLS' => 'none',
    'NSS' => 'none',
    'CS_L10N' => 'none',
    'ST' => 'none',
    'IM' => '/var/tmp/ci61/SunOS_sparc/IM/CI/getVersion',
    'RECOMMENDED' => 'none',
    'IM_L10N' => 'none',
    'CS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion',
    'LDAPJDK' => 'none',
    'BZIP' => 'none',
    'IM_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/IM_SCHA/CI/getVersion',

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```

        'MS_L10N' => 'none',
        'LIBCPLUSPLUS' => 'none',
        'SNMP' => 'none',
        'MS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/MS_SCHA/CI/getVersion',
        'CS' => '/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion',
        'JHRT' => 'none',
        'CE_L10N' => 'none',
        'SSH' => 'none',
        'DA' => '/var/tmp/ci61/SunOS_sparc/DA/CI/getVersion'
    };
!!! prod_getVers
$VAR1 = {
    'SASL' => 0,
    'IWC' => '1.0-4.01',
    'MS64_L10N' => 0,
    'MS' => '7.0-3.01',
    'DSSETUP' => '6.4-3.01',
    'PKGINSTALL' => 0,
    'LIBMTMALLOC' => 0,
    'MQ_L10N' => 0,
    'ICU' => 0,
    'MS64' => '7.0-3.01',
    'LDAPCSDK' => 0,
    'LDAPCSDK6' => 0,
    'JDK' => 0,
    'CE' => '6.3-11.01',
    'PATCHUTILS' => 0,
    'MQ' => 0,
    'IMAPI' => 0,
    'CI' => '6.1-0.01',
    'LDAPCSDK6_TOOLS' => 0,
    'NSS' => 0,
    'CS_L10N' => 0,
    'ST' => 0,
    'IM' => '8.0-00.06',
    'RECOMMENDED' => 0,
    'IM_L10N' => 0,
    'CS_SCHA' => '6.3-1.01',
    'LDAPJDK' => 0,
    'BZIP' => 0,
    'IM_SCHA' => '7.3-01.02',
    'MS_L10N' => 0,
    'LIBCPLUSPLUS' => 0,
    'SNMP' => 0,
    'MS_SCHA' => '7.0-0.03',
    'CS' => '6.3-11.01',
    'JHRT' => 0,
    'CE_L10N' => 0,
    'SSH' => 0,
    'DA' => '6.4-3.01'
};
!!! prod_builddate
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '20081208',

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'MS64_L10N' => 'none',
'MS' => '20081209',
'DSSETUP' => '20080729',
'PKGINSTALL' => 'none',
'LIBMTMALLOC' => 'none',
'MQ_L10N' => 'none',
'ICU' => 'none',
'MS64' => '20081209',
'LDAPCSDK' => 'none',
'LDAPCSDK6' => 'none',
'JDK' => 'none',
'CE' => '20081203',
'PATCHUTILS' => 'none',
'MQ' => 'none',
'IMAPI' => 'none',
'CI' => '20081210',
'LDAPCSDK6_TOOLS' => 'none',
'NSS' => 'none',
'CS_L10N' => 'none',
'ST' => 'none',
'IM' => '20081204',
'RECOMMENDED' => 'none',
'IM_L10N' => 'none',
'CS_SCHA' => '20080331',
'LDAPJDK' => 'none',
'BZIP' => 'none',
'IM_SCHA' => '20080403',
'MS_L10N' => 'none',
'LIBCPLUSPLUS' => 'none',
'SNMP' => 'none',
'MS_SCHA' => '20080519',
'CS' => '20081122',
'JHRT' => 'none',
'CE_L10N' => 'none',
'SSH' => 'none',
'DA' => '20081022'
};
===== End QQQ findGetVersion =====
INFO: prod_mktVers{NSS} (no map) = 4.2.6
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK} (no map) = 5.0
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.1
INFO: prod_mktVers{MQ_L10N} (no map) = 4.1
INFO: prod_mktVers{LDAPJDK} (no map) = 4.19
INFO: prod_mktVers{IMAPI} (w/ map) = 8
INFO: prod_mktVers{LIBMTMALLOC} (no map) = 11.9.0
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PKGINSTALL} (no map) = Unknown
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{SNMP} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10

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INFO: prod_mktVers{SSH} (no map) = 11.9.0
INFO: prod_mktVers{RECOMMENDED} (no map) = 2008.10.09
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 6u1
INFO: prod_mktVers{MS} (w/ map) = 7u1
INFO: prod_mktVers{MS64} (w/ map) = 7u1
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DA} (w/ map) = 6.4
INFO: prod_mktVers{CS} (w/ map) = 6.3
INFO: prod_mktVers{IM} (w/ map) = 8
INFO: prod_mktVers{CE} (w/ map) = 6.3
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{CS_SCHA} (no map) = 6.3
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
INFO: prod_mktVers{IWC} (w/ map) = 1
Detecting Installed Products...
Checking LIBMTMALLOC 11.9.0 ...
    LIBMTMALLOC 11.9.0 is not present.
Checking LIBCPLUSPLUS 5.9 ...
    Checking pkg SUNWlibc... already present.
    LIBCPLUSPLUS 5.9 is already present.
Checking PKGINSTALL Unknown ...
    Checking pkg SUNWcsr... already present.
    PKGINSTALL Unknown is already present.
Checking PATCHUTILS Unknown ...
    Checking pkg SUNWpkgcmds... already present.
    Checking pkg SUNWswmt... already present.
    Checking pkg SUNWinstall-patch-utils-root... already present.
    Checking pkg SUNWcsr... already present.
    Checking pkg SUNWdtrc... already present.
    Checking pkg SUNWzoneu... already present.
    PATCHUTILS Unknown is already present.
Checking SNMP Unknown ...
    SNMP Unknown is not present.
Checking BZIP 11.10 ...
    Checking pkg SUNWbzip... already present.
    BZIP 11.10 is already present.
Checking SSH 11.9.0 ...
    SSH 11.9.0 is not present.
Checking RECOMMENDED 2008.10.09 ...
    RECOMMENDED 2008.10.09 is not present.
Checking ST 1.1.4 ...
    Checking pkg SUNWservicetagr... already present.
    Checking pkg SUNWservicetagu... already present.
    Checking pkg SUNWstosreg... already present.
    ST 1.1.4 is already present.
Checking NSS 4.2.6 ...
    Checking pkg SUNWjss... already present.
    Checking pkg SUNWpr... already present.
    Checking pkg SUNWprd... already present.
    Checking pkg SUNWtls... already present.
    Checking pkg SUNWtlsd... already present.
    Checking pkg SUNWtlsu... already present.
    NSS 4.2.6 is already present.
Checking SASL 2.19 ...
    Checking pkg SUNWsas1... already present.

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SASL 2.19 is already present.
Checking LDAPCS DK 5.0 ...
  Checking pkg SUNWldk... not present.
  Checking pkg SUNWldkx... not present.
  LDAPCS DK 5.0 is not present.
Checking LDAPCS DK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... already present.
  Checking pkg SUNWldapcsdk-dev... already present.
  LDAPCS DK6 6.0 is already present.
Checking LDAPCS DK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... already present.
  LDAPCS DK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... already present.
  ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... already present.
  Checking pkg SUNWj6rtx... already present.
  Checking pkg SUNWj6dev... already present.
  Checking pkg SUNWj6dvx... already present.
  Checking pkg SUNWj6cfg... already present.
  JDK 1.6.0 is already present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... not present.
  Checking pkg SUNWj5rtx... not present.
  Checking pkg SUNWj5cfg... not present.
  JDK 1.5.0 is not present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... already present.
  Checking pkg SUNWjhdev... already present.
  Checking pkg SUNWjhdev... already present.
  Checking pkg SUNWjhdoc... already present.
  JHRT 2.0 is already present.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... already present.
  Checking pkg SUNWiqu... already present.
  Checking pkg SUNWiqdoc... already present.
  Checking pkg SUNWiquc... already present.
  Checking pkg SUNWiqum... already present.
  Checking pkg SUNWiqjx... already present.
  Checking pkg SUNWiqfs... already present.
  Checking pkg SUNWiqcrt... already present.
  Checking pkg SUNWiqcdv... already present.
  MQ 4.1 is already present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqpl... not present.
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 3.7,REV=2006.06.18.22.35

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Checking pkg SUNWiqjx... present but with a different pkg VERSION.
  checking SUNWiqjx 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqfs... present but with a different pkg VERSION.
  checking SUNWiqfs 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
  checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
  checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqflen... not present.
NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.1 ...
Checking pkg SUNWfiqu... not present.
Checking pkg SUNWfiqic... not present.
Checking pkg SUNWdiqu... not present.
Checking pkg SUNWdiqic... not present.
Checking pkg SUNWjiqu... not present.
Checking pkg SUNWjiquc... not present.
Checking pkg SUNWeiqu... not present.
Checking pkg SUNWeiquc... not present.
Checking pkg SUNWkiqu... not present.
Checking pkg SUNWkiquc... not present.
Checking pkg SUNWciqu... not present.
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 4.1 is not present.
Checking MQ_L10N 3.7 ...
Checking pkg SUNWfiqu... not present.
Checking pkg SUNWfiqic... not present.
Checking pkg SUNWdiqu... not present.
Checking pkg SUNWdiqic... not present.
Checking pkg SUNWjiqu... not present.
Checking pkg SUNWjiquc... not present.
Checking pkg SUNWeiqu... not present.
Checking pkg SUNWeiquc... not present.
Checking pkg SUNWkiqu... not present.
Checking pkg SUNWkiquc... not present.
Checking pkg SUNWciqu... not present.
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 3.7 is not present.
Checking LDAPJDK 4.19 ...
Checking pkg SUNWljdk... already present.
LDAPJDK 4.19 is already present.
Checking IMAPI 8.0 ...
Checking pkg SUNWiimd... already present.
IMAPI 8.0 is already present.
Checking IMAPI 7.0 ...
Checking pkg SUNWiimd... present but with a different pkg VERSION.
  checking SUNWiimd 7.0,REV=2004.11.24.05.24.36
NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking IMAPI 7.3 ...
Checking pkg SUNWiimd... present but with a different pkg VERSION.
  checking SUNWiimd 7.3,REV=2008.01.15
NOTICE: Instant Messaging API is present with a different pkg VERSION.

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```

Checking CI 6.1 ...
  Checking pkg SUNWcomms...
/opt/altroot/CommsInstaller/lib/getVersion VERSION BUILDDATE 2>&1
6.1-0.01
20081210
-- Exit status: 0
  already present.
  CI 6.1 is already present.
Checking MS 7.0 ...
  Checking pkg SUNWmessaging-server...
/opt/altroot/messaging/lib/getVersion VERSION BUILDDATE 2>&1
7.0-3.01
20081209
-- Exit status: 0
  already present.
  MS 7.0 is already present.
Checking MS 6.3 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3 is not present.
Checking MS64 7.0 ...
  Checking pkg SUNWmessaging-server-64...
/opt/altroot/messaging64/lib/getVersion VERSION BUILDDATE 2>&1
7.0-3.01
20081209
-- Exit status: 0
  already present.
  MS64 7.0 is already present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds...
/opt/altroot/dssetup/lib/getVersion VERSION BUILDDATE 2>&1
6.4-3.01
20080729
-- Exit status: 0
  already present.
  DSSETUP 6.4 is already present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic...
/opt/altroot/da/lib/getVersion VERSION BUILDDATE 2>&1
6.4-3.01
20081022
-- Exit status: 0
  already present.
  Checking pkg SUNWcomis... already present.
  DA 6.4 is already present.
Checking CS 6.3 ...
  Checking pkg SUNWics5...
/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion --installed
/opt/altroot/calendar VERSION BUILDDATE 2>&1

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```

6.3-11.01
20081122
-- Exit status: 0
already present.
  Checking pkg SUNWica5... already present.
  CS 6.3 is already present.
Checking IM 8.0 ...
  Checking pkg SUNWiim...
/opt/altroot/im/lib/getVersion VERSION BUILDDATE 2>&1
8.0-00.06
20081204
-- Exit status: 0
already present.
  Checking pkg SUNWiimin... already present.
  Checking pkg SUNWiimm... already present.
  Checking pkg SUNWiimjd... already present.
  Checking pkg SUNWiimid... already present.
  Checking pkg SUNWiimc... already present.
  Checking pkg SUNWiimd... already present.
  Checking pkg SUNWiimgw... already present.
  IM 8.0 is already present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimc... present but with a different pkg VERSION.
    checking SUNWiimc 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimd... present but with a different pkg VERSION.
    checking SUNWiimd 7.0,REV=2004.11.24.05.24.36
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IM 7.3 ...
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.3,REV=2008.01.15
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.3,REV=2008.01.15
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.3,REV=2008.01.15
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.3,REV=2008.01.15
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.3,REV=2008.01.15
  Checking pkg SUNWiimc... present but with a different pkg VERSION.
    checking SUNWiimc 7.3,REV=2008.01.15
  Checking pkg SUNWiimd... present but with a different pkg VERSION.
    checking SUNWiimd 7.3,REV=2008.01.15
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking CE 6.3 ...
  Checking pkg SUNWuwc...
/opt/altroot/ce/lib/getVersion VERSION BUILDDATE 2>&1

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6.3-11.01
20081203
-- Exit status: 0
already present.
CE 6.3 is already present.
Checking MS_SCHA 7.0 ...
Checking pkg SUNWmessaging-server-scha...
/opt/altroot/msg_scha/lib/getVersion VERSION BUILDDATE 2>&1
7.0-0.03
20080519
-- Exit status: 0
already present.
MS_SCHA 7.0 is already present.
Checking MS_SCHA 6.0 ...
Checking pkg SUNWscims... not present.
MS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
Checking pkg SUNWscics...
/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion --installed
/opt/altroot/cs_scha VERSION BUILDDATE 2>&1
6.3-1.01
20080331
-- Exit status: 0
already present.
CS_SCHA 6.3 is already present.
Checking CS_SCHA 6.0 ...
Checking pkg SUNWscics... present but with a different pkg VERSION.
checking SUNWscics 6.0,REV=2003.11.14
NOTICE: Calendar Server Sun Cluster HA agent is present with a
different pkg VERSION.
Checking IM_SCHA 7.3 ...
Checking pkg SUNWiimsc...
/opt/altroot/im_scha/lib/getVersion VERSION BUILDDATE 2>&1
7.3-01.02
20080403
-- Exit status: 0
already present.
IM_SCHA 7.3 is already present.
Checking IM_SCHA 7.0 ...
Checking pkg SUNWiimsc... present but with a different pkg VERSION.
checking SUNWiimsc 7.0,REV=2005.08.03.09.41.41
NOTICE: Instant Messaging Sun Cluster HA agent is present with a
different pkg VERSION.
Checking IWC 1.0 ...
Checking pkg SUNWiwc...
/opt/altroot/iwc/lib/getVersion VERSION BUILDDATE 2>&1
1.0-4.01
20081208
-- Exit status: 0
already present.
IWC 1.0 is already present.
Checking MS_L10N 6.2 ...
Checking pkg SUNWmsgde... not present.
Checking pkg SUNWmsges... not present.
Checking pkg SUNWmsgfr... not present.
Checking pkg SUNWmsgja... not present.

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Checking pkg SUNWmsgko... not present.
Checking pkg SUNWmsgzh... not present.
Checking pkg SUNWmsgtw... not present.
MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
Checking pkg SUNWmsg-l10n... not present.
MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
Checking pkg SUNWmessaging-server-l10n-64... not present.
MS64_L10N 6.3 is not present.
Checking CS_L10N 6.2 ...
Checking pkg SUNWdeics... not present.
Checking pkg SUNWesics... not present.
Checking pkg SUNWfrics... not present.
Checking pkg SUNWjaics... not present.
Checking pkg SUNWkoics... not present.
Checking pkg SUNWzhics... not present.
Checking pkg SUNWtwics... not present.
CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
Checking pkg SUNWics-l10n... not present.
CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
Checking pkg SUNWdiimc... not present.
Checking pkg SUNWdiimd... not present.
Checking pkg SUNWdimid... not present.
Checking pkg SUNWeiimc... not present.
Checking pkg SUNWeiimd... not present.
Checking pkg SUNWeiimin... not present.
Checking pkg SUNWeimid... not present.
Checking pkg SUNWfiimc... not present.
Checking pkg SUNWfiimd... not present.
Checking pkg SUNWfiimin... not present.
Checking pkg SUNWfimid... not present.
Checking pkg SUNWjiimc... not present.
Checking pkg SUNWjiimd... not present.
Checking pkg SUNWjiimin... not present.
Checking pkg SUNWjimid... not present.
Checking pkg SUNWkiimc... not present.
Checking pkg SUNWkiimd... not present.
Checking pkg SUNWkiimin... not present.
Checking pkg SUNWkimid... not present.
Checking pkg SUNWciimc... not present.
Checking pkg SUNWciimd... not present.
Checking pkg SUNWciimin... not present.
Checking pkg SUNWcimid... not present.
Checking pkg SUNWhiimc... not present.
Checking pkg SUNWhiimd... not present.
Checking pkg SUNWhiimin... not present.
Checking pkg SUNWhimid... not present.
IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
Checking pkg SUNWiimc-l10n... not present.
Checking pkg SUNWiimd-l10n... not present.
Checking pkg SUNWiimid-l10n... not present.
Checking pkg SUNWiimin-l10n... not present.

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IM_L10N 7.2 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
CE_L10N 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-12 /tmp/.patchout_20090120102831.16087
-- Running patchadd -p report...
--   Generating /tmp/.patchout_20090120102831.16087
patchadd -p > /tmp/.patchout_20090120102831.16087 2>>
/tmp/CommsInstaller_20090120102831.log 2>&1
-- Exit status: 0
-- older version at lineno 143 found 119963-05 - not acceptable
-- Exact match found at line 144
-- Final return status: 1
  LIBCPLUSPLUS patch 119963-12 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20090120102831.16087
-- Exact match found at line 85
-- Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20090120102831.16087
-- Exact match found at line 88
-- Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-45 /tmp/.patchout_20090120102831.16087
-- Exact match found at line 170
-- Final return status: 1
  PATCHUTILS patch 119254-45 is already present.
-- chk4patch 126868-02 /tmp/.patchout_20090120102831.16087
-- older version at lineno 131 found 126868-01 - not acceptable
-- Exact match found at line 132
-- Final return status: 1
  BZIP patch 126868-02 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20090120102831.16087
-- Exact match found at line 133
-- Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-58 /tmp/.patchout_20090120102831.16087
-- older version at lineno 170 found 119254-45 - not acceptable
-- older version at lineno 171 found 119254-26 - not acceptable
-- older version at lineno 172 found 119254-23 - not acceptable
-- older version at lineno 173 found 119254-54 - not acceptable
-- Final return status: 0
  RECOMMENDED patch 119254-58 is not present.
-- chk4patch 118833-36 /tmp/.patchout_20090120102831.16087
-- older version at lineno 3 found 118833-11 - not acceptable
-- Exact match found at line 5
-- Final return status: 1

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RECOMMENDED patch 118833-36 is already present.
-- chk4patch 120011-14 /tmp/.patchout_20090120102831.16087
-- Final return status: 0
RECOMMENDED patch 120011-14 is not present.
-- chk4patch 125358-06 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Running patchadd -R /opt/altroot -p report...
-- Generating /tmp/.patchout_altroot_20090120102831.16087
patchadd -R /opt/altroot -p >
/tmp/.patchout_altroot_20090120102831.16087 2>>
/tmp/CommsInstaller_20090120102831.log 2>&1
-- Exit status: 0
-- Exact match found at line 4
-- Final return status: 1
NSS patch 125358-06 is already present.
-- chk4patch 119345-05 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 6
-- Final return status: 1
SASL patch 119345-05 is already present.
-- chk4patch 136798-01 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 5
-- Final return status: 1
LDAPCSDK6_TOOLS patch 136798-01 is already present.
-- chk4patch 119810-05 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 3
-- Final return status: 1
ICU patch 119810-05 is already present.
-- chk4patch 125136-09 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 18
-- Final return status: 1
JDK patch 125136-09 is already present.
-- chk4patch 125137-09 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 19
-- Final return status: 1
JDK patch 125137-09 is already present.
-- chk4patch 127411-01 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 20
-- Final return status: 1
MQ patch 127411-01 is already present.
-- chk4patch 127412-01 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 21
-- Final return status: 1
MQ patch 127412-01 is already present.
-- chk4patch 119725-04 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 2
-- Final return status: 1
LDAPJDK patch 119725-04 is already present.
-- chk4patch 137201-03 /tmp/.patchout_altroot_20090120102831.16087

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/opt/altroot -R /opt/altroot
-- Exact match found at line 7
-- Final return status: 1
  MS patch 137201-03 is already present.
-- chk4patch 137204-03 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 8
-- Final return status: 1
  MS64 patch 137204-03 is already present.
-- chk4patch 118242-03 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 9
-- Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-19 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 10
-- Final return status: 1
  DSSETUP patch 118245-19 is already present.
-- chk4patch 121581-19 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 12
-- Final return status: 1
  DA patch 121581-19 is already present.
-- chk4patch 121657-32 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 13
-- Final return status: 1
  CS patch 121657-32 is already present.
-- chk4patch 137571-01 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 16
-- Final return status: 1
  IM_SCHA patch 137571-01 is already present.
-- chk4patch 137631-04 /tmp/.patchout_altroot_20090120102831.16087
/opt/altroot -R /opt/altroot
-- Exact match found at line 17
-- Final return status: 1
  IWC patch 137631-04 is already present.
===== QQQ detectProducts =====
QQQ Dumper
!!! present
$VAR1 = {
    '137571-01' => 'PRESENT',
    'DSSETUP' => {
        '6.4' => 'PRESENT'
    },
    'MQ_L10N' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    '119345-05' => 'PRESENT',
    'ICU' => {
        'ICU2,ICU3' => 'PRESENT'
    },
    'MS64' => {

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        '7.0' => 'PRESENT'
    },
    '137631-04' => 'PRESENT',
    'LDAPCSDK' => {
        '5.0' => 'NOT_PRESENT'
    },
    'CE' => {
        '6.3' => 'PRESENT'
    },
    'MQ' => {
        '3.7' => 'DIFF_VERSION',
        '4.1' => 'PRESENT'
    },
    'PATCHUTILS' => {
        'Unknown' => 'PRESENT'
    },
    'IMAPI' => {
        '8.0' => 'PRESENT',
        '7.0' => 'DIFF_VERSION',
        '7.3' => 'DIFF_VERSION'
    },
    '121581-19' => 'PRESENT',
    'LDAPCSDK6_TOOLS' => {
        '6.0' => 'PRESENT'
    },
    'ST' => {
        '1.1.4' => 'PRESENT'
    },
    '121657-32' => 'PRESENT',
    '118833-36' => 'PRESENT',
    'IM_L10N' => {
        '7.2' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT'
    },
    '119725-04' => 'PRESENT',
    'LDAPJDK' => {
        '4.19' => 'PRESENT'
    },
    'BZIP' => {
        '11.10' => 'PRESENT'
    },
    '119254-58' => 'NOT_PRESENT',
    'IM_SCHA' => {
        '7.0' => 'DIFF_VERSION',
        '7.3' => 'PRESENT'
    },
    '126868-02' => 'PRESENT',
    'SNMP' => {
        'Unknown' => 'NOT_PRESENT'
    },
    'MS_SCHA' => {
        '6.0' => 'NOT_PRESENT',
        '7.0' => 'PRESENT'
    },
    '125358-06' => 'PRESENT',
    'JHRT' => {

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        '2.0' => 'PRESENT'
    },
    'CE_L10N' => {
        '6.2' => 'NOT_PRESENT',
        '6.3' => 'NOT_PRESENT'
    },
    '136798-01' => 'PRESENT',
    '119810-05' => 'PRESENT',
    'SASL' => {
        '2.19' => 'PRESENT'
    },
    'IWC' => {
        '1.0' => 'PRESENT'
    },
    'MS64_L10N' => {
        '6.3' => 'NOT_PRESENT'
    },
    '125137-09' => 'PRESENT',
    'MS' => {
        '7.0' => 'PRESENT',
        '6.3' => 'NOT_PRESENT'
    },
    'PKGINSTALL' => {
        'Unknown' => 'PRESENT'
    },
    'LIBMTMALLOC' => {
        '11.9.0' => 'NOT_PRESENT'
    },
    '120900-04' => 'PRESENT',
    '127411-01' => 'PRESENT',
    '120011-14' => 'NOT_PRESENT',
    'LDAPCSDK6' => {
        '6.0' => 'PRESENT'
    },
    '119963-12' => 'PRESENT',
    'JDK' => {
        '1.6.0' => 'PRESENT',
        '1.5.0' => 'NOT_PRESENT'
    },
    'CI' => {
        '6.1' => 'PRESENT'
    },
    '137321-01' => 'PRESENT',
    '119254-45' => 'PRESENT',
    'NSS' => {
        '4.2.6' => 'PRESENT'
    },
    'IM' => {
        '8.0' => 'PRESENT',
        '7.0' => 'DIFF_VERSION',
        '7.3' => 'DIFF_VERSION'
    },
    'CS_L10N' => {
        '6.2' => 'NOT_PRESENT',
        '6.3' => 'NOT_PRESENT'
    },

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'125136-09' => 'PRESENT',
'RECOMMENDED' => {
    '2008.10.09' => 'NOT_PRESENT'
},
'CS_SCHA' => {
    '6.0' => 'DIFF_VERSION',
    '6.3' => 'PRESENT'
},
'137201-03' => 'PRESENT',
'118245-19' => 'PRESENT',
'MS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'LIBCPLUSPLUS' => {
    '5.9' => 'PRESENT'
},
'137204-03' => 'PRESENT',
'121133-02' => 'PRESENT',
'118242-03' => 'PRESENT',
'CS' => {
    '6.3' => 'PRESENT'
},
'SSH' => {
    '11.9.0' => 'NOT_PRESENT'
},
'DA' => {
    '6.4' => 'PRESENT'
},
'127412-01' => 'PRESENT'
};
!!! pkgparams
$VAR1 = {
    'SUNWica5' => {
        '6.0,REV=2003.11.14.18.12.58' => [
            'SUNWica5',
            '/calendar',
            '6.3-11.01'
        ]
    },
    'SUNWmsgja' => {},
    'SUNWcomic' => {
        '1.0,REV=2003.10.29' => [
            'SUNWcomic',
            '/da',
            '6.4-3.01'
        ]
    },
    'SUNWservicetagu' => {
        '1.1.4,REV=2008.03.21.07.54' => [
            'SUNWservicetagu',
            '/',
            '1.1.4.1'
        ]
    }
}

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    },
    'SUNWjimid' => {},
    'SUNWdiquc' => {},
    'SUNWmsgko' => {},
    'SUNWmessaging-server-110n-64' => {},
    'SUNWics5' => {
        '6.0,REV=2003.11.14.18.12.58' => [
            'SUNWics5',
            '6.3-11.01'
        ]
    },
    'SUNWiqlpl' => {},
    'SUNWmsgco' => {},
    'SUNWfiquc' => {},
    'SUNWjhdem' => {
        '2.0,REV=2006.10.04' => [
            'SUNWjhdem',
            '/usr',
            '2.0/FCS'
        ]
    },
    'SUNWiqfs' => {
        '4.1,REV=2007.07.26.10.59' => [
            'SUNWiqfs',
            '/',
            '4.1.0.0'
        ]
    },
    'SUNWfimid' => {},
    'SUNWcomds' => {
        '6.3,REV=2004.08.12' => [
            'SUNWcomds',
            '/dssetup',
            '6.4-3.01'
        ]
    },
    'SUNWjhdev' => {
        '2.0,REV=2006.10.04' => [
            'SUNWjhdev',
            '/usr',
            '2.0/FCS'
        ]
    },
    'SUNWj6rtx' => {
        '1.6.0,REV=2006.11.29.04.58' => [
            'SUNWj6rtx',
            '/usr',
            '1.6.0_07/1.6.0_07-b06'
        ]
    },
    'SUNWiqum' => {

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'4.1,REV=2007.07.26.10.59' => [
    'SUNWiqum',
    '/',
    '4.1.0.1'
]
},
'SUNWduwc' => {},
'SUNWhiimin' => {},
'SUNWkiimin' => {},
'SUNWeiimd' => {},
'SUNWj6rt' => {
    '1.6.0,REV=2006.11.29.05.57' => [
        'SUNWj6rt',
        '/usr',
'1.6.0_07/1.6.0_07-b06'
    ]
},
'SUNWj5rt' => {},
'SUNWiimc-l10n' => {},
'SUNWhiimc' => {},
'SUNWmsg-l10n' => {},
'SUNWfrics' => {},
'SUNWciqu' => {},
'SUNWkoics' => {},
'SUNWdimid' => {},
'SUNWjiquc' => {},
'SUNWiimgw' => {
    '8.0,REV=2008.12.04' => [
        'SUNWiimgw',
        '/im',
        '8.0-00'
    ]
},
'SUNWiimd-l10n' => {},
'SUNWhiquc' => {},
'SUNWzhics' => {},
'SUNWkiimd' => {},
'SUNWmsgmp' => {},
'SUNWuwc' => {
    '6.1,REV=2004.04.29' => [
        'SUNWuwc',
        '/ce',
        '6.3-11.01'
    ]
},
'SUNWscics' => {
    '6.3,REV=2008.03.31.18.10.20' => [
'SUNWscics',
'/cs_scha',
'6.3-1.01'
    ]
},
'SUNWiimc' => {

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        '8.0,REV=2008.12.04' => [
            'SUNWiimc',
            '/im',
            '8.0-00'
        ]
    },
    'SUNWhiimd' => {},
    'SUNWmessaging-server-scha' => {
        '7.0,REV=2008.05.19' => [
'SUNWmessaging-server-scha',
'/msg_scha',
'7.0-0.03'
        ]
    },
    'SUNWmsglb' => {},
    'SUNWt1s' => {
        '3.11.4,REV=2006.11.16.20.40' => [
            'SUNWt1s',
            '/',
            '3.11.9'
        ]
    },
    'SUNWj6dvx' => {
        '1.6.0,REV=2006.11.29.04.58' => [
'SUNWj6dvx',
'/usr',
'1.6.0_07/1.6.0_07-b06'
        ]
    },
    'SUNWfuwc' => {},
    'SUNWlibC' => {
        '5.10,REV=2004.12.22' => [
            'SUNWlibC',
            '/',
            '5.10'
        ]
    },
    'SUNWjiimin' => {},
    'SUNWscims' => {},
    'SUNWiimjd' => {
        '8.0,REV=2008.12.04' => [
            'SUNWiimjd',
            '/im',
            '8.0-00'
        ]
    },
    'SUNWciimd' => {},
    'SUNWldapcsdk-dev' => {
        '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-dev',

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'6.00'
                                                                    '/',
                                                                    ]
                                                                    },
'SUNWiqlen' => {},
'SUNWiimid-l10n' => {},
'SUNWiqr' => {
    '4.1,REV=2007.07.26.10.58' => [
                                                                    'SUNWiqr',
                                                                    '/',
                                                                    '4.1.0.1'
                                                                    ]
    },
'SUNWdiimc' => {},
'SUNWmsgwm' => {},
'SUNWmessaging-server-64' => {
    '7.0,REV=2008.06.20' => [
'SUNWmessaging-server-64',
'/messaging64',
'7.0-3.01'
                                                                    ]
    },
'SUNWeiquc' => {},
'SUNWj5cfg' => {},
'SUNWhiqu' => {},
'SUNWiimd' => {
    '8.0,REV=2008.12.04' => [
                                                                    'SUNWiimd',
                                                                    '/',
                                                                    '8.0-00'
                                                                    ]
    },
'SUNWfiimd' => {},
'SUNWj5rtx' => {},
'SUNWiquc' => {
    '4.1,REV=2007.07.26.10.59' => [
                                                                    'SUNWiquc',
                                                                    '/',
                                                                    '4.1.0.1'
                                                                    ]
    },
'SUNWiimid' => {
    '8.0,REV=2008.12.04' => [
                                                                    'SUNWiimid',
                                                                    '/im',
                                                                    '8.0-00'
                                                                    ]
    },
'SUNWmsgmt' => {},
'SUNWljdk' => {
    '1.0,REV=2004.10.11.06.02' => [
                                                                    'SUNWljdk',

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        '/',
        '4.19'
    ]
    },
    'SUNWcuwc' => {},
    'SUNWldapcsdk-libs' => {
        '6.00,REV=2006.12.11.00.08' => [
            'SUNWldapcsdk-libs',
            '/',
            '6.00'
        ]
    },
    'SUNWservicetagr' => {
        '1.1.4,REV=2008.03.21.07.54' => [
            'SUNWservicetagr',
            '/',
            '1.1.4.1'
        ]
    },
    'SUNWciimc' => {},
    'SUNWjhrt' => {
        '2.0,REV=2006.10.31' => [
            'SUNWjhrt',
            '/usr',
            '2.0/FCS'
        ]
    },
    'SUNWtlsd' => {
        '3.11.4,REV=2006.11.16.20.40' => [
            'SUNWtlsd',
            '/',
            '3.11.9'
        ]
    },
    'SUNWmsgin' => {},
    'SUNWdtrc' => {
        '11.10.0,REV=2005.01.21.15.53' => [
            'SUNWdtrc',
            '/',
            '5.10/Generic'
        ]
    },
    'SUNWhuwc' => {},
    'SUNWiqdoc' => {
        '4.1,REV=2007.07.26.10.58' => [
            'SUNWiqdoc',
            '/',
            '4.1.0.0'
        ]
    },
    },

```

```

'SUNWjiimd' => {},
'SUNWjuwc' => {},
'SUNWiimd' => {
    '8.0,REV=2008.12.04' => [
        'SUNWiimd',
        '/im',
        '8.0-00'
    ]
},
'SUNWiqcrt' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqcrt',
        '/opt',
        '4.1.0.1'
    ]
},
'SUNWmsgzh' => {},
'SUNWprd' => {
    '4.6.4,REV=2006.11.16.20.40' => [
        'SUNWprd',
        '/',
        '4.7'
    ]
},
'SUNWmsgen' => {},
'SUNWldk' => {},
'SUNWiwc' => {
    '1.0,REV=2008.07.07' => [
        'SUNWiwc',
        '/iwc',
        '1.0-4.01'
    ]
},
'SUNWiimin-l10n' => {},
'SUNWiimsc' => {
    '7.3,REV=2008.01.07.20.24.34' => [
'SUNWiimsc',
'/im_scha',
'7.3-01'
    ]
},
'SUNWinstall-patch-utils-root' => {
'11.10,REV=2005.01.09.23.05' => [
'SUNWinstall-patch-utils-root',
'/',
'SNAG Development'
]
},
'SUNWiimin' => {

```

```

        '8.0,REV=2008.12.04' => [
            'SUNWiimin',
            '/im',
            '8.0-00'
        ]
    },
    'SUNWuwc-110n' => {},
    'SUNWmsgst' => {},
    'SUNWiqu' => {
        '4.1,REV=2007.07.26.10.58' => [
            'SUNWiqu',
            '/',
            '4.1.0.1'
        ]
    },
    'SUNWkiimc' => {},
    'SUNWiim' => {
        '8.0,REV=2008.12.04' => [
            'SUNWiim',
            '/im',
            '8.0-00'
        ]
    },
    'SUNWeiimin' => {},
    'SUNWcimid' => {},
    'SUNWiqcdv' => {
        '4.1,REV=2007.07.26.10.59' => [
            'SUNWiqcdv',
            '/opt',
            '4.1.0.1'
        ]
    },
    'SUNWldapcsdk-tools' => {
        '6.00,REV=2006.12.11.00.08' => [
            'SUNWldapcsdk-tools',
            '/directory',
            '6.00'
        ]
    },
    'SUNWjss' => {
        '4.2.4,REV=2006.11.16.20.40' => [
            'SUNWjss',
            '/',
            '4.2.6'
        ]
    },
    'SUNWdiqu' => {},
    'SUNWj6cfg' => {
        '1.6.0,REV=2006.11.29.05.57' => [
            'SUNWj6cfg',
            '/',

```

```

'1.6.0_07/1.6.0_07-b06'
]
},
'SUNWhimid' => {},
'SUNWciquc' => {},
'SUNWcomms' => {
    '6.1,REV=2008.12.10' => [
        'SUNWcomms',
        '/CommsInstaller',
        '6.1-0.01'
    ]
},
'SUNWjiqu' => {},
'SUNWkiqu' => {},
'SUNWkuwc' => {},
'SUNWics-110n' => {},
'SUNWeiqu' => {},
'SUNWmessaging-server' => {
    '7.0,REV=2008.06.20' => [
'SUNWmessaging-server',
'/messaging',
'7.0-3.01'
    ]
},
'SUNWmsgtw' => {},
'SUNWeiimc' => {},
'SUNWjaics' => {},
'SUNWpkgcmdsu' => {
    '11.11,REV=2005.01.09.23.05' => [
'SUNWpkgcmdsu',
'/',
'SNAG
Development'
    ]
},
'SUNWldkx' => {},
'SUNWjiimc' => {},
'SUNWiqjx' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqjx',
        '/',
        '4.1.0.1'
    ]
},
'SUNWjhdoc' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdoc',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWj6dev' => {

```

```

'1.6.0,REV=2006.11.29.05.57' => [
'SUNWj6dev',
'/usr',
'1.6.0_07/1.6.0_07-b06'
]
},
'SUNWeimid' => {},
'SUNWmsges' => {},
'SUNWpr' => {
'4.6.4,REV=2006.11.16.20.40' => [
'SUNWpr',
 '/',
 '4.7'
]
},
'SUNWmsgmf' => {},
'SUNWkimid' => {},
'SUNWicu' => {
'1.2,REV=2005.01.06.14.13' => [
'SUNWicu',
 '/usr',
 '10/Generic'
]
},
'SUNWfiimin' => {},
'SUNWswmt' => {
'11.10,REV=2005.01.10.17.19' => [
'SUNWswmt',
 '/',
 'SNAG'
]
}
Development'
},
'SUNWcomis' => {
'1.0,REV=2003.10.29' => [
'SUNWcomis',
 '/da',
 '6.4-3.01'
]
},
'SUNWdeics' => {},
'SUNWtwics' => {},
'SUNWciimin' => {},
'SUNWmsgfr' => {},
'SUNWdiimd' => {},
'SUNWeuwc' => {},
'SUNWkiqc' => {},
'SUNWstosreg' => {
'1.1.4,REV=2008.03.21.07.54' => [
'SUNWstosreg',
 '/',
 '1.1.4.1'
]
}

```

```

    },
    'SUNWmsgde' => {},
    'SUNWbzip' => {
        '11.10.0,REV=2005.01.08.05.16' => [
'SUNWbzip',
                                '/',
'5.10/SunOS Development'
                                ]
        },
    'SUNWt1su' => {
        '3.11.4,REV=2006.11.16.20.40' => [
                                'SUNWt1su',
                                '/',
                                '3.11.9'
                                ]
        },
    'SUNWfiqu' => {},
    'SUNWsas1' => {
        '2.17,REV=2004.04.06.15.24' => [
                                'SUNWsas1',
                                '/',
                                '2.19'
                                ]
        },
    'SUNWzoneu' => {
        '11.10.0,REV=2005.01.21.15.53' => [
'SUNWzoneu',
                                '/',
'5.10/Generic'
                                ]
        },
    'SUNWcsr' => {
        '11.10.0,REV=2005.01.21.15.53' => [
                                'SUNWcsr',
                                '/',
'5.10/Generic'
                                ]
        },
    'SUNWfiimc' => {},
    'SUNWesics' => {},
    'SUNWiimm' => {
        '8.0,REV=2008.12.04' => [
                                'SUNWiimm',
                                '/im',
                                '8.0-00'
                                ]
        }
    };
!!! installedprod
$VAR1 = {
    'IWC' => {

```

```

        '1.0' => [
            '/opt/altroot/iwc',
            '1.0-4.01',
            '20081208',
            '1'
        ]
    },
    'IM' => {
        '8.0' => [
            '/opt/altroot/im',
            '8.0-00.06',
            '20081204',
            '8'
        ]
    },
    'SASL' => {
        '2.19' => [
            '/opt/altroot/',
            '2.19',
            'none',
            '2.19'
        ]
    },
    'ST' => {
        '1.1.4' => [
            '/opt/altroot/',
            '1.1.4.1',
            'none',
            '1.1.4'
        ]
    },
    'MS' => {
        '7.0' => [
            '/opt/altroot/messaging',
            '7.0-3.01',
            '20081209',
            '7u1'
        ]
    },
    'DSSETUP' => {
        '6.4' => [
            '/opt/altroot/dssetup',
            '6.4-3.01',
            '20080729',
            '6.4'
        ]
    },
    'PKGINSTALL' => {
        'Unknown' => [
            '/opt/altroot/',
            '5.10/Generic',
            'none',
            'Unknown'
        ]
    },
    'CS_SCHA' => {

```

```

        '6.3' => [
            '/opt/altroot/cs_scha',
            '6.3-1.01',
            '20080331',
            '6.3'
        ]
    },
    'LDAPJDK' => {
        '4.19' => [
            '/opt/altroot/',
            '4.19',
            'none',
            '4.19'
        ]
    },
    'BZIP' => {
        '11.10' => [
            '/opt/altroot/',
            '5.10/SunOS Development',
            'none',
            '11.10'
        ]
    },
    'IM_SCHA' => {
        '7.3' => [
            '/opt/altroot/im_scha',
            '7.3-01.02',
            '20080403',
            '7.3'
        ]
    },
    'ICU' => {
        'ICU2,ICU3' => [
            '/opt/altroot/usr',
            '10/Generic',
            'none',
            'ICU2,ICU3'
        ]
    },
    'MS64' => {
        '7.0' => [
            '/opt/altroot/messaging64',
            '7.0-3.01',
            '20081209',
            '7u1'
        ]
    },
    'LIBCPLUSPLUS' => {
        '5.9' => [
            '/opt/altroot/',
            '5.10',
            'none',
            '5.9'
        ]
    },
    'LDAPCSDK6' => {

```

```

        '6.0' => [
            '/opt/altroot/',
            '6.00',
            'none',
            '6.0'
        ]
    },
    'CE' => {
        '6.3' => [
            '/opt/altroot/ce',
            '6.3-11.01',
            '20081203',
            '6.3'
        ]
    },
    'JDK' => {
        '1.6.0' => [
            '/opt/altroot/usr',
            '1.6.0_07/1.6.0_07-b06',
            'none',
            '1.6.0'
        ]
    },
    'MS_SCHA' => {
        '7.0' => [
            '/opt/altroot/msg_scha',
            '7.0-0.03',
            '20080519',
            '7.0'
        ]
    },
    'CS' => {
        '6.3' => [
            '/opt/altroot/calendar',
            '6.3-11.01',
            '20081122',
            '6.3'
        ]
    },
    'PATCHUTILS' => {
        'Unknown' => [
            '/opt/altroot/',
            'SNAG Development',
            'none',
            'Unknown'
        ]
    },
    'MQ' => {
        '4.1' => [
            '/opt/altroot/',
            '4.1.0.1',
            'none',
            '4.1'
        ]
    },
    'JHRT' => {

```

```

        '2.0' => [
            '/opt/altroot/usr',
            '2.0/FCS',
            'none',
            '2.0'
        ]
    },
    'IMAPI' => {
        '8.0' => [
            '/opt/altroot/',
            '8.0-00',
            'none',
            '8'
        ]
    },
    'CI' => {
        '6.1' => [
            '/opt/altroot/CommsInstaller',
            '6.1-0.01',
            '20081210',
            '6u1'
        ]
    },
    'DA' => {
        '6.4' => [
            '/opt/altroot/da',
            '6.4-3.01',
            '20081022',
            '6.4'
        ]
    },
    'LDAPCSDK6_TOOLS' => {
        '6.0' => [
            '/opt/altroot/directory',
            '6.00',
            'none',
            '6.0'
        ]
    },
    'NSS' => {
        '4.2.6' => [
            '/opt/altroot/',
            '4.2.6',
            'none',
            '4.2.6'
        ]
    }
};

```

=====
 =====
 End QQQ detectProducts =====

Product Selection:

Communication Services Products:

Item	Description
----	-----

- 1 Messaging Server 7u1 (7.0-3.01)
Installed Version at /opt/altroot/messaging
- 2 Messaging Server (64bit) 7u1 (7.0-3.01)
Installed Version at /opt/altroot/messaging64
- 3 Comms DSsetup 6.4 (6.4-3.01)
Installed Version at /opt/altroot/dssetup
- 4 Comms Delegated Administrator 6.4 (6.4-3.01)
Installed Version at /opt/altroot/da
- 5 Calendar Server 6.3 (6.3-11.01)
Installed Version at /opt/altroot/calendar
- 6 Instant Messaging 8 (8.0-00.06)
Installed Version at /opt/altroot/im
- 7 Communications Express 6.3 (6.3-11.01)
Installed Version at /opt/altroot/ce
- 8 Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
Installed Version at /opt/altroot/msg_scha
- 9 Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
Installed Version at /opt/altroot/cs_scha
- 10 Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
Installed Version at /opt/altroot/im_scha
- 11 Convergence 1 (1.0-4.01)
Installed Version at /opt/altroot/iwc

Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]:

```

=====
QQQ selections: MS 7.0 MS64 7.0 DSSETUP 6.4 DA 6.4 CS 6.3 IM 8.0 CE 6.3
MS_SCHA 7.0 CS_SCHA 6.3 IM_SCHA 7.3 IWC 1.0
  WILL UNINSTALL: Messaging Server 7u1 (7.0-3.01)
                    at /opt/altroot/messaging)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWmessaging-server
  WILL UNINSTALL: Messaging Server (64bit) 7u1 (7.0-3.01)
                    at /opt/altroot/messaging64)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWmessaging-server-64
  WILL UNINSTALL: Comms DSsetup 6.4 (6.4-3.01)
                    at /opt/altroot/dssetup)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWcomds
  WILL UNINSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
                    at /opt/altroot/da)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWcomis
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWcomic
  WILL UNINSTALL: Calendar Server 6.3 (6.3-11.01)
                    at /opt/altroot/calendar)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWica5
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWics5

```

```

WILL UNINSTALL: Instant Messaging 8 (8.0-00.06)
                    at /opt/altroot/im)
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimgw
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimd
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimc
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimid
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimjd
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimm
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimin
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiim
WILL UNINSTALL: Communications Express 6.3 (6.3-11.01)
                    at /opt/altroot/ce)
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWuwc
WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                    at /opt/altroot/msg_scha)
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWmessaging-server-scha
WILL UNINSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
                    at /opt/altroot/cs_scha)
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWscics
WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                    at /opt/altroot/im_scha)
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimsc
WILL UNINSTALL: Convergence 1 (1.0-4.01)
                    at /opt/altroot/iwc)
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiwc
=====
Ready to uninstall

Do you want to continue ? [yes] :

=====
Uninstalling Messaging Server 7u1 (7.0-3.01 at
/opt/altroot/messaging)...
----- Executing Task 1 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWmessaging-server 2>&1

Removal of <SUNWmessaging-server> was successful.
-- Exit status: 0

=====
Uninstalling Messaging Server (64bit) 7u1 (7.0-3.01 at
/opt/altroot/messaging64)...

```

```

----- Executing Task 2 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWmessaging-server-64 2>&1

Removal of <SUNWmessaging-server-64> was successful.
-- Exit status: 0

=====
Uninstalling Comms DSsetup 6.4 (6.4-3.01 at /opt/altroot/dssetup)...
----- Executing Task 3 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWcomds 2>&1

Removal of <SUNWcomds> was successful.
-- Exit status: 0

=====
Uninstalling Comms Delegated Administrator 6.4 (6.4-3.01 at
/opt/altroot/da)...
----- Executing Task 4 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWcomis 2>&1

Removal of <SUNWcomis> was successful.
-- Exit status: 0
----- Executing Task 5 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWcomic 2>&1

Removal of <SUNWcomic> was successful.
-- Exit status: 0

=====
Uninstalling Calendar Server 6.3 (6.3-11.01 at /opt/altroot/calendar)...
----- Executing Task 6 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWica5 2>&1

Removal of <SUNWica5> was successful.
-- Exit status: 0
----- Executing Task 7 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWics5 2>&1
Replacing current install root with /.
pkgparam: ERROR: unable to locate parameter information for "SUNWics5"
Replacing current install root with /.
pkgparam: ERROR: unable to locate parameter information for "SUNWics5"

Removal of <SUNWics5> was successful.
-- Exit status: 0

=====
Uninstalling Instant Messaging 8 (8.0-00.06 at /opt/altroot/im)...
----- Executing Task 8 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimgw 2>&1

```

```

Removal of <SUNWiimgw> was successful.
-- Exit status: 0
----- Executing Task 9 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimd 2>&1

Removal of <SUNWiimd> was successful.
-- Exit status: 0
----- Executing Task 10 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimc 2>&1

Removal of <SUNWiimc> was successful.
-- Exit status: 0
----- Executing Task 11 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimid 2>&1

Removal of <SUNWiimid> was successful.
-- Exit status: 0
----- Executing Task 12 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimjd 2>&1

Removal of <SUNWiimjd> was successful.
-- Exit status: 0
----- Executing Task 13 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimm 2>&1

Removal of <SUNWiimm> was successful.
-- Exit status: 0
----- Executing Task 14 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimin 2>&1

Removal of <SUNWiimin> was successful.
-- Exit status: 0
----- Executing Task 15 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiim 2>&1

Removal of <SUNWiim> was successful.
-- Exit status: 0

=====
Uninstalling Communications Express 6.3 (6.3-11.01 at
/opt/altroot/ce)...
----- Executing Task 16 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWuwc 2>&1

Removal of <SUNWuwc> was successful.
-- Exit status: 0

```

```

=====
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03 at
/opt/altroot/msg_scha)...
----- Executing Task 17 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWmessaging-server-scha 2>&1

Removal of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0

=====
Uninstalling Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01 at
/opt/altroot/cs_scha)...
----- Executing Task 18 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWscics 2>&1

Attempting to change the following in ics.conf
    local.server.ha.enabled="no"
    local.server.ha.agent="none"
Done...

Removal of <SUNWscics> was successful.
-- Exit status: 0

=====
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02 at
/opt/altroot/im_scha)...
----- Executing Task 19 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiimsc 2>&1

Removal of <SUNWiimsc> was successful.
-- Exit status: 0

=====
Uninstalling Convergence 1 (1.0-4.01 at /opt/altroot/iwc)...
----- Executing Task 20 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R /opt/altroot
SUNWiwc 2>&1

Removal of <SUNWiwc> was successful.
-- Exit status: 0
=====
SUMMARY:

PASSED: Task 1: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWmessaging-server
PASSED: Task 2: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWmessaging-server-64
PASSED: Task 3: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWcomds
PASSED: Task 4: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWcomis
PASSED: Task 5: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWcomic

```

```

PASSED: Task 6: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWica5
PASSED: Task 7: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWics5
PASSED: Task 8: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimgw
PASSED: Task 9: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimd
PASSED: Task 10: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimc
PASSED: Task 11: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimid
PASSED: Task 12: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimjd
PASSED: Task 13: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimm
PASSED: Task 14: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimin
PASSED: Task 15: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiim
PASSED: Task 16: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWuwc
PASSED: Task 17: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWmessaging-server-scha
PASSED: Task 18: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWscics
PASSED: Task 19: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiimsc
PASSED: Task 20: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet -R
/opt/altroot SUNWiwc

```

All tasks PASSED

Checking JES java symlink...

```

ls -l /usr/jdk /usr/java 2>&1
/usr/java:
total 2
drwxr-xr-x  3 root    root          512 Feb 12  2007 jre

/usr/jdk:
total 14
lrwxrwxrwx  1 root    root           27 Mar  1  2007 entsys-j2se ->
/usr/jdk/instances/jdk1.5.0
drwxr-xr-x  4 root    bin           512 Sep 17 12:44 instances
lrwxrwxrwx  1 root    other          7 Feb 12  2007 j2sdk1.4.2_11 ->
../j2se
lrwxrwxrwx  1 root    other          18 Oct  3 14:57 jdk1.5.0_09 ->
instances/jdk1.5.0
lrwxrwxrwx  1 root    other          18 Sep 17 12:45 jdk1.6.0_07 ->
instances/jdk1.6.0
lrwxrwxrwx  1 root    other          11 Sep 17 12:45 latest ->
jdk1.6.0_07
drwxr-xr-x  8 root    bin           512 Dec 10 11:28 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
lrwxrwxrwx  1 root    root           27 Mar  1  2007

```

```

/usr/jdk/entsys-j2se -> /usr/jdk/instances/jdk1.5.0
lrwxrwxrwx 1 root other 11 Sep 17 12:45 /usr/jdk/latest ->
jdk1.6.0_07
-- Exit status: 0
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se:
total 34398
-rw-r--r-- 1 root bin 2487 Oct 12 2006 COPYRIGHT
-rw-r--r-- 1 root bin 17293 Oct 12 2006 LICENSE
-rw-r--r-- 1 root bin 20415 Oct 12 2006 README.html
drwxr-xr-x 3 root bin 1024 Dec 10 11:28 bin
drwxr-xr-x 9 root bin 512 Oct 3 14:59 demo
drwxr-xr-x 3 root bin 512 Oct 3 14:58 include
drwxr-xr-x 6 root bin 512 Oct 3 14:57 jre
drwxr-xr-x 2 root bin 512 Oct 3 14:58 lib
drwxr-xr-x 6 root bin 512 Oct 3 14:59 man
drwxr-xr-x 4 root bin 512 Oct 3 14:59 sample
-rw-r--r-- 1 root bin 17537249 Oct 12 2006 src.zip

/usr/jdk/latest:
total 37258
-rw-r--r-- 1 root bin 4137 Jun 10 2008 COPYRIGHT
-rw-r--r-- 1 root bin 17058 Jun 10 2008 LICENSE
-rw-r--r-- 1 root bin 28599 Jun 10 2008 README.html
-rw-r--r-- 1 root bin 24132 Jun 10 2008 README_ja.html
-rw-r--r-- 1 root bin 18329 Jun 10 2008 README_zh_CN.html
-rw-r--r-- 1 root bin 190102 Jun 10 2008
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x 3 root bin 1024 Dec 10 11:28 bin
drwxr-xr-x 3 root bin 512 Sep 17 12:47 include
drwxr-xr-x 6 root bin 512 Sep 17 12:44 jre
drwxr-xr-x 3 root bin 512 Sep 17 12:47 lib
-r--r--r-- 1 root other 6655 Sep 17 12:46 register.html
-r--r--r-- 1 root other 7087 Sep 17 12:46 register_ja.html
-r--r--r-- 1 root other 6265 Sep 17 12:46
register_zh_CN.html
-rw-r--r-- 1 root bin 18719038 Jun 10 2008 src.zip
-- Exit status: 0
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====
-- unlink /tmp/.patchout_20090120102831.16087
-- unlink /tmp/.patchout_altroot_20090120102831.16087
mkdir -p /opt/altroot/var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_200901201028
Closing the log at Tue Jan 20 10:36:08 2009
(81 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090120104750.log
=====
Detecting Installed Products...
Detecting Installed Patches...

```

```

NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTRoot: /
NAME: <none>

=====
Detecting Installed Products...
Detecting Installed Patches...
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTRoot: /opt/altroot
NAME: <none>

(82 root) cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
<!-- Last Update: Tue Jan 20 10:26:40 PST 2009 -->
<!-- By: /var/tmp/ci61 ./commpkg -->

<multi-inst-list>
  <install root="/" suite="comms" />
  <install root="/opt/altroot" suite="comms" />
</multi-inst-list>
(83 root) ls /opt/altroot
total 34
  2 CommsInstaller/      2 dssetup/             2 messaging64/
  2 calendar/           2 etc/                  2 msg_scha/
  2 ce/                  2 im/                   2 opt/
  2 cs_scha/             2 im_scha/              2 usr/
  2 da/                  2 iwc/                   2 var/
  2 directory/          2 messaging/

(84 root) \rm -rf /opt/altroot
(85 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090120104829.log
=====
Detecting Installed Products...
Detecting Installed Patches...
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTRoot: /
NAME: <none>

INFO: /opt/altroot does not exist
=====

```

```
INFO: /etc/softlist.xml updated
(86 root) cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
<!-- Last Update: Tue Jan 20 10:48:38 PST 2009 -->
<!-- By: /var/tmp/ci61 ./commpkg -->

<multi-inst-list>
  <install root="/" suite="comms" />
</multi-inst-list>
```

(87 root)

Comments

- The /etc/softlist.xml file contains the "known" altroots to CI. It is not authoritative. The file is updated when CI finds changes on the system.
- Note the use of --acceptLicense for the install command. CI's philosophy is to do the right thing when you do not specify any switches. switches are for "power-user" options.
- When installing into an altroot, products and SCs are installed, but OS components are not installed.
- altroot install is available on solaris only, it uses the -R switch to pkgadd
- The --rootdir switch to "commpkg uninstall" is deprecated in favor of just specifying the altroot on the command line as an argument. You must specify the altroot to "commpkg uninstall". The altroot is an optional 3rd argument to the commpkg command.
- Another way to uninstall an altroot, is to simply wipe out the entire altroot (with rm -r)
- Only MS has been tested to use the SCs in the altroot location. Most other products have not done this testing, and thus probably may use the SC in the default altroot, and not the one in the altroot.

Sample Session - Communications Suite 6 Update 1 Simple Install and Uninstall

Sample Session - Communications Suite 6 Update 1 Simple Install and Uninstall

This sample session performs a "simple" install and uninstall of Communications Suite 6 Update 1 by running the Communications Suite installer, `commpkg`.

This document shows the use of `commpkg info` to check what is installed, `commpkg install` to install all the products, and `commpkg uninstall` to uninstall all the products. It contains the following topics:

- [Summary of Commands Run](#)
- [Session](#)
- [Installation Comments](#)
- [Uninstall Comments](#)

Summary of Commands Run

```
(41 root) ./commpkg info
(42 root) ./commpkg install
(43 root) cat
/var/opt/CommsInstaller/logs/undoCommsInstall_20090119134514
(44 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119134514
(45 root) ls -l
/var/opt/CommsInstaller/logs/CommsInstaller_20090119134514.log
(46 root) ./commpkg info
(47 root) ls /opt/sun/comms
(48 root) ./commpkg uninstall
(49 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119135415
(50 root) ls -l
/var/opt/CommsInstaller/logs/CommsInstaller_20090119135415.log
(51 root) ./commpkg info
(52 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20090119134514.log
(53 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20090119135415.log
```

Session

```
(41 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090119134502.log
=====
Detecting Installed Products...
```

```

NOTICE: Message Queue is present with a different pkg VERSION.
Detecting Installed Patches...
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTRoot: /
NAME: <none>

(42 root) ./commpkg install
-- LOGFILE: /tmp/CommsInstaller_20090119134514.log
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone

CommsInstaller version 6.1-0.01 built on Wed Dec 10 12:33:59 PST 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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```

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Enter s to skip, or Enter c to continue [c] :

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13. Governing Law.

Any action related to this Agreement will be governed by California law and controlling U.S. federal law. No choice of law rules of any jurisdiction will apply.

Enter s to skip, or Enter c to continue [c] :

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Please contact Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, California 95054 if you have questions.

Do you agree to the license terms ? [No] : yes

=====

Specify Install Location

This program will extract the server files and install them into a directory you specify. That directory is called the INSTALLROOT in the product documentation and will contain the server programs.

To accept the default shown in brackets, press the Enter key.

Install location [/opt/sun/comms]:

-- Creating /opt/sun/comms

=====

Detecting Installed Products...

NOTICE: Message Queue is present with a different pkg VERSION.

Detecting Installed Patches...

NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09) has not been applied. Specifically the following patches are missing:

119254-58 120011-14

NOTICE: It is highly recommended that you apply the latest OS Recommended Patch Cluster

Do you want to continue ? [yes] :

=====

Product Selection:

Shared Components (not shown) will be installed as required.

you will be prompted later if Shared Components need to be upgraded.

OS patches (not shown) will be installed as required.

Communication Services Products:

Item Description

- ```

 1 Messaging Server 7u1 (7.0-3.01)
 2 Messaging Server (64bit) 7u1 (7.0-3.01)
 3 Comms DSsetup 6.4 (6.4-3.01)
 4 Comms Delegated Administrator 6.4 (6.4-3.01)
 5 Calendar Server 6.3 (6.3-11.01)
 6 Instant Messaging 8 (8.0-00.06)
 7 Communications Express 6.3 (6.3-11.01)
 8 Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
 9 Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
10 Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
11 Convergence 1 (1.0-4.01)

```

Enter the items you wish to install. Enter q to quit.  
 Prefix an item with ~ to indicate you only want  
 to install shared component dependencies of that product  
 You can enter multiple items using commas to separate them.  
 For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,  
 9, 10, 11]:

```
=====
```

Generating list of things to install...  
 Checking for Shared Component Upgrade Requirements...

Shared component Message Queue has a different pkg version installed  
 Description: Message Queue  
 Current pkg Version (SUNWiqr): 3.7,REV=2006.06.18.22.34  
 To be installed pkg version (SUNWiqr): 4.1,REV=2007.07.26.10.58  
 Product Version: 4.1

Note that changing pkg versions is irreversible  
 On the other hand, if you do not change it,  
 some products may not work properly  
 An alternative is to start over and do a multi-install using --altroot

Do you wish to change pkg versions for Message Queue [n] : y

```
=====
```

- ```

WILL INSTALL: Instant Messaging API 8
WILL INSTALL: Messaging Server 7u1 (7.0-3.01)
                  to /opt/sun/comms/messaging
WILL INSTALL: Messaging Server (64bit) 7u1 (7.0-3.01)
                  to /opt/sun/comms/messaging64
WILL INSTALL: Comms DSsetup 6.4 (6.4-3.01)
                  to /opt/sun/comms/dssetup
WILL INSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
                  to /opt/sun/comms/da
WILL INSTALL: Calendar Server 6.3 (6.3-11.01)
                  to /opt/sun/comms/calendar
WILL INSTALL: Instant Messaging 8 (8.0-00.06)
                  to /opt/sun/comms/im
WILL INSTALL: Communications Express 6.3 (6.3-11.01)
                  to /opt/sun/comms/ce
WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  to /opt/sun/comms/msg_scha
WILL INSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)

```

```

        to /opt/sun/comms/cs_scha
WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
        to /opt/sun/comms/im_scha
WILL INSTALL: Convergence 1 (1.0-4.01)
        to /opt/sun/comms/iwc
WILL INSTALL: CommsInstaller 6u1 (6.1-0.01)
        to /opt/sun/comms/CommsInstaller
NOTICE: Message Queue will be upgraded...
        Removing the old version is an irreversible process.
WILL REMOVE EXISTING: Message Queue 3.7 (3.7.0.1)
WILL INSTALL: Message Queue 4.1
=====
Ready to install

Do you want to continue ? [yes] :

=====
Installing Instant Messaging API 8...
----- Executing Task 1 of 42 ...

=====
Installing Messaging Server 7u1 (7.0-3.01)...
----- Executing Task 2 of 42 ...

=====
Installing Messaging Server (64bit) 7u1 (7.0-3.01)...
----- Executing Task 3 of 42 ...

=====
Installing Comms DSsetup 6.4 (6.4-3.01)...
----- Executing Task 4 of 42 ...

=====
Installing Comms Delegated Administrator 6.4 (6.4-3.01)...
----- Executing Task 5 of 42 ...
----- Executing Task 6 of 42 ...

=====
Installing Calendar Server 6.3 (6.3-11.01)...
----- Executing Task 7 of 42 ...
----- Executing Task 8 of 42 ...

=====
Installing Instant Messaging 8 (8.0-00.06)...
----- Executing Task 9 of 42 ...
----- Executing Task 10 of 42 ...
----- Executing Task 11 of 42 ...
----- Executing Task 12 of 42 ...
----- Executing Task 13 of 42 ...
----- Executing Task 14 of 42 ...
----- Executing Task 15 of 42 ...
----- Executing Task 16 of 42 ...

=====
Installing Communications Express 6.3 (6.3-11.01)...
----- Executing Task 17 of 42 ...

```

```

=====
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
----- Executing Task 18 of 42 ...

=====
Installing Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)...
----- Executing Task 19 of 42 ...

=====
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
----- Executing Task 20 of 42 ...

=====
Installing Convergence 1 (1.0-4.01)...
----- Executing Task 21 of 42 ...

=====
Installing CommsInstaller 6u1 (6.1-0.01)...
----- Executing Task 22 of 42 ...

=====
Removing existing Message Queue 3.7 (3.7.0.1)...
----- Executing Task 23 of 42 ...
----- Executing Task 24 of 42 ...
----- Executing Task 25 of 42 ...
----- Executing Task 26 of 42 ...
----- Executing Task 27 of 42 ...
----- Executing Task 28 of 42 ...
----- Executing Task 29 of 42 ...
----- Executing Task 30 of 42 ...
----- Executing Task 31 of 42 ...
----- Executing Task 32 of 42 ...
----- Executing Task 33 of 42 ...

=====
Installing Message Queue 4.1...
----- Executing Task 34 of 42 ...
----- Executing Task 35 of 42 ...
----- Executing Task 36 of 42 ...
----- Executing Task 37 of 42 ...
----- Executing Task 38 of 42 ...
----- Executing Task 39 of 42 ...
----- Executing Task 40 of 42 ...
----- Executing Task 41 of 42 ...
----- Executing Task 42 of 42 ...
=====
SUMMARY:

All tasks PASSED

Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:

```

```

=====
NOTICE: To undo the installation, run the commands in:
        /var/opt/CommsInstaller/logs/undoCommsInstall_20090119134514

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119134514
NOTICE: LOGFILE created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20090119134514.log
(43 root) cat
/var/opt/CommsInstaller/logs/undoCommsInstall_20090119134514
#!/bin/sh
# Note that only tasks that PASSED are undone
# For reference, tasks that FAILED or are irreversible are in comments
# WARNING WARNING WARNING
# Executing irreversible tasks may result in a non-functional system!!!
ADMIN=/var/opt/CommsInstaller/logs/admin.quiet
set -v
# no undo for removal of SUNWiqlpl
# no undo for removal of SUNWiqdoc
# no undo for removal of SUNWiquc
# no undo for removal of SUNWiqum
# no undo for removal of SUNWiqjx
# no undo for removal of SUNWiqfs
# no undo for removal of SUNWiqcrt
# no undo for removal of SUNWiqcdv
# no undo for removal of SUNWiqlen
#####
# Finished Undo of: Installing Message Queue 4.1...
#####
#####
# Finished Undo of: Removing existing Message Queue 3.7 (3.7.0.1)...
#####
# IRREVERSIBLE: pkgrm -n -a $ADMIN SUNWcomms
#####
# Finished Undo of: Installing CommsInstaller 6u1 (6.1-0.01)...
#####
pkgrm -n -a $ADMIN SUNWiwc
#####
# Finished Undo of: Installing Convergence 1 (1.0-4.01)...
#####
pkgrm -n -a $ADMIN SUNWiimsc
#####
# Finished Undo of: Installing Instant Messaging Sun Cluster HA agent
7.3 (7.3-01.02)...
#####
pkgrm -n -a $ADMIN SUNWscics
#####
# Finished Undo of: Installing Calendar Server Sun Cluster HA agent 6.3
(6.3-1.01)...
#####
pkgrm -n -a $ADMIN SUNWmessaging-server-scha
#####
# Finished Undo of: Installing Messaging Server Sun Cluster HA agent 7.0
(7.0-0.03)...

```

```

#####
pkgrm -n -a $ADMIN SUNWuwc
#####
# Finished Undo of: Installing Communications Express 6.3 (6.3-11.01)...
#####
pkgrm -n -a $ADMIN SUNWiimgw
pkgrm -n -a $ADMIN SUNWiimd
pkgrm -n -a $ADMIN SUNWiimc
pkgrm -n -a $ADMIN SUNWiimid
pkgrm -n -a $ADMIN SUNWiimjd
pkgrm -n -a $ADMIN SUNWiimm
pkgrm -n -a $ADMIN SUNWiimin
pkgrm -n -a $ADMIN SUNWiim
#####
# Finished Undo of: Installing Instant Messaging 8 (8.0-00.06)...
#####
pkgrm -n -a $ADMIN SUNWica5
pkgrm -n -a $ADMIN SUNWics5
#####
# Finished Undo of: Installing Calendar Server 6.3 (6.3-11.01)...
#####
pkgrm -n -a $ADMIN SUNWcomis
pkgrm -n -a $ADMIN SUNWcomic
#####
# Finished Undo of: Installing Comms Delegated Administrator 6.4
(6.4-3.01)...
#####
pkgrm -n -a $ADMIN SUNWcomds
#####
# Finished Undo of: Installing Comms DSsetup 6.4 (6.4-3.01)...
#####
pkgrm -n -a $ADMIN SUNWmessaging-server-64
#####
# Finished Undo of: Installing Messaging Server (64bit) 7u1
(7.0-3.01)...
#####
pkgrm -n -a $ADMIN SUNWmessaging-server
#####
# Finished Undo of: Installing Messaging Server 7u1 (7.0-3.01)...
#####
# IRREVERSIBLE: pkgrm -n -a $ADMIN SUNWiimd
#####
# Finished Undo of: Installing Instant Messaging API 8...
#####
(44 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119134514
#
# Silent File for CommsInstaller 6.1-0.01
# Generated on 20090119134514
#
#
# NOTE: You must set ACCEPTLICENSE=yes below or alternatively
# use --acceptLicense on the command line
#
#

```

```

# verb used to create this silent file
#
VERB=install

#
# alternate distro path if not found where commpkg resides
#   and no --distro switch specified is
#
ALTDISTROPATH=/var/tmp/ci61

#
# The installation root
#
INSTALLROOT=/opt/sun/comms

#
# flag to indicate whether to use alternate root install mode
#
ALTROOT=no

#
# flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDESC=no

#
# flag to indicate acceptance of the software license
#
ACCEPTLICENSE=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# list of components (using mnemonics)
# A ~ in front of the product indicates that only the shared
# components are installed

```

```

#
COMPONENTS=MS MS64 DSSETUP DA CS IM CE MS_SCHA CS_SCHA IM_SCHA IWC
COMPONENT_VERSIONS=
(45 root) ls -l
/var/opt/CommsInstaller/logs/CommsInstaller_20090119134514.log
 256 -rw-r--r--   1 root    root      121304 Jan 19 13:52
/var/opt/CommsInstaller/logs/CommsInstaller_20090119134514.log
(46 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090119135343.log
=====
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
           has not been applied. Specifically the following
           patches are missing:
           119254-58 120011-14
  NOTICE: It is highly recommended that you apply the
           latest OS Recommended Patch Cluster
ALTRoot: /
NAME: <none>
Product: Messaging Server 7u1
        Version: 7.0-3.01
        Basedir: /opt/sun/comms/messaging
        Build Date: 20081209
Product: Messaging Server (64bit) 7u1
        Version: 7.0-3.01
        Basedir: /opt/sun/comms/messaging64
        Build Date: 20081209
Product: Comms DSsetup 6.4
        Version: 6.4-3.01
        Basedir: /opt/sun/comms/dssetup
        Build Date: 20080729
Product: Comms Delegated Administrator 6.4
        Version: 6.4-3.01
        Basedir: /opt/sun/comms/da
        Build Date: 20081022
Product: Calendar Server 6.3
        Version: 6.3-11.01
        Basedir: /opt/sun/comms/calendar
        Build Date: 20081122
Product: Instant Messaging 8
        Version: 8.0-00.06
        Basedir: /opt/sun/comms/im
        Build Date: 20081204
Product: Communications Express 6.3
        Version: 6.3-11.01
        Basedir: /opt/sun/comms/ce
        Build Date: 20081203
Product: Messaging Server Sun Cluster HA agent 7.0
        Version: 7.0-0.03
        Basedir: /opt/sun/comms/msg_scha
        Build Date: 20080519
Product: Calendar Server Sun Cluster HA agent 6.3
        Version: 6.3-1.01
        Basedir: /opt/sun/comms/cs_scha
        Build Date: 20080331

```

```
Product: Instant Messaging Sun Cluster HA agent 7.3
Version: 7.3-01.02
Basedir: /opt/sun/comms/im_scha
Build Date: 20080403
Product: Convergence 1
Version: 1.0-4.01
Basedir: /opt/sun/comms/iwc
Build Date: 20081208
```

```
(47 root) ls /opt/sun/comms
total 24
 2 CommsInstaller/      2 dssetup/             2 messaging64/
 2 calendar/           2 im/                  2 msg_scha/
 2 ce/                 2 im_scha/
 2 cs_scha/            2 iwc/
 2 da/                 2 messaging/
```

```
(48 root) ./commpkg uninstall
-- LOGFILE: /tmp/CommsInstaller_20090119135415.log
Detecting Installed Products...
Detecting Installed Patches...
=====
Product Selection:
```

Communication Services Products:

Item	Description
1	Messaging Server 7u1 (7.0-3.01) Installed Version at /opt/sun/comms/messaging
2	Messaging Server (64bit) 7u1 (7.0-3.01) Installed Version at /opt/sun/comms/messaging64
3	Comms DSsetup 6.4 (6.4-3.01) Installed Version at /opt/sun/comms/dssetup
4	Comms Delegated Administrator 6.4 (6.4-3.01) Installed Version at /opt/sun/comms/da
5	Calendar Server 6.3 (6.3-11.01) Installed Version at /opt/sun/comms/calendar
6	Instant Messaging 8 (8.0-00.06) Installed Version at /opt/sun/comms/im
7	Communications Express 6.3 (6.3-11.01) Installed Version at /opt/sun/comms/ce
8	Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) Installed Version at /opt/sun/comms/msg_scha
9	Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01) Installed Version at /opt/sun/comms/cs_scha
10	Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02) Installed Version at /opt/sun/comms/im_scha
11	Convergence 1 (1.0-4.01) Installed Version at /opt/sun/comms/iwc

Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]:

```

=====
WILL UNINSTALL: Messaging Server 7u1 (7.0-3.01)
                  at /opt/sun/comms/messaging)
WILL UNINSTALL: Messaging Server (64bit) 7u1 (7.0-3.01)
                  at /opt/sun/comms/messaging64)
WILL UNINSTALL: Comms DSsetup 6.4 (6.4-3.01)
                  at /opt/sun/comms/dssetup)
WILL UNINSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
                  at /opt/sun/comms/da)
WILL UNINSTALL: Calendar Server 6.3 (6.3-11.01)
                  at /opt/sun/comms/calendar)
WILL UNINSTALL: Instant Messaging 8 (8.0-00.06)
                  at /opt/sun/comms/im)
WILL UNINSTALL: Communications Express 6.3 (6.3-11.01)
                  at /opt/sun/comms/ce)
WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  at /opt/sun/comms/msg_scha)
WILL UNINSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
                  at /opt/sun/comms/cs_scha)
WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                  at /opt/sun/comms/im_scha)
WILL UNINSTALL: Convergence 1 (1.0-4.01)
                  at /opt/sun/comms/iwc)
=====
Ready to uninstall

Do you want to continue ? [yes] :

=====
Uninstalling Messaging Server 7u1 (7.0-3.01 at
/opt/sun/comms/messaging)...
----- Executing Task 1 of 20 ...

=====
Uninstalling Messaging Server (64bit) 7u1 (7.0-3.01 at
/opt/sun/comms/messaging64)...
----- Executing Task 2 of 20 ...

=====
Uninstalling Comms DSsetup 6.4 (6.4-3.01 at /opt/sun/comms/dssetup)...
----- Executing Task 3 of 20 ...

=====
Uninstalling Comms Delegated Administrator 6.4 (6.4-3.01 at
/opt/sun/comms/da)...
----- Executing Task 4 of 20 ...
----- Executing Task 5 of 20 ...

=====
Uninstalling Calendar Server 6.3 (6.3-11.01 at
/opt/sun/comms/calendar)...
----- Executing Task 6 of 20 ...
----- Executing Task 7 of 20 ...

=====
Uninstalling Instant Messaging 8 (8.0-00.06 at /opt/sun/comms/im)...

```

```

----- Executing Task 8 of 20 ...
----- Executing Task 9 of 20 ...
----- Executing Task 10 of 20 ...
----- Executing Task 11 of 20 ...
----- Executing Task 12 of 20 ...
----- Executing Task 13 of 20 ...
----- Executing Task 14 of 20 ...
----- Executing Task 15 of 20 ...

=====
Uninstalling Communications Express 6.3 (6.3-11.01 at
/opt/sun/comms/ce)...
----- Executing Task 16 of 20 ...

=====
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03 at
/opt/sun/comms/msg_scha)...
----- Executing Task 17 of 20 ...

=====
Uninstalling Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01 at
/opt/sun/comms/cs_scha)...
----- Executing Task 18 of 20 ...

=====
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02 at
/opt/sun/comms/im_scha)...
----- Executing Task 19 of 20 ...

=====
Uninstalling Convergence 1 (1.0-4.01 at /opt/sun/comms/iwc)...
----- Executing Task 20 of 20 ...
=====
SUMMARY:

All tasks PASSED

Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119135415
NOTICE: LOGFILE created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20090119135415.log
(49 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119135415
#
# Silent File for CommsInstaller 6.1-0.01
# Generated on 20090119135415
#

```

```

#
#
# verb used to create this silent file
VERB=uninstall

#
# root directory
#
ROOTDIR=/

#
# list of components (using mnemonics)
# WARNING: for verb=uninstall, when there are multiple
#         instances, the latest known version found is uninstalled
#
COMPONENTS=MS MS64 DSSETUP DA CS IM CE MS_SCHA CS_SCHA IM_SCHA IWC
COMPONENT_VERSIONS= 7.0 7.0 6.4 6.4 6.3 8.0 6.3 7.0 6.3 7.3 1.0
(50 root) ls -l
/var/opt/CommsInstaller/logs/CommsInstaller_20090119135415.log
178 -rw-r--r-- 1 root root 91125 Jan 19 13:58
/var/opt/CommsInstaller/logs/CommsInstaller_20090119135415.log
(51 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090119135833.log
=====
Detecting Installed Products...
Detecting Installed Patches...
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTRoot: /
NAME: <none>

(52 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20090119134514.log
===== LOGFILE started Mon Jan 19 13:45:14 2009 =====
LOGFILE = /tmp/CommsInstaller_20090119134514.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg install
-- perl version: 5.008004 pid: 2521
-- basetime: 1232401514 Mon Jan 19 13:45:14 2009
-- scriptDir: /var/tmp/ci61
-- LOGFILE: /tmp/CommsInstaller_20090119134514.log
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
-- Exit status: 0
!!! ENV
$VAR1 = {
    'CAPSAVE' => '/home/dl111122/.termcap',
    'PS1' => '# ',
    'LINES' => '55',
    'COLUMNS' => '80',
    'PWD' => '/var/tmp/ci61',

```

```

        'USER' => 'dl111122',
        'VISUAL' => 'gnuclient',
        'LOGNAME' => 'dl111122',
        'EMACS' => 't',
        'REMOTE' => '/home/dl111122/.remote',
        'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc:./home/dl111122/bin:/new/local/bin'
'EMACS_TYPE' => 'pc',
        'EMACSPACKAGEPATH' => '/new/local/lib/xemacs/xemacs-packages',
        'MORE' => '-c',
        'TERM' => 'emacs',
        'PAGER' => 'cat',
        'LM_LICENSE_FILE' =>
'/usr/dist/share/devpro_lic,v1.0/license_dir/sunpro.lic.site,1',
        'HOME' => '/home/dl111122',
        'LD_LIBRARY_PATH' => '/usr/dt/lib:/usr/openwin/lib',
        'MANPATH' =>
'/usr/cluster/man:/tools/ns/man:/usr/openwin/man:/usr/man',
        'TERMSAVE' => 'emacs',
        'CDPATH' => '....:/home/dl111122',
        'EDITOR' => 'gnuclient',
        'MAIL' => '/var/mail/dl111122',
        'TZ' => 'US/Pacific',
        'ESHELL' => '/bin/csh',
        'INFOPATH' =>
'/new/local/info:/new/local-generic/share/emacs/19.34/info:/usr/local/info'
'MOTIFHOME' => '/usr/dt',
        'CVSROOT' =>
':pserver:dl111122@redcvs.red.iplanet.com:/m/src',
        'OPENWINHOME' => '/usr/openwin',
        'RCSINIT' => '-zLT',
        'SHELL' => '/bin/csh',
        'HZ' => '100',
        'TERMCAP' => '/home/dl111122/.termcap'
};
cat /etc/release 2>&1
                Solaris 10 6/06 s10s_u2wos_08 SPARC
                Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
                Use is subject to license terms.
                Assembled 01 May 2006

-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
$VAR1 = [
        'MS',
        'MS64',
        'DSSETUP',
        'DA',
        'CS',
        'IM',
        'CE',
        'MS_SCHA',
        'CS_SCHA',
        'IM_SCHA',
        'IWC'
];

```

```

/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=0
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=1
is_path_writable=1
is_running_system=0
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=1
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 0
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone
Reading Product Files...
Reading /var/tmp/ci61/.install/Product/NSS/NSS.in...
mapFile /var/tmp/ci61/.install/Product/NSS/NSS.map does not exist...
Reading /var/tmp/ci61/.install/Product/SASL/SASL.in...
mapFile /var/tmp/ci61/.install/Product/SASL/SASL.map does not exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.map does not
exist...
Reading
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.in...
mapFile
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ICU/ICU.in...
mapFile /var/tmp/ci61/.install/Product/ICU/ICU.map does not exist...
Reading /var/tmp/ci61/.install/Product/JDK/JDK.in...
mapFile /var/tmp/ci61/.install/Product/JDK/JDK.map does not exist...
Reading /var/tmp/ci61/.install/Product/JHRT/JHRT.in...
mapFile /var/tmp/ci61/.install/Product/JHRT/JHRT.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ/MQ.in...
mapFile /var/tmp/ci61/.install/Product/MQ/MQ.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.in...
mapFile /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.in...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.map...
Reading /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.in...
mapFile /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.map does

```

```

not exist...
Reading /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.in...
mapFile /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.map
does not exist...
Reading /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.in...
mapFile /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.map does
not exist...
Reading /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.in...
mapFile /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/SNMP/SNMP.in...
mapFile /var/tmp/ci61/.install/Product/SNMP/SNMP.map does not exist...
Reading /var/tmp/ci61/.install/Product/BZIP/BZIP.in...
mapFile /var/tmp/ci61/.install/Product/BZIP/BZIP.map does not exist...
Reading /var/tmp/ci61/.install/Product/SSH/SSH.in...
mapFile /var/tmp/ci61/.install/Product/SSH/SSH.map does not exist...
Reading /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.in...
mapFile /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ST/ST.in...
mapFile /var/tmp/ci61/.install/Product/ST/ST.map does not exist...
Reading /var/tmp/ci61/.install/Product/CI/CI.in...
Reading /var/tmp/ci61/.install/Product/CI/CI.map...
Reading /var/tmp/ci61/.install/Product/MS/MS.in...
Reading /var/tmp/ci61/.install/Product/MS/MS.map...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.in...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.map...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.in...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.map...
Reading /var/tmp/ci61/.install/Product/DA/DA.in...
Reading /var/tmp/ci61/.install/Product/DA/DA.map...
Reading /var/tmp/ci61/.install/Product/CS/CS.in...
Reading /var/tmp/ci61/.install/Product/CS/CS.map...
Reading /var/tmp/ci61/.install/Product/IM/IM.in...
Reading /var/tmp/ci61/.install/Product/IM/IM.map...
Reading /var/tmp/ci61/.install/Product/CE/CE.in...
Reading /var/tmp/ci61/.install/Product/CE/CE.map...
Reading /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.in...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.map...
Reading OLD /var/tmp/ci61/.install/Product/MS/6.3/MS.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.0/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.3/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_SCHA/6.0/MS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_SCHA/6.0/CS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_SCHA/7.0/IM_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.2/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.3/MS_L10N.in...

```

```

Reading OLD /var/tmp/ci61/.install/Product/MS64_L10N/6.3/MS64_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.2/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.3/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.0/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.2/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.2/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.3/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/JDK/1.5.0/JDK.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ/3.7/MQ.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ_L10N/3.7/MQ_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.0/IMAPI.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.3/IMAPI.in...
===== QQQ findGetVersion =====
!!! getVersion
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '/var/tmp/ci61/SunOS_sparc/IWC/CI/getVersion',
    'MS64_L10N' => 'none',
    'MS' => '/var/tmp/ci61/SunOS_sparc/MS/CI/getVersion',
    'DSSETUP' =>
'/var/tmp/ci61/SunOS_sparc/DSSETUP/CI/getVersion',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '/var/tmp/ci61/SunOS_sparc/MS64/CI/getVersion',
    'LDAPCSDK' => 'none',
    'LDAPCSDK6' => 'none',
    'JDK' => 'none',
    'CE' => '/var/tmp/ci61/SunOS_sparc/CE/CI/getVersion',
    'PATCHUTILS' => 'none',
    'MQ' => 'none',
    'IMAPI' => 'none',
    'CI' =>
'/var/tmp/ci61/.install/Product/CI/SunOS_sparc/getVersion',
    'LDAPCSDK6_TOOLS' => 'none',
    'NSS' => 'none',
    'CS_L10N' => 'none',
    'ST' => 'none',
    'IM' => '/var/tmp/ci61/SunOS_sparc/IM/CI/getVersion',
    'RECOMMENDED' => 'none',
    'IM_L10N' => 'none',
    'CS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion',
    'LDAPJDK' => 'none',
    'BZIP' => 'none',
    'IM_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/IM_SCHA/CI/getVersion',
    'MS_L10N' => 'none',
    'LIBCPLUSPLUS' => 'none',
    'SNMP' => 'none',
    'MS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/MS_SCHA/CI/getVersion',
    'CS' => '/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion',
    'JHRT' => 'none',
    'CE_L10N' => 'none',

```

```

        'SSH' => 'none',
        'DA' => '/var/tmp/ci61/SunOS_sparc/DA/CI/getVersion'
    };
!!! prod_getVers
$VAR1 = {
    'SASL' => 0,
    'IWC' => '1.0-4.01',
    'MS64_L10N' => 0,
    'MS' => '7.0-3.01',
    'DSSETUP' => '6.4-3.01',
    'PKGINSTALL' => 0,
    'LIBMTMALLOC' => 0,
    'MQ_L10N' => 0,
    'ICU' => 0,
    'MS64' => '7.0-3.01',
    'LDAPCSDK' => 0,
    'LDAPCSDK6' => 0,
    'JDK' => 0,
    'CE' => '6.3-11.01',
    'PATCHUTILS' => 0,
    'MQ' => 0,
    'IMAPI' => 0,
    'CI' => '6.1-0.01',
    'LDAPCSDK6_TOOLS' => 0,
    'NSS' => 0,
    'CS_L10N' => 0,
    'ST' => 0,
    'IM' => '8.0-00.06',
    'RECOMMENDED' => 0,
    'IM_L10N' => 0,
    'CS_SCHA' => '6.3-1.01',
    'LDAPJDK' => 0,
    'BZIP' => 0,
    'IM_SCHA' => '7.3-01.02',
    'MS_L10N' => 0,
    'LIBCPLUSPLUS' => 0,
    'SNMP' => 0,
    'MS_SCHA' => '7.0-0.03',
    'CS' => '6.3-11.01',
    'JHRT' => 0,
    'CE_L10N' => 0,
    'SSH' => 0,
    'DA' => '6.4-3.01'
};
!!! prod_builddate
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '20081208',
    'MS64_L10N' => 'none',
    'MS' => '20081209',
    'DSSETUP' => '20080729',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '20081209',

```

```

        'LDAPCSDK' => 'none',
        'LDAPCSDK6' => 'none',
        'JDK' => 'none',
        'CE' => '20081203',
        'PATCHUTILS' => 'none',
        'MQ' => 'none',
        'IMAPI' => 'none',
        'CI' => '20081210',
        'LDAPCSDK6_TOOLS' => 'none',
        'NSS' => 'none',
        'CS_L10N' => 'none',
        'ST' => 'none',
        'IM' => '20081204',
        'RECOMMENDED' => 'none',
        'IM_L10N' => 'none',
        'CS_SCHA' => '20080331',
        'LDAPJDK' => 'none',
        'BZIP' => 'none',
        'IM_SCHA' => '20080403',
        'MS_L10N' => 'none',
        'LIBCPLUSPLUS' => 'none',
        'SNMP' => 'none',
        'MS_SCHA' => '20080519',
        'CS' => '20081122',
        'JHRT' => 'none',
        'CE_L10N' => 'none',
        'SSH' => 'none',
        'DA' => '20081022'
    };
}

===== End QQQ findGetVersion =====
INFO: prod_mktVers{NSS} (no map) = 4.2.6
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK} (no map) = 5.0
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.1
INFO: prod_mktVers{MQ_L10N} (no map) = 4.1
INFO: prod_mktVers{LDAPJDK} (no map) = 4.19
INFO: prod_mktVers{IMAPI} (w/ map) = 8
INFO: prod_mktVers{LIBMTMALLOC} (no map) = 11.9.0
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PKGINSTALL} (no map) = Unknown
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{SNMP} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{SSH} (no map) = 11.9.0
INFO: prod_mktVers{RECOMMENDED} (no map) = 2008.10.09
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 6u1
INFO: prod_mktVers{MS} (w/ map) = 7u1
INFO: prod_mktVers{MS64} (w/ map) = 7u1
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DA} (w/ map) = 6.4

```

```
INFO: prod_mktVers{CS} (w/ map) = 6.3
INFO: prod_mktVers{IM} (w/ map) = 8
INFO: prod_mktVers{CE} (w/ map) = 6.3
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{CS_SCHA} (no map) = 6.3
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
INFO: prod_mktVers{IWC} (w/ map) = 1
```

CommsInstaller version 6.1-0.01 built on Wed Dec 10 12:33:59 PST 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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System Communications Sync, Sun Cluster, Sun Cluster Agents, Sun
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TO BE LEGALLY INVALID.

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Please contact Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, California 95054 if you have questions.

Do you agree to the license terms ? [No] : yes

=====

Specify Install Location

This program will extract the server files and install them into a directory you specify. That directory is called the INSTALLROOT in the product documentation and will contain the server programs.

To accept the default shown in brackets, press the Enter key.

```
Install location [/opt/sun/comms]: -- Creating /opt/sun/comms
-- Setting owner:group for /opt/sun/comms to bin:bin
/bin/chown bin:bin /opt/sun/comms 2>&1
-- Exit status: 0
-- Setting permission for /opt/sun/comms to 755
/bin/chmod 755 /opt/sun/comms 2>&1
-- Exit status: 0
=====
```

```
Detecting Installed Products...
Checking LIBMTMALLOC 11.9.0 ...
  LIBMTMALLOC 11.9.0 is not present.
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... already present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PKGINSTALL Unknown ...
  Checking pkg SUNWcsr... already present.
  PKGINSTALL Unknown is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmds... already present.
  Checking pkg SUNWswmt... already present.
  Checking pkg SUNWinstall-patch-utils-root... already present.
  Checking pkg SUNWcsr... already present.
  Checking pkg SUNWdtrc... already present.
  Checking pkg SUNWzoneu... already present.
  PATCHUTILS Unknown is already present.
Checking SNMP Unknown ...
  SNMP Unknown is not present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... already present.
  BZIP 11.10 is already present.
Checking SSH 11.9.0 ...
```

```

SSH 11.9.0 is not present.
Checking RECOMMENDED 2008.10.09 ...
  RECOMMENDED 2008.10.09 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... already present.
  Checking pkg SUNWservicetagu... already present.
  Checking pkg SUNWstosreg... already present.
  ST 1.1.4 is already present.
Checking NSS 4.2.6 ...
  Checking pkg SUNWjss... already present.
  Checking pkg SUNWpr... already present.
  Checking pkg SUNWprd... already present.
  Checking pkg SUNWtls... already present.
  Checking pkg SUNWtlsd... already present.
  Checking pkg SUNWtlsu... already present.
  NSS 4.2.6 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsas1... already present.
  SASL 2.19 is already present.
Checking LDAPCS DK 5.0 ...
  Checking pkg SUNWldk... already present.
  Checking pkg SUNWldkx... already present.
  LDAPCS DK 5.0 is already present.
Checking LDAPCS DK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... already present.
  Checking pkg SUNWldapcsdk-dev... already present.
  LDAPCS DK6 6.0 is already present.
Checking LDAPCS DK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... already present.
  LDAPCS DK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... already present.
  ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... already present.
  Checking pkg SUNWj6rtx... already present.
  Checking pkg SUNWj6dev... already present.
  Checking pkg SUNWj6dvx... already present.
  Checking pkg SUNWj6cfg... already present.
  JDK 1.6.0 is already present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... already present.
  Checking pkg SUNWj5rtx... already present.
  Checking pkg SUNWj5cfg... already present.
  JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... already present.
  Checking pkg SUNWjhdev... already present.
  Checking pkg SUNWjhdev... already present.
  Checking pkg SUNWjhdoc... already present.
  JHRT 2.0 is already present.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.1,REV=2007.07.26.10.58

```

```

Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
  checking SUNWiqdoc 4.1,REV=2007.07.26.10.58
Checking pkg SUNWiquc... present but with a different pkg VERSION.
  checking SUNWiquc 4.1,REV=2007.07.26.10.59
Checking pkg SUNWiqum... present but with a different pkg VERSION.
  checking SUNWiqum 4.1,REV=2007.07.26.10.59
Checking pkg SUNWiqjx... present but with a different pkg VERSION.
  checking SUNWiqjx 4.1,REV=2007.07.26.10.59
Checking pkg SUNWiqfs... present but with a different pkg VERSION.
  checking SUNWiqfs 4.1,REV=2007.07.26.10.59
Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
  checking SUNWiqcrt 4.1,REV=2007.07.26.10.59
Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
  checking SUNWiqcdv 4.1,REV=2007.07.26.10.59
NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... already present.
  Checking pkg SUNWiqu... already present.
  Checking pkg SUNWiqtpl... already present.
  Checking pkg SUNWiqdoc... already present.
  Checking pkg SUNWiquc... already present.
  Checking pkg SUNWiqum... already present.
  Checking pkg SUNWiqjx... already present.
  Checking pkg SUNWiqfs... already present.
  Checking pkg SUNWiqcrt... already present.
  Checking pkg SUNWiqcdv... already present.
  Checking pkg SUNWiqqlen... already present.
MQ 3.7 is already present.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiQU... not present.
  Checking pkg SUNWeiQUc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciQU... not present.
  Checking pkg SUNWciQUc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
MQ_L10N 4.1 is not present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiQU... not present.
  Checking pkg SUNWeiQUc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciQU... not present.

```

```
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 3.7 is not present.
Checking LDAPJDK 4.19 ...
Checking pkg SUNWljdk... already present.
LDAPJDK 4.19 is already present.
Checking IMAPI 8.0 ...
Checking pkg SUNWiimdv... not present.
IMAPI 8.0 is not present.
Checking IMAPI 7.0 ...
Checking pkg SUNWiimdv... not present.
IMAPI 7.0 is not present.
Checking IMAPI 7.3 ...
Checking pkg SUNWiimdv... not present.
IMAPI 7.3 is not present.
Checking CI 6.1 ...
Checking pkg SUNWcomms... not present.
CI 6.1 is not present.
Checking MS 7.0 ...
Checking pkg SUNWmessaging-server... not present.
MS 7.0 is not present.
Checking MS 6.3 ...
Checking pkg SUNWmsgin... not present.
Checking pkg SUNWmsgen... not present.
Checking pkg SUNWmsglb... not present.
Checking pkg SUNWmsgco... not present.
Checking pkg SUNWmsgmt... not present.
Checking pkg SUNWmsgst... not present.
Checking pkg SUNWmsgmp... not present.
Checking pkg SUNWmsgwm... not present.
Checking pkg SUNWmsgmf... not present.
MS 6.3 is not present.
Checking MS64 7.0 ...
Checking pkg SUNWmessaging-server-64... not present.
MS64 7.0 is not present.
Checking DSSETUP 6.4 ...
Checking pkg SUNWcomds... not present.
DSSETUP 6.4 is not present.
Checking DA 6.4 ...
Checking pkg SUNWcomic... not present.
Checking pkg SUNWcomis... not present.
DA 6.4 is not present.
Checking CS 6.3 ...
Checking pkg SUNWics5... not present.
Checking pkg SUNWica5... not present.
CS 6.3 is not present.
Checking IM 8.0 ...
Checking pkg SUNWiim... not present.
Checking pkg SUNWiimin... not present.
Checking pkg SUNWiimm... not present.
Checking pkg SUNWiimjd... not present.
Checking pkg SUNWiimid... not present.
Checking pkg SUNWiimc... not present.
Checking pkg SUNWiimd... not present.
Checking pkg SUNWiimgw... not present.
```

```

    IM 8.0 is not present.
Checking IM 7.0 ...
    Checking pkg SUNWiimin... not present.
    Checking pkg SUNWiim... not present.
    Checking pkg SUNWiimm... not present.
    Checking pkg SUNWiimjd... not present.
    Checking pkg SUNWiimid... not present.
    Checking pkg SUNWiimc... not present.
    Checking pkg SUNWiimd... not present.
    IM 7.0 is not present.
Checking IM 7.3 ...
    Checking pkg SUNWiim... not present.
    Checking pkg SUNWiimin... not present.
    Checking pkg SUNWiimm... not present.
    Checking pkg SUNWiimjd... not present.
    Checking pkg SUNWiimid... not present.
    Checking pkg SUNWiimc... not present.
    Checking pkg SUNWiimd... not present.
    IM 7.3 is not present.
Checking CE 6.3 ...
    Checking pkg SUNWuwc... not present.
    CE 6.3 is not present.
Checking MS_SCHA 7.0 ...
    Checking pkg SUNWmessaging-server-scha... not present.
    MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
    Checking pkg SUNWscims... not present.
    MS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
    Checking pkg SUNWscics... not present.
    CS_SCHA 6.3 is not present.
Checking CS_SCHA 6.0 ...
    Checking pkg SUNWscics... not present.
    CS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
    Checking pkg SUNWiimsc... not present.
    IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
    Checking pkg SUNWiimsc... not present.
    IM_SCHA 7.0 is not present.
Checking IWC 1.0 ...
    Checking pkg SUNWiwc... not present.
    IWC 1.0 is not present.
Checking MS_L10N 6.2 ...
    Checking pkg SUNWmsgde... not present.
    Checking pkg SUNWmsges... not present.
    Checking pkg SUNWmsgfr... not present.
    Checking pkg SUNWmsgja... not present.
    Checking pkg SUNWmsgko... not present.
    Checking pkg SUNWmsgzh... not present.
    Checking pkg SUNWmsgtw... not present.
    MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
    Checking pkg SUNWmsg-l10n... not present.
    MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...

```

```
Checking pkg SUNWmessaging-server-110n-64... not present.
MS64_L10N 6.3 is not present.
Checking CS_L10N 6.2 ...
Checking pkg SUNWdeics... not present.
Checking pkg SUNWesics... not present.
Checking pkg SUNWfrics... not present.
Checking pkg SUNWjaics... not present.
Checking pkg SUNWkoics... not present.
Checking pkg SUNWzhics... not present.
Checking pkg SUNWtwics... not present.
CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
Checking pkg SUNWics-110n... not present.
CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
Checking pkg SUNWdiimc... not present.
Checking pkg SUNWdiimd... not present.
Checking pkg SUNWdimid... not present.
Checking pkg SUNWeiimc... not present.
Checking pkg SUNWeiimd... not present.
Checking pkg SUNWeiimin... not present.
Checking pkg SUNWeimid... not present.
Checking pkg SUNWfiimc... not present.
Checking pkg SUNWfiimd... not present.
Checking pkg SUNWfiimin... not present.
Checking pkg SUNWfimid... not present.
Checking pkg SUNWjiimc... not present.
Checking pkg SUNWjiimd... not present.
Checking pkg SUNWjiimin... not present.
Checking pkg SUNWjimid... not present.
Checking pkg SUNWkiimc... not present.
Checking pkg SUNWkiimd... not present.
Checking pkg SUNWkiimin... not present.
Checking pkg SUNWkimid... not present.
Checking pkg SUNWciimc... not present.
Checking pkg SUNWciimd... not present.
Checking pkg SUNWciimin... not present.
Checking pkg SUNWcimid... not present.
Checking pkg SUNWhiimc... not present.
Checking pkg SUNWhiimd... not present.
Checking pkg SUNWhiimin... not present.
Checking pkg SUNWhimid... not present.
IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
Checking pkg SUNWiimc-110n... not present.
Checking pkg SUNWiimd-110n... not present.
Checking pkg SUNWiimid-110n... not present.
Checking pkg SUNWiimin-110n... not present.
IM_L10N 7.2 is not present.
Checking CE_L10N 6.2 ...
Checking pkg SUNWduwc... not present.
Checking pkg SUNWeuwc... not present.
Checking pkg SUNWfuwc... not present.
Checking pkg SUNWjuwc... not present.
Checking pkg SUNWkuwc... not present.
Checking pkg SUNWcuwc... not present.
```

```

Checking pkg SUNWhuwc... not present.
CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
Checking pkg SUNWuwc-l10n... not present.
CE_L10N 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-12 /tmp/.patchout_20090119134514.2521
-- Running patchadd -p report...
-- Generating /tmp/.patchout_20090119134514.2521
patchadd -p > /tmp/.patchout_20090119134514.2521 2>>
/tmp/CommsInstaller_20090119134514.log 2>&1
-- Exit status: 0
-- older version at lineno 143 found 119963-05 - not acceptable
-- Exact match found at line 144
-- Final return status: 1
LIBCPLUSPLUS patch 119963-12 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 85
-- Final return status: 1
PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 88
-- Final return status: 1
PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-45 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 169
-- Final return status: 1
PATCHUTILS patch 119254-45 is already present.
-- chk4patch 126868-02 /tmp/.patchout_20090119134514.2521
-- older version at lineno 131 found 126868-01 - not acceptable
-- Exact match found at line 132
-- Final return status: 1
BZIP patch 126868-02 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 133
-- Final return status: 1
BZIP patch 137321-01 is already present.
-- chk4patch 119254-58 /tmp/.patchout_20090119134514.2521
-- older version at lineno 169 found 119254-45 - not acceptable
-- older version at lineno 170 found 119254-26 - not acceptable
-- older version at lineno 171 found 119254-23 - not acceptable
-- older version at lineno 172 found 119254-54 - not acceptable
-- Final return status: 0
RECOMMENDED patch 119254-58 is not present.
-- chk4patch 118833-36 /tmp/.patchout_20090119134514.2521
-- older version at lineno 3 found 118833-11 - not acceptable
-- Exact match found at line 5
-- Final return status: 1
RECOMMENDED patch 118833-36 is already present.
-- chk4patch 120011-14 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
RECOMMENDED patch 120011-14 is not present.
-- chk4patch 125358-06 /tmp/.patchout_20090119134514.2521
-- older version at lineno 217 found 125358-03 - not acceptable
-- older version at lineno 218 found 125358-05 - not acceptable
-- Exact match found at line 219

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```

-- Final return status: 1
   NSS patch 125358-06 is already present.
-- chk4patch 119345-05 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 384
-- Final return status: 1
   SASL patch 119345-05 is already present.
-- chk4patch 136798-01 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 385
-- Final return status: 1
   LDAPCSDK6_TOOLS patch 136798-01 is already present.
-- chk4patch 119810-05 /tmp/.patchout_20090119134514.2521
-- older version at lineno 245 found 119810-04 - not acceptable
-- older version at lineno 246 found 119810-02 - not acceptable
-- Exact match found at line 247
-- Final return status: 1
   ICU patch 119810-05 is already present.
-- chk4patch 125136-09 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 284
-- Final return status: 1
   JDK patch 125136-09 is already present.
-- chk4patch 125137-09 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 285
-- Final return status: 1
   JDK patch 125137-09 is already present.
-- chk4patch 127411-01 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   MQ patch 127411-01 is not present.
-- chk4patch 127412-01 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   MQ patch 127412-01 is not present.
-- chk4patch 119725-04 /tmp/.patchout_20090119134514.2521
-- Exact match found at line 389
-- Final return status: 1
   LDAPJDK patch 119725-04 is already present.
-- chk4patch 137201-03 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   MS patch 137201-03 is not present.
-- chk4patch 137204-03 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   MS64 patch 137204-03 is not present.
-- chk4patch 118242-03 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   DSSETUP patch 118242-03 is not present.
-- chk4patch 118245-19 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   DSSETUP patch 118245-19 is not present.
-- chk4patch 121581-19 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   DA patch 121581-19 is not present.
-- chk4patch 121657-32 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   CS patch 121657-32 is not present.
-- chk4patch 137571-01 /tmp/.patchout_20090119134514.2521
-- Final return status: 0
   IM_SCHA patch 137571-01 is not present.
-- chk4patch 137631-04 /tmp/.patchout_20090119134514.2521

```

```

-- Final return status: 0
   IWC patch 137631-04 is not present.
===== QQQ detectProducts =====
QQQ Dumper
!!! present
$VAR1 = {
    '137571-01' => 'NOT_PRESENT',
    'DSSETUP' => {
        '6.4' => 'NOT_PRESENT'
    },
    'MQ_L10N' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    '119345-05' => 'PRESENT',
    'ICU' => {
        'ICU2,ICU3' => 'PRESENT'
    },
    'MS64' => {
        '7.0' => 'NOT_PRESENT'
    },
    '137631-04' => 'NOT_PRESENT',
    'LDAPCSDK' => {
        '5.0' => 'PRESENT'
    },
    'CE' => {
        '6.3' => 'NOT_PRESENT'
    },
    'MQ' => {
        '3.7' => 'PRESENT',
        '4.1' => 'DIFF_VERSION'
    },
    'PATCHUTILS' => {
        'Unknown' => 'PRESENT'
    },
    'IMAPI' => {
        '8.0' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT',
        '7.3' => 'NOT_PRESENT'
    },
    '121581-19' => 'NOT_PRESENT',
    'LDAPCSDK6_TOOLS' => {
        '6.0' => 'PRESENT'
    },
    'ST' => {
        '1.1.4' => 'PRESENT'
    },
    '121657-32' => 'NOT_PRESENT',
    '118833-36' => 'PRESENT',
    'IM_L10N' => {
        '7.2' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT'
    },
    '119725-04' => 'PRESENT',
    'LDAPJDK' => {
        '4.19' => 'PRESENT'
    }
}

```

```

    },
'BZIP' => {
    '11.10' => 'PRESENT'
},
'119254-58' => 'NOT_PRESENT',
'IM_SCHA' => {
    '7.0' => 'NOT_PRESENT',
    '7.3' => 'NOT_PRESENT'
},
'126868-02' => 'PRESENT',
'SNMP' => {
    'Unknown' => 'NOT_PRESENT'
},
'MS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT'
},
'125358-06' => 'PRESENT',
'JHRT' => {
    '2.0' => 'PRESENT'
},
'CE_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'136798-01' => 'PRESENT',
'119810-05' => 'PRESENT',
'SASL' => {
    '2.19' => 'PRESENT'
},
'IWC' => {
    '1.0' => 'NOT_PRESENT'
},
'MS64_L10N' => {
    '6.3' => 'NOT_PRESENT'
},
'125137-09' => 'PRESENT',
'MS' => {
    '7.0' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'PKGINSTALL' => {
    'Unknown' => 'PRESENT'
},
'LIBMTMALLOC' => {
    '11.9.0' => 'NOT_PRESENT'
},
'120900-04' => 'PRESENT',
'127411-01' => 'NOT_PRESENT',
'120011-14' => 'NOT_PRESENT',
'LDAPCSK6' => {
    '6.0' => 'PRESENT'
},
'119963-12' => 'PRESENT',
'JDK' => {
    '1.6.0' => 'PRESENT',

```

```

        '1.5.0' => 'PRESENT'
    },
    'CI' => {
        '6.1' => 'NOT_PRESENT'
    },
    '137321-01' => 'PRESENT',
    '119254-45' => 'PRESENT',
    'NSS' => {
        '4.2.6' => 'PRESENT'
    },
    'IM' => {
        '8.0' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT',
        '7.3' => 'NOT_PRESENT'
    },
    'CS_L10N' => {
        '6.2' => 'NOT_PRESENT',
        '6.3' => 'NOT_PRESENT'
    },
    '125136-09' => 'PRESENT',
    'RECOMMENDED' => {
        '2008.10.09' => 'NOT_PRESENT'
    },
    'CS_SCHA' => {
        '6.0' => 'NOT_PRESENT',
        '6.3' => 'NOT_PRESENT'
    },
    '137201-03' => 'NOT_PRESENT',
    '118245-19' => 'NOT_PRESENT',
    'MS_L10N' => {
        '6.2' => 'NOT_PRESENT',
        '6.3' => 'NOT_PRESENT'
    },
    'LIBCPLUSPLUS' => {
        '5.9' => 'PRESENT'
    },
    '137204-03' => 'NOT_PRESENT',
    '121133-02' => 'PRESENT',
    '118242-03' => 'NOT_PRESENT',
    'CS' => {
        '6.3' => 'NOT_PRESENT'
    },
    'SSH' => {
        '11.9.0' => 'NOT_PRESENT'
    },
    'DA' => {
        '6.4' => 'NOT_PRESENT'
    },
    '127412-01' => 'NOT_PRESENT'
};
!!! pkgparams
$VAR1 = {
    'SUNWica5' => {},
    'SUNWmsgja' => {},
    'SUNWcomic' => {},
    'SUNWservicetagu' => {

```

```

'1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagu',
                                                                    '/',
'1.1.4.1'
                                                                    ]
},
'SUNWjimid' => {},
'SUNWdiquc' => {},
'SUNWmsgko' => {},
'SUNWmessaging-server-110n-64' => {},
'SUNWics5' => {},
'SUNWiqlpl' => {
    '3.7,REV=2006.06.18.22.35' => [
        'SUNWiqlpl',
        '/',
        '3.7.0.1'
    ]
},
'SUNWmsgco' => {},
'SUNWfiquc' => {},
'SUNWjhdem' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdem',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWiqfs' => {
    '3.7,REV=2006.06.18.22.35' => [
        'SUNWiqfs',
        '/',
        '3.7.0.1'
    ]
},
'SUNWfimid' => {},
'SUNWcomds' => {},
'SUNWjhdev' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdev',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWj6rtx' => {
    '1.6.0,REV=2006.11.29.04.58' => [
'SUNWj6rtx',
                                                                    '/usr',
'1.6.0_07/1.6.0_07-b06'
                                                                    ]
},
'SUNWiqum' => {
    '3.7,REV=2006.06.18.22.35' => [

```

```

        'SUNWiqum',
        '/',
        '3.7.0.1'
    ]
    },
    'SUNWduwc' => {},
    'SUNWhiimin' => {},
    'SUNWkiimin' => {},
    'SUNWeiimd' => {},
    'SUNWj6rt' => {
        '1.6.0,REV=2006.11.29.05.57' => [
            'SUNWj6rt',
            '/usr',
        ]
    },
    '1.6.0_07/1.6.0_07-b06'
    },
    'SUNWj5rt' => {
        '1.5.0,REV=2004.12.07.00.07' => [
            'SUNWj5rt',
            '/usr',
        ]
    },
    '1.5.0_09/1.5.0_09-b03'
    },
    'SUNWiimc-l10n' => {},
    'SUNWhiimc' => {},
    'SUNWmsg-l10n' => {},
    'SUNWfrics' => {},
    'SUNWciqu' => {},
    'SUNWkoics' => {},
    'SUNWdimid' => {},
    'SUNWjiquc' => {},
    'SUNWiimgw' => {},
    'SUNWiimd-l10n' => {},
    'SUNWhiquc' => {},
    'SUNWzhics' => {},
    'SUNWkiimd' => {},
    'SUNWmsgmp' => {},
    'SUNWuwc' => {},
    'SUNWscics' => {},
    'SUNWiimc' => {},
    'SUNWhiimd' => {},
    'SUNWmessaging-server-scha' => {},
    'SUNWmsglb' => {},
    'SUNWt1s' => {
        '3.11.4,REV=2006.11.16.20.40' => [
            'SUNWt1s',
            '/',
            '3.11.9'
        ]
    },
    'SUNWj6dvx' => {
        '1.6.0,REV=2006.11.29.04.58' => [
            'SUNWj6dvx',

```

```

'1.6.0_07/1.6.0_07-b06'
    '/usr',
]
    },
'SUNWfuwc' => {},
'SUNWlibc' => {
    '5.10,REV=2004.12.22' => [
        'SUNWlibc',
        '/',
        '5.10'
    ]
},
'SUNWjiimin' => {},
'SUNWscims' => {},
'SUNWiimjd' => {},
'SUNWciimd' => {},
'SUNWldapcsdk-dev' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-dev',
        '/',
'6.00'
    ]
},
'SUNWiqlen' => {
    '3.7,REV=2006.06.18.22.35' => [
        'SUNWiqlen',
        '/',
        '3.7.0.1'
    ]
},
'SUNWiimid-l10n' => {},
'SUNWiqr' => {
    '3.7,REV=2006.06.18.22.34' => [
        'SUNWiqr',
        '/',
        '3.7.0.1'
    ]
},
'SUNWdiimc' => {},
'SUNWmsgwm' => {},
'SUNWmessaging-server-64' => {},
'SUNWeiquc' => {},
'SUNWj5cfg' => {
    '1.5.0,REV=2004.12.07.00.07' => [
'SUNWj5cfg',
        '/usr',
'1.5.0_09/1.5.0_09-b03'
    ]
},
'SUNWhiqu' => {},
'SUNWiimd' => {},

```

```

'SUNWfiimd' => {},
'SUNWj5rtx' => {
    '1.5.0,REV=2004.12.06.22.09' => [
'SUNWj5rtx',
                                                    '/usr',
'1.5.0_09/1.5.0_09-b03'
                                                    ]
    },
'SUNWiquc' => {
    '3.7,REV=2006.06.18.22.35' => [
'SUNWiquc',
    '/',
    '3.7.0.1'
    ]
    },
'SUNWiimid' => {},
'SUNWmsgmt' => {},
'SUNWljdk' => {
    '1.0,REV=2004.10.11.06.02' => [
'SUNWljdk',
    '/',
    '4.19'
    ]
    },
'SUNWcuwc' => {},
'SUNWldapcsdk-libs' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-libs',
                                                    '/',
'6.00'
                                                    ]
    },
'SUNWservicetagr' => {
    '1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagr',
                                                    '/',
'1.1.4.1'
                                                    ]
    },
'SUNWciimc' => {},
'SUNWjhrt' => {
    '2.0,REV=2006.10.31' => [
'SUNWjhrt',
    '/usr',
    '2.0/FCS'
    ]
    },
'SUNWtlsd' => {
    '3.11.4,REV=2006.11.16.20.40' => [
'SUNWtlsd',

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```

        '/',
        '3.11.9'
    ]
    },
    'SUNWmsgin' => {},
    'SUNWdtrc' => {
        '11.10.0,REV=2005.01.21.15.53' => [
'SUNWdtrc',
        '/',
'5.10/Generic'
        ]
    },
    'SUNWhuwc' => {},
    'SUNWiqdoc' => {
        '3.7,REV=2006.06.18.22.35' => [
'SUNWiqdoc',
        '/',
        '3.7.0.1'
        ]
    },
    'SUNWjiimd' => {},
    'SUNWjuwc' => {},
    'SUNWiimd' => {},
    'SUNWiqcrt' => {
        '3.7,REV=2006.06.18.22.35' => [
'SUNWiqcrt',
        '/opt',
        '3.7.0.1'
        ]
    },
    'SUNWmsgzh' => {},
    'SUNWprd' => {
        '4.6.4,REV=2006.11.16.20.40' => [
'SUNWprd',
        '/',
        '4.7'
        ]
    },
    'SUNWmsgen' => {},
    'SUNWldk' => {
        '5.11,REV=2003.05.14.12.06' => [
'SUNWldk',
        '/',
        '5.12'
        ]
    },
    'SUNWiwc' => {},
    'SUNWiimin-l10n' => {},
    'SUNWiimsc' => {},
    'SUNWinstall-patch-utils-root' => {
'11.10,REV=2005.01.09.23.05' => [
'SUNWinstall-patch-utils-root',

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```

'/',
'SNAG Development'
]
},
'SUNWiimin' => {},
'SUNWuwc-110n' => {},
'SUNWmsgst' => {},
'SUNWiqu' => {
    '3.7,REV=2006.06.18.22.34' => [
        'SUNWiqu',
        '/',
        '3.7.0.1'
    ]
},
'SUNWkiimc' => {},
'SUNWiim' => {},
'SUNWeiimin' => {},
'SUNWcimid' => {},
'SUNWiqcdv' => {
    '3.7,REV=2006.06.18.22.35' => [
        'SUNWiqcdv',
        '/opt',
        '3.7.0.1'
    ]
},
'SUNWldapcsdk-tools' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-tools',
'/opt/SUNWdsee',
'6.00'
    ]
},
'SUNWjss' => {
    '4.2.4,REV=2006.11.16.20.40' => [
        'SUNWjss',
        '/',
        '4.2.6'
    ]
},
'SUNWdiqu' => {},
'SUNWj6cfg' => {
    '1.6.0,REV=2006.11.29.05.57' => [
'SUNWj6cfg',
        '/',
'1.6.0_07/1.6.0_07-b06'
    ]
},
'SUNWhimid' => {},

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```

'SUNWciquc' => {},
'SUNWcomms' => {},
'SUNWjiqu' => {},
'SUNWkiqu' => {},
'SUNWkuwc' => {},
'SUNWics-110n' => {},
'SUNWeiqu' => {},
'SUNWmessaging-server' => {},
'SUNWmsgtw' => {},
'SUNWeiimc' => {},
'SUNWjaics' => {},
'SUNWpkgcmdsu' => {
    '11.11,REV=2005.01.09.23.05' => [
'SUNWpkgcmdsu',
                                                                    '/',
                                                                    'SNAG
Development'
                                                                    ]
    },
'SUNWldkx' => {
    '5.11,REV=2003.05.14.12.06' => [
                                                                    'SUNWldkx',
                                                                    '/',
                                                                    '5.12'
                                                                    ]
    },
'SUNWjiimc' => {},
'SUNWiqjx' => {
    '3.7,REV=2006.06.18.22.35' => [
                                                                    'SUNWiqjx',
                                                                    '/',
                                                                    '3.7.0.1'
                                                                    ]
    },
'SUNWjhdoc' => {
    '2.0,REV=2006.10.04' => [
                                                                    'SUNWjhdoc',
                                                                    '/usr',
                                                                    '2.0/FCS'
                                                                    ]
    },
'SUNWj6dev' => {
    '1.6.0,REV=2006.11.29.05.57' => [
'SUNWj6dev',
                                                                    '/usr',
'1.6.0_07/1.6.0_07-b06'
                                                                    ]
    },
'SUNWeimid' => {},
'SUNWmsges' => {},
'SUNWpr' => {
    '4.6.4,REV=2006.11.16.20.40' => [
                                                                    'SUNWpr',

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```

        '/',
        '4.7'
    ]
    },
    'SUNWmsgmf' => {},
    'SUNWkimid' => {},
    'SUNWicu' => {
        '1.2,REV=2005.01.06.14.13' => [
            'SUNWicu',
            '/usr',
            '10/Generic'
        ]
    },
    'SUNWfiimin' => {},
    'SUNWswmt' => {
        '11.10,REV=2005.01.10.17.19' => [
            'SUNWswmt',
            '/',
            'SNAG
Development'
        ]
    },
    'SUNWcomis' => {},
    'SUNWdeics' => {},
    'SUNWtwics' => {},
    'SUNWciimin' => {},
    'SUNWmsgfr' => {},
    'SUNWdiimd' => {},
    'SUNWeuwc' => {},
    'SUNWkiquc' => {},
    'SUNWstosreg' => {
        '1.1.4,REV=2008.03.21.07.54' => [
            'SUNWstosreg',
            '/',
            '1.1.4.1'
        ]
    },
    'SUNWmsgde' => {},
    'SUNWbzip' => {
        '11.10.0,REV=2005.01.08.05.16' => [
            'SUNWbzip',
            '/'
        ]
    },
    '5.10/SunOS Development'
    ],
    'SUNWtisu' => {
        '3.11.4,REV=2006.11.16.20.40' => [
            'SUNWtisu',
            '/',
            '3.11.9'
        ]
    },
    'SUNWfiqu' => {}

```

```

'SUNWsas1' => {
    '2.17,REV=2004.04.06.15.24' => [
        'SUNWsas1',
        '/',
        '2.19'
    ]
},
'SUNWzoneu' => {
    '11.10.0,REV=2005.01.21.15.53' => [
'SUNWzoneu',
        '/',
'5.10/Generic'
    ]
},
'SUNWcsr' => {
    '11.10.0,REV=2005.01.21.15.53' => [
        'SUNWcsr',
        '/',
'5.10/Generic'
    ]
},
'SUNWfiimc' => {},
'SUNWesics' => {},
'SUNWiimm' => {}
};
!!! installedprod
$VAR1 = {
    'SASL' => {
        '2.19' => [
            '/',
            '2.19',
            'none',
            '2.19'
        ]
    },
    'ST' => {
        '1.1.4' => [
            '/',
            '1.1.4.1',
            'none',
            '1.1.4'
        ]
    },
    'LDAPCSDK6' => {
        '6.0' => [
            '/',
            '6.00',
            'none',
            '6.0'
        ]
    },
    'LDAPCSDK' => {
        '5.0' => [

```

```

        '/',
        '5.12',
        'none',
        '5.0'
    ]
},
'LIBCPLUSPLUS' => {
    '5.9' => [
        '/',
        '5.10',
        'none',
        '5.9'
    ]
},
'JDK' => {
    '1.6.0' => [
        '/usr',
        '1.6.0_07/1.6.0_07-b06',
        'none',
        '1.6.0'
    ]
},
'PKGINSTALL' => {
    'Unknown' => [
        '/',
        '5.10/Generic',
        'none',
        'Unknown'
    ]
},
'MQ' => {
    '3.7' => [
        '/',
        '3.7.0.1',
        'none',
        '3.7'
    ]
},
'PATCHUTILS' => {
    'Unknown' => [
        '/',
        'SNAG Development',
        'none',
        'Unknown'
    ]
},
'LDAPJDK' => {
    '4.19' => [
        '/',
        '4.19',
        'none',
        '4.19'
    ]
},
'JHRT' => {
    '2.0' => [

```

```

        '/usr',
        '2.0/FCS',
        'none',
        '2.0'
    ]
},
'BZIP' => {
    '11.10' => [
        '/',
        '5.10/SunOS Development',
        'none',
        '11.10'
    ]
},
'ICU' => {
    'ICU2,ICU3' => [
        '/usr',
        '10/Generic',
        'none',
        'ICU2,ICU3'
    ]
},
'LDAPSDK6_TOOLS' => {
    '6.0' => [
        '/opt/SUNWdsee',
        '6.00',
        'none',
        '6.0'
    ]
},
'NSS' => {
    '4.2.6' => [
        '/',
        '4.2.6',
        'none',
        '4.2.6'
    ]
}
};

===== End QQQ detectProducts =====
-- Checking for RECOMMENDED patch 119254-58
patch 119254-58: NOT_PRESENT
-- Checking for RECOMMENDED patch 118833-36
patch is PRESENT
-- Checking for RECOMMENDED patch 120011-14
patch 120011-14: NOT_PRESENT
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
has not been applied. Specifically the following
patches are missing:
119254-58 120011-14
NOTICE: It is highly recommended that you apply the
latest OS Recommended Patch Cluster
Do you want to continue ? [yes] :
=====
===== QQQ =====
QQQ Dumper

```

```
!!! isUpgradable
$VAR1 = {};
!!! usePkgUpgradeFlag
$VAR1 = {};
Product Selection:
```

Shared Components (not shown) will be installed as required.
you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Services Products:

Item	Description
1	Messaging Server 7u1 (7.0-3.01)
2	Messaging Server (64bit) 7u1 (7.0-3.01)
3	Comms DSsetup 6.4 (6.4-3.01)
4	Comms Delegated Administrator 6.4 (6.4-3.01)
5	Calendar Server 6.3 (6.3-11.01)
6	Instant Messaging 8 (8.0-00.06)
7	Communications Express 6.3 (6.3-11.01)
8	Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
9	Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
10	Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
11	Convergence 1 (1.0-4.01)

Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]:

```
=====
QQQ selections: 0 MS 0 MS64 0 DSSETUP 0 DA 0 CS 0 IM 0 CE 0 MS_SCHA 0
CS_SCHA 0 IM_SCHA 0 IWC
```

Generating list of things to install...

```
NOTICE: toInstall - IMAPI LDAPJDK ICU PATCHUTILS NSS BZIP LIBCPPLUSPLUS
LDAPCSDK6 LDAPCSDK6_TOOLS SASL MS MS64 DSSETUP DA CS IM CE MS_SCHA
CS_SCHA IM_SCHA IWC CI ST JDK JHRT MQ
```

Checking for Shared Component Upgrade Requirements...

Shared component Message Queue has a different pkg version installed
Description: Message Queue

```
Current pkg Version (SUNWiqr): 3.7,REV=2006.06.18.22.34
To be installed pkg version (SUNWiqr): 4.1,REV=2007.07.26.10.58
Product Version: 4.1
```

Note that changing pkg versions is irreversible
On the other hand, if you do not change it,
some products may not work properly
An alternative is to start over and do a multi-install using --altroot

Do you wish to change pkg versions for Message Queue [n] : y

```
=====
```

```

WILL INSTALL: Instant Messaging API 8
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/IMAPI/Packages -r
/tmp/.response_IMAPI_20090119134514 SUNWiimdvd
WILL INSTALL: Messaging Server 7ul (7.0-3.01)
to /opt/sun/comms/messaging
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20090119134514 SUNWmessaging-server
WILL INSTALL: Messaging Server (64bit) 7ul (7.0-3.01)
to /opt/sun/comms/messaging64
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/MS64/Packages -r
/tmp/.response_MS64_20090119134514 SUNWmessaging-server-64
WILL INSTALL: Comms DSsetup 6.4 (6.4-3.01)
to /opt/sun/comms/dssetup
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/DSSETUP/Packages -r
/tmp/.response_DSSETUP_20090119134514 SUNWcomds
WILL INSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
to /opt/sun/comms/da
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090119134514 SUNWcomic
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090119134514 SUNWcomis
WILL INSTALL: Calendar Server 6.3 (6.3-11.01)
to /opt/sun/comms/calendar
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090119134514 SUNWics5
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090119134514 SUNWica5
WILL INSTALL: Instant Messaging 8 (8.0-00.06)
to /opt/sun/comms/im
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiim
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimin
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimm
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimjd
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimid
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimc
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d

```

```

/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimd
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimgw
  WILL INSTALL: Communications Express 6.3 (6.3-11.01)
                  to /opt/sun/comms/ce
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CE/Packages -r
/tmp/.response_CE_20090119134514 SUNWuwcc
  WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  to /opt/sun/comms/msg_scha
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MS_SCHA/Packages -r
/tmp/.response_MS_SCHA_20090119134514 SUNWmessaging-server-scha
  WILL INSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
                  to /opt/sun/comms/cs_scha
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/CS_SCHA/Packages -r
/tmp/.response_CS_SCHA_20090119134514 SUNWscics
  WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                  to /opt/sun/comms/im_scha
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/IM_SCHA/Packages -r
/tmp/.response_IM_SCHA_20090119134514 SUNWiimsc
  WILL INSTALL: Convergence 1 (1.0-4.01)
                  to /opt/sun/comms/iwc
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IWC/Packages -r
/tmp/.response_IWC_20090119134514 SUNWiwc
  WILL INSTALL: CommsInstaller 6u1 (6.1-0.01)
                  to /opt/sun/comms/CommsInstaller
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090119134514 SUNWcomms
  NOTICE: Message Queue will be upgraded...
           Removing the old version is an irreversible process.
  WILL REMOVE EXISTING: Message Queue 3.7 (3.7.0.1)
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqlen
3.7,REV=2006.06.18.22.35 i=20: realpkg=SUNWiqlen base=/
  Task: pkgadd -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqlen
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqcdv
3.7,REV=2006.06.18.22.35 i=18: realpkg=SUNWiqcdv base=/opt
  Task: pkgadd -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqcdv
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqcrt
3.7,REV=2006.06.18.22.35 i=16: realpkg=SUNWiqcrt base=/opt
  Task: pkgadd -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqcrt
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqfs
3.7,REV=2006.06.18.22.35 i=14: realpkg=SUNWiqfs base=/
  Task: pkgadd -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqfs
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqjx
3.7,REV=2006.06.18.22.35 i=12: realpkg=SUNWiqjx base=/
  Task: pkgadd -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqjx
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqum
3.7,REV=2006.06.18.22.35 i=10: realpkg=SUNWiqum base=/
  Task: pkgadd -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqum

```

```

-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiquc
3.7,REV=2006.06.18.22.35 i=8: realpkg=SUNWiquc base=/
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiquc
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqdoc
3.7,REV=2006.06.18.22.35 i=6: realpkg=SUNWiqdoc base=/
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqdoc
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqlpl
3.7,REV=2006.06.18.22.35 i=4: realpkg=SUNWiqlpl base=/
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqlpl
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqu
3.7,REV=2006.06.18.22.34 i=2: realpkg=SUNWiqu base=/
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqu
-- QQQ30 removeProductPkgs (product=MQ pkg=SUNWiqr
3.7,REV=2006.06.18.22.34 i=0: realpkg=SUNWiqr base=/
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqr
WILL INSTALL: Message Queue 4.1
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqr
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqu
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqdoc
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiquc
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqum
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqjx
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqfs
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqcrt
  Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqcdv
=====
Ready to install

Do you want to continue ? [yes] :

=====
Installing Instant Messaging API 8...
----- Executing Task 1 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/IMAPI/Packages -r
/tmp/.response_IMAPI_20090119134514 SUNWiimdvdv 2>&1
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```

```
Installation of <SUNWiimdv> was successful.  
-- Exit status: 0
```

```
=====  
Installing Messaging Server 7ul (7.0-3.01)...  
----- Executing Task 2 of 42 ...  
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d  
/var/tmp/ci61/SunOS_sparc/MS/Packages -r  
/tmp/.response_MS_20090119134514 SUNWmessaging-server 2>&1  
Copyright 2003-2008 Sun Microsystems, Inc. All rights reserved.  
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```

```
Installation of <SUNWmessaging-server> was successful.  
-- Exit status: 0
```

```
=====  
Installing Messaging Server (64bit) 7ul (7.0-3.01)...  
----- Executing Task 3 of 42 ...  
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d  
/var/tmp/ci61/SunOS_sparc/MS64/Packages -r  
/tmp/.response_MS64_20090119134514 SUNWmessaging-server-64 2>&1  
Copyright 2003-2008 Sun Microsystems, Inc. All rights reserved.  
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```

```
Installation of <SUNWmessaging-server-64> was successful.  
-- Exit status: 0
```

```
=====  
Installing Comms DSsetup 6.4 (6.4-3.01)...  
----- Executing Task 4 of 42 ...  
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d  
/var/tmp/ci61/SunOS_sparc/DSSETUP/Packages -r  
/tmp/.response_DSSETUP_20090119134514 SUNWcomds 2>&1  
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```

```
Installation of <SUNWcomds> was successful.  
-- Exit status: 0
```

```
=====  
Installing Comms Delegated Administrator 6.4 (6.4-3.01)...  
----- Executing Task 5 of 42 ...  
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d  
/var/tmp/ci61/SunOS_sparc/DA/Packages -r  
/tmp/.response_DA_20090119134514 SUNWcomic 2>&1  
Copyright 2003 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.  
22234 blocks
```

```
Installation of <SUNWcomic> was successful.  
-- Exit status: 0  
----- Executing Task 6 of 42 ...  
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d  
/var/tmp/ci61/SunOS_sparc/DA/Packages -r  
/tmp/.response_DA_20090119134514 SUNWcomis 2>&1
```

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23456 blocks

Installation of <SUNWcomis> was successful.
-- Exit status: 0

```
=====
Installing Calendar Server 6.3 (6.3-11.01)...
----- Executing Task 7 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090119134514 SUNWics5 2>&1
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```

Checking for existence of
/opt/sun/comms/calendar/SUNWics5/cal/bin/config
/opt/sun/comms/calendar/SUNWics5/cal/bin/config is clean

Checking for existence of /opt/sun/comms/calendar/SUNWics5/cal/config
/opt/sun/comms/calendar/SUNWics5/cal/config is clean

Checking for existence of /opt/sun/comms/calendar/SUNWics5/cal/bin/html
/opt/sun/comms/calendar/SUNWics5/cal/bin/html is clean

Checking for existence of /opt/sun/comms/calendar/SUNWics5/cal/bin/data
/opt/sun/comms/calendar/SUNWics5/cal/bin/data is clean

Checking for any files in /opt/sun/comms/calendar/SUNWics5/cal/bin/
/opt/sun/comms/calendar/SUNWics5/cal/bin is clean

Installation of <SUNWics5> was successful.
-- Exit status: 0
----- Executing Task 8 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090119134514 SUNWica5 2>&1
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Installation of <SUNWica5> was successful.
-- Exit status: 0

```
=====
Installing Instant Messaging 8 (8.0-00.06)...
----- Executing Task 9 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiim 2>&1
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```

Installation of <SUNWiim> was successful.
-- Exit status: 0

```

----- Executing Task 10 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimin 2>&1
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Installation of <SUNWiimin> was successful.
-- Exit status: 0
----- Executing Task 11 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimm 2>&1
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Installation of <SUNWiimm> was successful.
-- Exit status: 0
----- Executing Task 12 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimjd 2>&1
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Installation of <SUNWiimjd> was successful.
-- Exit status: 0
----- Executing Task 13 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimid 2>&1
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Installation of <SUNWiimid> was successful.
-- Exit status: 0
----- Executing Task 14 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimc 2>&1
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Installation of <SUNWiimc> was successful.
-- Exit status: 0
----- Executing Task 15 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimd 2>&1
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Installation of <SUNWiimd> was successful.
-- Exit status: 0
----- Executing Task 16 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d

```

```
/var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimgw 2>&1
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```

```
Installation of <SUNWiimgw> was successful.
-- Exit status: 0
```

```
=====
Installing Communications Express 6.3 (6.3-11.01)...
----- Executing Task 17 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CE/Packages -r
/tmp/.response_CE_20090119134514 SUNWuwc 2>&1
Copyright 2003 Sun Microsystems, Inc. All rights reserved.
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92397 blocks
```

```
Installation of <SUNWuwc> was successful.
-- Exit status: 0
```

```
=====
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
----- Executing Task 18 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MS_SCHA/Packages -r
/tmp/.response_MS_SCHA_20090119134514 SUNWmessaging-server-scha 2>&1
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```

```
Installation of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0
```

```
=====
Installing Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)...
----- Executing Task 19 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/CS_SCHA/Packages -r
/tmp/.response_CS_SCHA_20090119134514 SUNWscics 2>&1
Copyright 2005 Sun Microsystems, Inc. All rights reserved.
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ln: cannot create /usr/cluster/lib/rgm/rtreg/SUNW.scics: No such file or
directory
```

```
Attempting to set following in ics.conf
    local.server.ha.enabled="yes"
    local.server.ha.agent="SUNWscics"
```

```
Sun Cluster 3.0_u1 Agent for iCS 5.1 Note
```

```
-----
Remember to add the following to the ics.conf file
    local.server.ha.enabled="yes"
    local.server.ha.agent="SUNWscics"
```

```

Installation of <SUNWscics> was successful.
-- Exit status: 0

=====
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
----- Executing Task 20 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/IM_SCHA/Packages -r
/tmp/.response_IM_SCHA_20090119134514 SUNWiimsc 2>&1
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Installation of <SUNWiimsc> was successful.
-- Exit status: 0

=====
Installing Convergence 1 (1.0-4.01)...
----- Executing Task 21 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/IWC/Packages -r
/tmp/.response_IWC_20090119134514 SUNWiwc 2>&1
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Installation of <SUNWiwc> was successful.
-- Exit status: 0

=====
Installing CommsInstaller 6ul (6.1-0.01)...
----- Executing Task 22 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090119134514 SUNWcomms 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWcomms> was successful.
-- Exit status: 0

=====
Removing existing Message Queue 3.7 (3.7.0.1)...
----- Executing Task 23 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqlen 2>&1

Removal of <SUNWiqlen> was successful.
-- Exit status: 0
----- Executing Task 24 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqcdv 2>&1

Removal of <SUNWiqcdv> was successful.
-- Exit status: 0
----- Executing Task 25 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqcrt 2>&1

Removal of <SUNWiqcrt> was successful.

```

```

-- Exit status: 0
----- Executing Task 26 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqfs 2>&1

Removal of <SUNWiqfs> was successful.
-- Exit status: 0
----- Executing Task 27 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqjx 2>&1

Removal of <SUNWiqjx> was successful.
-- Exit status: 0
----- Executing Task 28 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqum 2>&1

Removal of <SUNWiqum> was successful.
-- Exit status: 0
----- Executing Task 29 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiquc 2>&1

Removal of <SUNWiquc> was successful.
-- Exit status: 0
----- Executing Task 30 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqdoc 2>&1

Removal of <SUNWiqdoc> was successful.
-- Exit status: 0
----- Executing Task 31 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqlpl 2>&1

Removal of <SUNWiqlpl> was successful.
-- Exit status: 0
----- Executing Task 32 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqu 2>&1

Removal of <SUNWiqu> was successful.
-- Exit status: 0
----- Executing Task 33 of 42 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiqr 2>&1

Removal of <SUNWiqr> was successful.
-- Exit status: 0

=====
Installing Message Queue 4.1...
----- Executing Task 34 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqr 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWiqr> was successful.
-- Exit status: 0
----- Executing Task 35 of 42 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r

```

```
/tmp/.response_MQ_20090119134514 SUNWiqu 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.
```

Installation of <SUNWiqu> was successful.

-- Exit status: 0

----- Executing Task 36 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d  
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r  
/tmp/.response_MQ_20090119134514 SUNWiqdoc 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.
```

Installation of <SUNWiqdoc> was successful.

-- Exit status: 0

----- Executing Task 37 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d  
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r  
/tmp/.response_MQ_20090119134514 SUNWiquc 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.
```

Installation of <SUNWiquc> was successful.

-- Exit status: 0

----- Executing Task 38 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d  
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r  
/tmp/.response_MQ_20090119134514 SUNWiqum 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.
```

Installation of <SUNWiqum> was successful.

-- Exit status: 0

----- Executing Task 39 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d  
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r  
/tmp/.response_MQ_20090119134514 SUNWiqjx 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.
```

Installation of <SUNWiqjx> was successful.

-- Exit status: 0

----- Executing Task 40 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d  
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r  
/tmp/.response_MQ_20090119134514 SUNWiqfs 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.  
Use is subject to license terms.
```

Installation of <SUNWiqfs> was successful.

-- Exit status: 0

----- Executing Task 41 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d  
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r  
/tmp/.response_MQ_20090119134514 SUNWiqcrt 2>&1  
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
```

Use is subject to license terms.

Installation of <SUNWiqcrt> was successful.

-- Exit status: 0

----- Executing Task 42 of 42 ...

```
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqcdv 2>&1
Copyright 2007 Sun Microsystems, Inc. All rights reserved.
```

Use is subject to license terms.

Installation of <SUNWiqcdv> was successful.

-- Exit status: 0

=====

SUMMARY:

```
PASSED: Task 1: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/IMAPI/Packages -r
/tmp/.response_IMAPI_20090119134514 SUNWiimdvdv
PASSED: Task 2: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20090119134514 SUNWmessaging-server
PASSED: Task 3: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/MS64/Packages -r
/tmp/.response_MS64_20090119134514 SUNWmessaging-server-64
PASSED: Task 4: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/DSSETUP/Packages -r
/tmp/.response_DSSETUP_20090119134514 SUNWcomds
PASSED: Task 5: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090119134514 SUNWcomidv
PASSED: Task 6: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/DA/Packages -r
/tmp/.response_DA_20090119134514 SUNWcomis
PASSED: Task 7: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090119134514 SUNWics5
PASSED: Task 8: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/CS/Packages -r
/tmp/.response_CS_20090119134514 SUNWica5
PASSED: Task 9: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n
-d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiim
PASSED: Task 10: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimin
PASSED: Task 11: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimm
PASSED: Task 12: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimjd
PASSED: Task 13: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimid
PASSED: Task 14: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
```

```

-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimc
PASSED: Task 15: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimd
PASSED: Task 16: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IM/Packages -r
/tmp/.response_IM_20090119134514 SUNWiimgw
PASSED: Task 17: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/CE/Packages -r
/tmp/.response_CE_20090119134514 SUNWuwcc
PASSED: Task 18: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MS_SCHA/Packages -r
/tmp/.response_MS_SCHA_20090119134514 SUNWmessaging-server-scha
PASSED: Task 19: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/CS_SCHA/Packages -r
/tmp/.response_CS_SCHA_20090119134514 SUNWscics
PASSED: Task 20: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/IM_SCHA/Packages -r
/tmp/.response_IM_SCHA_20090119134514 SUNWiimsc
PASSED: Task 21: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/IWC/Packages -r
/tmp/.response_IWC_20090119134514 SUNWiwc
PASSED: Task 22: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090119134514 SUNWcomms
PASSED: Task 23: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqlen
PASSED: Task 24: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqcdv
PASSED: Task 25: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqcrt
PASSED: Task 26: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqfs
PASSED: Task 27: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqjx
PASSED: Task 28: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqum
PASSED: Task 29: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiquc
PASSED: Task 30: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqdoc
PASSED: Task 31: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqlpl
PASSED: Task 32: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqu
PASSED: Task 33: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiqr
PASSED: Task 34: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqr
PASSED: Task 35: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqu
PASSED: Task 36: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r

```

```

/tmp/.response_MQ_20090119134514 SUNWiqdoc
PASSED: Task 37: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiquc
PASSED: Task 38: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqum
PASSED: Task 39: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqjx
PASSED: Task 40: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqfs
PASSED: Task 41: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqcrt
PASSED: Task 42: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/MQ/Packages -r
/tmp/.response_MQ_20090119134514 SUNWiqcdv

```

All tasks PASSED

Checking JES java symlink...

```
ls -l /usr/jdk /usr/java 2>&1
```

```
/usr/java:
```

```
total 2
```

```
drwxr-xr-x  3 root      root          512 Feb 12  2007 jre
```

```
/usr/jdk:
```

```
total 14
```

```
lrwxrwxrwx  1 root      root          27 Mar  1  2007 entsys-j2se ->
```

```
/usr/jdk/instances/jdk1.5.0
```

```
drwxr-xr-x  4 root      bin          512 Sep 17 12:44 instances
```

```
lrwxrwxrwx  1 root      other         7 Feb 12  2007 j2sdk1.4.2_11 ->
```

```
../j2se
```

```
lrwxrwxrwx  1 root      other         18 Oct  3 14:57 jdk1.5.0_09 ->
```

```
instances/jdk1.5.0
```

```
lrwxrwxrwx  1 root      other         18 Sep 17 12:45 jdk1.6.0_07 ->
```

```
instances/jdk1.6.0
```

```
lrwxrwxrwx  1 root      other         11 Sep 17 12:45 latest ->
```

```
jdk1.6.0_07
```

```
drwxr-xr-x  8 root      bin          512 Dec 10 11:28 packages
```

```
-- Exit status: 0
```

```
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
```

```
lrwxrwxrwx  1 root      root          27 Mar  1  2007
```

```
/usr/jdk/entsys-j2se -> /usr/jdk/instances/jdk1.5.0
```

```
lrwxrwxrwx  1 root      other         11 Sep 17 12:45 /usr/jdk/latest ->
```

```
jdk1.6.0_07
```

```
-- Exit status: 0
```

```
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
```

```
/usr/jdk/entsys-j2se:
```

```
total 34398
```

```
-rw-r--r--  1 root      bin          2487 Oct 12  2006 COPYRIGHT
```

```
-rw-r--r--  1 root      bin        17293 Oct 12  2006 LICENSE
```

```
-rw-r--r--  1 root      bin        20415 Oct 12  2006 README.html
```

```
drwxr-xr-x  3 root      bin          1024 Dec 10 11:28 bin
```

```

drwxr-xr-x  9 root    bin           512 Oct  3 14:59 demo
drwxr-xr-x  3 root    bin           512 Oct  3 14:58 include
drwxr-xr-x  6 root    bin           512 Oct  3 14:57 jre
drwxr-xr-x  2 root    bin           512 Oct  3 14:58 lib
drwxr-xr-x  6 root    bin           512 Oct  3 14:59 man
drwxr-xr-x  4 root    bin           512 Oct  3 14:59 sample
-rw-r--r--  1 root    bin           17537249 Oct 12  2006 src.zip

/usr/jdk/latest:
total 37258
-rw-r--r--  1 root    bin           4137 Jun 10  2008 COPYRIGHT
-rw-r--r--  1 root    bin           17058 Jun 10  2008 LICENSE
-rw-r--r--  1 root    bin           28599 Jun 10  2008 README.html
-rw-r--r--  1 root    bin           24132 Jun 10  2008 README_ja.html
-rw-r--r--  1 root    bin           18329 Jun 10  2008 README_zh_CN.html
-rw-r--r--  1 root    bin           190102 Jun 10  2008
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x  3 root    bin           1024 Dec 10 11:28 bin
drwxr-xr-x  3 root    bin           512 Sep 17 12:47 include
drwxr-xr-x  6 root    bin           512 Sep 17 12:44 jre
drwxr-xr-x  3 root    bin           512 Sep 17 12:47 lib
-r--r--r--  1 root    other         6655 Sep 17 12:46 register.html
-r--r--r--  1 root    other         7087 Sep 17 12:46 register_ja.html
-r--r--r--  1 root    other         6265 Sep 17 12:46
register_zh_CN.html
-rw-r--r--  1 root    bin           18719038 Jun 10  2008 src.zip
-- Exit status: 0
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====
-- unlink /tmp/.response_IMAPI_20090119134514
-- unlink /tmp/.response_MS_20090119134514
-- unlink /tmp/.response_MS64_20090119134514
-- unlink /tmp/.response_DSSETUP_20090119134514
-- unlink /tmp/.response_DA_20090119134514
-- unlink /tmp/.response_CS_20090119134514
-- unlink /tmp/.response_IM_20090119134514
-- unlink /tmp/.response_CE_20090119134514
-- unlink /tmp/.response_MS_SCHA_20090119134514
-- unlink /tmp/.response_CS_SCHA_20090119134514
-- unlink /tmp/.response_IM_SCHA_20090119134514
-- unlink /tmp/.response_IWC_20090119134514
-- unlink /tmp/.response_CI_20090119134514
-- unlink /tmp/.response_MQ_20090119134514
-- unlink /tmp/.patchout_20090119134514.2521
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: To undo the installation, run the commands in:
        /var/opt/CommsInstaller/logs/undoCommsInstall_20090119134514

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119134514
-- Closing the log at Mon Jan 19 13:52:59 2009

```

```

(53 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20090119135415.log
===== LOGFILE started Mon Jan 19 13:54:15 2009 =====
LOGFILE = /tmp/CommsInstaller_20090119135415.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg uninstall
-- perl version: 5.008004 pid: 4112
-- basetime: 1232402055 Mon Jan 19 13:54:15 2009
-- scriptDir: /var/tmp/ci61
-- LOGFILE: /tmp/CommsInstaller_20090119135415.log
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
-- Exit status: 0
!!! ENV
$VAR1 = {
    'CAPSAVE' => '/home/dl111122/.termcap',
    'PS1' => '# ',
    'LINES' => '55',
    'COLUMNS' => '80',
    'PWD' => '/var/tmp/ci61',
    'USER' => 'dl111122',
    'VISUAL' => 'gnuclient',
    'LOGNAME' => 'dl111122',
    'EMACS' => 't',
    'REMOTE' => '/home/dl111122/.remote',
    'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc:./home/dl111122/bin:/new/local/bin'
    'EMACS_TYPE' => 'pc',
    'EMACSPACKAGEPATH' => '/new/local/lib/xemacs/xemacs-packages',
    'MORE' => '-c',
    'TERM' => 'emacs',
    'PAGER' => 'cat',
    'LM_LICENSE_FILE' =>
'/usr/dist/share/devpro_lic,v1.0/license_dir/sunpro.lic.site,1',
    'HOME' => '/home/dl111122',
    'LD_LIBRARY_PATH' => '/usr/dt/lib:/usr/openwin/lib',
    'MANPATH' =>
'/usr/cluster/man:/tools/ns/man:/usr/openwin/man:/usr/man',
    'TERMSAVE' => 'emacs',
    'CDPATH' => '....:/home/dl111122',
    'EDITOR' => 'gnuclient',
    'MAIL' => '/var/mail/dl111122',
    'TZ' => 'US/Pacific',
    'ESHELL' => '/bin/csh',
    'INFOPATH' =>
'/new/local/info:/new/local-generic/share/emacs/19.34/info:/usr/local/info'
    'MOTIFHOME' => '/usr/dt',
    'CVSROOT' =>
':pserver:dl111122@redcvs.red.iplanet.com:/m/src',
    'OPENWINHOME' => '/usr/openwin',
    'RCSINIT' => '-zLT',
    'SHELL' => '/bin/csh',
    'HZ' => '100',
    'TERMCAP' => '/home/dl111122/.termcap'
};

```

```

cat /etc/release 2>&1
                Solaris 10 6/06 s10s_u2wos_08 SPARC
                Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
                Use is subject to license terms.
                Assembled 01 May 2006

-- Exit status: 0
-- Recognized OS_VERS
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=0
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=1
is_path_writable=1
is_running_system=0
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=1
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 0
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading /var/tmp/ci61/.install/Product/NSS/NSS.in...
mapFile /var/tmp/ci61/.install/Product/NSS/NSS.map does not exist...
Reading /var/tmp/ci61/.install/Product/SASL/SASL.in...
mapFile /var/tmp/ci61/.install/Product/SASL/SASL.map does not exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.map does not
exist...
Reading
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.in...
mapFile
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ICU/ICU.in...
mapFile /var/tmp/ci61/.install/Product/ICU/ICU.map does not exist...
Reading /var/tmp/ci61/.install/Product/JDK/JDK.in...
mapFile /var/tmp/ci61/.install/Product/JDK/JDK.map does not exist...
Reading /var/tmp/ci61/.install/Product/JHRT/JHRT.in...
mapFile /var/tmp/ci61/.install/Product/JHRT/JHRT.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ/MQ.in...
mapFile /var/tmp/ci61/.install/Product/MQ/MQ.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.in...
mapFile /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.map does not

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exist...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.in...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.map...
Reading /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.in...
mapFile /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.map does
not exist...
Reading /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.in...
mapFile /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.map
does not exist...
Reading /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.in...
mapFile /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.map does
not exist...
Reading /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.in...
mapFile /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/SNMP/SNMP.in...
mapFile /var/tmp/ci61/.install/Product/SNMP/SNMP.map does not exist...
Reading /var/tmp/ci61/.install/Product/BZIP/BZIP.in...
mapFile /var/tmp/ci61/.install/Product/BZIP/BZIP.map does not exist...
Reading /var/tmp/ci61/.install/Product/SSH/SSH.in...
mapFile /var/tmp/ci61/.install/Product/SSH/SSH.map does not exist...
Reading /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.in...
mapFile /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ST/ST.in...
mapFile /var/tmp/ci61/.install/Product/ST/ST.map does not exist...
Reading /var/tmp/ci61/.install/Product/CI/CI.in...
Reading /var/tmp/ci61/.install/Product/CI/CI.map...
Reading /var/tmp/ci61/.install/Product/MS/MS.in...
Reading /var/tmp/ci61/.install/Product/MS/MS.map...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.in...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.map...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.in...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.map...
Reading /var/tmp/ci61/.install/Product/DA/DA.in...
Reading /var/tmp/ci61/.install/Product/DA/DA.map...
Reading /var/tmp/ci61/.install/Product/CS/CS.in...
Reading /var/tmp/ci61/.install/Product/CS/CS.map...
Reading /var/tmp/ci61/.install/Product/IM/IM.in...
Reading /var/tmp/ci61/.install/Product/IM/IM.map...
Reading /var/tmp/ci61/.install/Product/CE/CE.in...
Reading /var/tmp/ci61/.install/Product/CE/CE.map...
Reading /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.in...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.map...
Reading OLD /var/tmp/ci61/.install/Product/MS/6.3/MS.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.0/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.3/IM.in...

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Reading OLD /var/tmp/ci61/.install/Product/MS_SCHA/6.0/MS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_SCHA/6.0/CS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_SCHA/7.0/IM_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.2/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.3/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS64_L10N/6.3/MS64_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.2/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.3/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.0/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.2/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.2/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.3/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/JDK/1.5.0/JDK.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ/3.7/MQ.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ_L10N/3.7/MQ_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.0/IMAPI.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.3/IMAPI.in...
===== QQQ findGetVersion =====
!!! getVersion
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '/var/tmp/ci61/SunOS_sparc/IWC/CI/getVersion',
    'MS64_L10N' => 'none',
    'MS' => '/var/tmp/ci61/SunOS_sparc/MS/CI/getVersion',
    'DSSETUP' =>
'/var/tmp/ci61/SunOS_sparc/DSSETUP/CI/getVersion',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '/var/tmp/ci61/SunOS_sparc/MS64/CI/getVersion',
    'LDAPCSDK' => 'none',
    'LDAPCSDK6' => 'none',
    'JDK' => 'none',
    'CE' => '/var/tmp/ci61/SunOS_sparc/CE/CI/getVersion',
    'PATCHUTILS' => 'none',
    'MQ' => 'none',
    'IMAPI' => 'none',
    'CI' =>
'/var/tmp/ci61/.install/Product/CI/SunOS_sparc/getVersion',
    'LDAPCSDK6_TOOLS' => 'none',
    'NSS' => 'none',
    'CS_L10N' => 'none',
    'ST' => 'none',
    'IM' => '/var/tmp/ci61/SunOS_sparc/IM/CI/getVersion',
    'RECOMMENDED' => 'none',
    'IM_L10N' => 'none',
    'CS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion',
    'LDAPJDK' => 'none',
    'BZIP' => 'none',
    'IM_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/IM_SCHA/CI/getVersion',
    'MS_L10N' => 'none',
    'LIBCPLUSPLUS' => 'none',
    'SNMP' => 'none',

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        'MS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/MS_SCHA/CI/getVersion',
        'CS' => '/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion',
        'JHRT' => 'none',
        'CE_L10N' => 'none',
        'SSH' => 'none',
        'DA' => '/var/tmp/ci61/SunOS_sparc/DA/CI/getVersion'
    };
!!! prod_getVers
$VAR1 = {
    'SASL' => 0,
    'IWC' => '1.0-4.01',
    'MS64_L10N' => 0,
    'MS' => '7.0-3.01',
    'DSSETUP' => '6.4-3.01',
    'PKGINSTALL' => 0,
    'LIBMTMALLOC' => 0,
    'MQ_L10N' => 0,
    'ICU' => 0,
    'MS64' => '7.0-3.01',
    'LDAPCSDK' => 0,
    'LDAPCSDK6' => 0,
    'JDK' => 0,
    'CE' => '6.3-11.01',
    'PATCHUTILS' => 0,
    'MQ' => 0,
    'IMAPI' => 0,
    'CI' => '6.1-0.01',
    'LDAPCSDK6_TOOLS' => 0,
    'NSS' => 0,
    'CS_L10N' => 0,
    'ST' => 0,
    'IM' => '8.0-00.06',
    'RECOMMENDED' => 0,
    'IM_L10N' => 0,
    'CS_SCHA' => '6.3-1.01',
    'LDAPJDK' => 0,
    'BZIP' => 0,
    'IM_SCHA' => '7.3-01.02',
    'MS_L10N' => 0,
    'LIBCPLUSPLUS' => 0,
    'SNMP' => 0,
    'MS_SCHA' => '7.0-0.03',
    'CS' => '6.3-11.01',
    'JHRT' => 0,
    'CE_L10N' => 0,
    'SSH' => 0,
    'DA' => '6.4-3.01'
};
!!! prod_builddate
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '20081208',
    'MS64_L10N' => 'none',
    'MS' => '20081209',
    'DSSETUP' => '20080729',

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        'PKGINSTALL' => 'none',
        'LIBMTMALLOC' => 'none',
        'MQ_L10N' => 'none',
        'ICU' => 'none',
        'MS64' => '20081209',
        'LDAPCSDK' => 'none',
        'LDAPCSDK6' => 'none',
        'JDK' => 'none',
        'CE' => '20081203',
        'PATCHUTILS' => 'none',
        'MQ' => 'none',
        'IMAPI' => 'none',
        'CI' => '20081210',
        'LDAPCSDK6_TOOLS' => 'none',
        'NSS' => 'none',
        'CS_L10N' => 'none',
        'ST' => 'none',
        'IM' => '20081204',
        'RECOMMENDED' => 'none',
        'IM_L10N' => 'none',
        'CS_SCHA' => '20080331',
        'LDAPJDK' => 'none',
        'BZIP' => 'none',
        'IM_SCHA' => '20080403',
        'MS_L10N' => 'none',
        'LIBCPLUSPLUS' => 'none',
        'SNMP' => 'none',
        'MS_SCHA' => '20080519',
        'CS' => '20081122',
        'JHRT' => 'none',
        'CE_L10N' => 'none',
        'SSH' => 'none',
        'DA' => '20081022'
    };
===== End QQQ findGetVersion =====
INFO: prod_mktVers{NSS} (no map) = 4.2.6
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK} (no map) = 5.0
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.1
INFO: prod_mktVers{MQ_L10N} (no map) = 4.1
INFO: prod_mktVers{LDAPJDK} (no map) = 4.19
INFO: prod_mktVers{IMAPI} (w/ map) = 8
INFO: prod_mktVers{LIBMTMALLOC} (no map) = 11.9.0
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PKGINSTALL} (no map) = Unknown
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{SNMP} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{SSH} (no map) = 11.9.0
INFO: prod_mktVers{RECOMMENDED} (no map) = 2008.10.09
INFO: prod_mktVers{ST} (no map) = 1.1.4

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INFO: prod_mktVers{CI} (w/ map) = 6u1
INFO: prod_mktVers{MS} (w/ map) = 7u1
INFO: prod_mktVers{MS64} (w/ map) = 7u1
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DA} (w/ map) = 6.4
INFO: prod_mktVers{CS} (w/ map) = 6.3
INFO: prod_mktVers{IM} (w/ map) = 8
INFO: prod_mktVers{CE} (w/ map) = 6.3
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{CS_SCHA} (no map) = 6.3
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
INFO: prod_mktVers{IWC} (w/ map) = 1
Detecting Installed Products...
Checking LIBMTMALLOC 11.9.0 ...
  LIBMTMALLOC 11.9.0 is not present.
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibc... already present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PKGINSTALL Unknown ...
  Checking pkg SUNWcsr... already present.
  PKGINSTALL Unknown is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmds... already present.
  Checking pkg SUNWswmt... already present.
  Checking pkg SUNWinstall-patch-utils-root... already present.
  Checking pkg SUNWcsr... already present.
  Checking pkg SUNWdtrc... already present.
  Checking pkg SUNWzoneu... already present.
  PATCHUTILS Unknown is already present.
Checking SNMP Unknown ...
  SNMP Unknown is not present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... already present.
  BZIP 11.10 is already present.
Checking SSH 11.9.0 ...
  SSH 11.9.0 is not present.
Checking RECOMMENDED 2008.10.09 ...
  RECOMMENDED 2008.10.09 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... already present.
  Checking pkg SUNWservicetagu... already present.
  Checking pkg SUNWstosreg... already present.
  ST 1.1.4 is already present.
Checking NSS 4.2.6 ...
  Checking pkg SUNWjss... already present.
  Checking pkg SUNWpr... already present.
  Checking pkg SUNWprd... already present.
  Checking pkg SUNWtls... already present.
  Checking pkg SUNWtlsd... already present.
  Checking pkg SUNWtlsu... already present.
  NSS 4.2.6 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsas1... already present.
  SASL 2.19 is already present.
Checking LDAPCS DK 5.0 ...
  Checking pkg SUNWldk... already present.

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Checking pkg SUNWldkx... already present.
LDAPCSDK 5.0 is already present.
Checking LDAPCSDK6 6.0 ...
Checking pkg SUNWldapcsdk-libs... already present.
Checking pkg SUNWldapcsdk-dev... already present.
LDAPCSDK6 6.0 is already present.
Checking LDAPCSDK6_TOOLS 6.0 ...
Checking pkg SUNWldapcsdk-tools... already present.
LDAPCSDK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
Checking pkg SUNWicu... already present.
ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
Checking pkg SUNWj6rt... already present.
Checking pkg SUNWj6rtx... already present.
Checking pkg SUNWj6dev... already present.
Checking pkg SUNWj6dvx... already present.
Checking pkg SUNWj6cfg... already present.
JDK 1.6.0 is already present.
Checking JDK 1.5.0 ...
Checking pkg SUNWj5rt... already present.
Checking pkg SUNWj5rtx... already present.
Checking pkg SUNWj5cfg... already present.
JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
Checking pkg SUNWjhrt... already present.
Checking pkg SUNWjhdev... already present.
Checking pkg SUNWjhdem... already present.
Checking pkg SUNWjhdoc... already present.
JHRT 2.0 is already present.
Checking MQ 4.1 ...
Checking pkg SUNWiqr... already present.
Checking pkg SUNWiqu... already present.
Checking pkg SUNWiqdoc... already present.
Checking pkg SUNWiquc... already present.
Checking pkg SUNWiqum... already present.
Checking pkg SUNWiqjx... already present.
Checking pkg SUNWiqfs... already present.
Checking pkg SUNWiqcrt... already present.
Checking pkg SUNWiqcdv... already present.
MQ 4.1 is already present.
Checking MQ 3.7 ...
Checking pkg SUNWiqr... present but with a different pkg VERSION.
checking SUNWiqr 3.7,REV=2006.06.18.22.34
Checking pkg SUNWiqu... present but with a different pkg VERSION.
checking SUNWiqu 3.7,REV=2006.06.18.22.34
Checking pkg SUNWiqlpl... not present.
Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiquc... present but with a different pkg VERSION.
checking SUNWiquc 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqum... present but with a different pkg VERSION.
checking SUNWiqum 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqjx... present but with a different pkg VERSION.
checking SUNWiqjx 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqfs... present but with a different pkg VERSION.

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    checking SUNWiqfs 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqqlen... not present.
NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.1 ...
Checking pkg SUNWfiqu... not present.
Checking pkg SUNWfiquc... not present.
Checking pkg SUNWdiqu... not present.
Checking pkg SUNWdiquc... not present.
Checking pkg SUNWjiqu... not present.
Checking pkg SUNWjiquc... not present.
Checking pkg SUNWeiqu... not present.
Checking pkg SUNWeiquc... not present.
Checking pkg SUNWkiqu... not present.
Checking pkg SUNWkiquc... not present.
Checking pkg SUNWciqu... not present.
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 4.1 is not present.
Checking MQ_L10N 3.7 ...
Checking pkg SUNWfiqu... not present.
Checking pkg SUNWfiquc... not present.
Checking pkg SUNWdiqu... not present.
Checking pkg SUNWdiquc... not present.
Checking pkg SUNWjiqu... not present.
Checking pkg SUNWjiquc... not present.
Checking pkg SUNWeiqu... not present.
Checking pkg SUNWeiquc... not present.
Checking pkg SUNWkiqu... not present.
Checking pkg SUNWkiquc... not present.
Checking pkg SUNWciqu... not present.
Checking pkg SUNWciquc... not present.
Checking pkg SUNWhiqu... not present.
Checking pkg SUNWhiquc... not present.
MQ_L10N 3.7 is not present.
Checking LDAPJDK 4.19 ...
Checking pkg SUNWljdk... already present.
LDAPJDK 4.19 is already present.
Checking IMAPI 8.0 ...
Checking pkg SUNWiimd... already present.
IMAPI 8.0 is already present.
Checking IMAPI 7.0 ...
Checking pkg SUNWiimd... present but with a different pkg VERSION.
    checking SUNWiimd 7.0,REV=2004.11.24.05.24.36
NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking IMAPI 7.3 ...
Checking pkg SUNWiimd... present but with a different pkg VERSION.
    checking SUNWiimd 7.3,REV=2008.01.15
NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking CI 6.1 ...
Checking pkg SUNWcomms...
/opt/sun/comms/CommsInstaller/lib/getVersion VERSION BUILDDATE 2>&1

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6.1-0.01
20081210
-- Exit status: 0
   already present.
   CI 6.1 is already present.
Checking MS 7.0 ...
   Checking pkg SUNWmessaging-server...
/opt/sun/comms/messaging/lib/getVersion VERSION BUILDDATE 2>&1
7.0-3.01
20081209
-- Exit status: 0
   already present.
   MS 7.0 is already present.
Checking MS 6.3 ...
   Checking pkg SUNWmsgin... not present.
   Checking pkg SUNWmsgen... not present.
   Checking pkg SUNWmsglb... not present.
   Checking pkg SUNWmsgco... not present.
   Checking pkg SUNWmsgmt... not present.
   Checking pkg SUNWmsgst... not present.
   Checking pkg SUNWmsgmp... not present.
   Checking pkg SUNWmsgwm... not present.
   Checking pkg SUNWmsgmf... not present.
   MS 6.3 is not present.
Checking MS64 7.0 ...
   Checking pkg SUNWmessaging-server-64...
/opt/sun/comms/messaging64/lib/getVersion VERSION BUILDDATE 2>&1
7.0-3.01
20081209
-- Exit status: 0
   already present.
   MS64 7.0 is already present.
Checking DSSETUP 6.4 ...
   Checking pkg SUNWcomds...
/opt/sun/comms/dssetup/lib/getVersion VERSION BUILDDATE 2>&1
6.4-3.01
20080729
-- Exit status: 0
   already present.
   DSSETUP 6.4 is already present.
Checking DA 6.4 ...
   Checking pkg SUNWcomic...
/opt/sun/comms/da/lib/getVersion VERSION BUILDDATE 2>&1
6.4-3.01
20081022
-- Exit status: 0
   already present.
   Checking pkg SUNWcomis... already present.
   DA 6.4 is already present.
Checking CS 6.3 ...
   Checking pkg SUNWics5...
/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion --installed
/opt/sun/comms/calendar VERSION BUILDDATE 2>&1
6.3-11.01
20081122
-- Exit status: 0

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already present.
  Checking pkg SUNWica5... already present.
  CS 6.3 is already present.
Checking IM 8.0 ...
  Checking pkg SUNWiim...
/opt/sun/comms/im/lib/getVersion VERSION BUILDDATE 2>&1
8.0-00.06
20081204
-- Exit status: 0
already present.
  Checking pkg SUNWiimin... already present.
  Checking pkg SUNWiimm... already present.
  Checking pkg SUNWiimjd... already present.
  Checking pkg SUNWiimid... already present.
  Checking pkg SUNWiimc... already present.
  Checking pkg SUNWiimd... already present.
  Checking pkg SUNWiimgw... already present.
  IM 8.0 is already present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimc... present but with a different pkg VERSION.
    checking SUNWiimc 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimd... present but with a different pkg VERSION.
    checking SUNWiimd 7.0,REV=2004.11.24.05.24.36
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IM 7.3 ...
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.3,REV=2008.01.15
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.3,REV=2008.01.15
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.3,REV=2008.01.15
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.3,REV=2008.01.15
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.3,REV=2008.01.15
  Checking pkg SUNWiimc... present but with a different pkg VERSION.
    checking SUNWiimc 7.3,REV=2008.01.15
  Checking pkg SUNWiimd... present but with a different pkg VERSION.
    checking SUNWiimd 7.3,REV=2008.01.15
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking CE 6.3 ...
  Checking pkg SUNWuwc...
/opt/sun/comms/ce/lib/getVersion VERSION BUILDDATE 2>&1
6.3-11.01
20081203
-- Exit status: 0

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already present.
  CE 6.3 is already present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha...
/opt/sun/comms/msg_scha/lib/getVersion VERSION BUILDDATE 2>&1
7.0-0.03
20080519
-- Exit status: 0
already present.
  MS_SCHA 7.0 is already present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics...
/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion --installed
/opt/sun/comms/cs_scha VERSION BUILDDATE 2>&1
6.3-1.01
20080331
-- Exit status: 0
already present.
  CS_SCHA 6.3 is already present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... present but with a different pkg VERSION.
  checking SUNWscics 6.0,REV=2003.11.14
  NOTICE: Calendar Server Sun Cluster HA agent is present with a
different pkg VERSION.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc...
/opt/sun/comms/im_scha/lib/getVersion VERSION BUILDDATE 2>&1
7.3-01.02
20080403
-- Exit status: 0
already present.
  IM_SCHA 7.3 is already present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... present but with a different pkg VERSION.
  checking SUNWiimsc 7.0,REV=2005.08.03.09.41.41
  NOTICE: Instant Messaging Sun Cluster HA agent is present with a
different pkg VERSION.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc...
/opt/sun/comms/iwc/lib/getVersion VERSION BUILDDATE 2>&1
1.0-4.01
20081208
-- Exit status: 0
already present.
  IWC 1.0 is already present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.

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MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeiimid... not present.
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.

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Checking pkg SUNWewwc... not present.
Checking pkg SUNWfuwc... not present.
Checking pkg SUNWjuwc... not present.
Checking pkg SUNWkuwc... not present.
Checking pkg SUNWcuwc... not present.
Checking pkg SUNWhuwc... not present.
CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
Checking pkg SUNWuwc-l10n... not present.
CE_L10N 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-12 /tmp/.patchout_20090119135415.4112
-- Running patchadd -p report...
-- Generating /tmp/.patchout_20090119135415.4112
patchadd -p > /tmp/.patchout_20090119135415.4112 2>>
/tmp/CommsInstaller_20090119135415.log 2>&1
-- Exit status: 0
-- older version at lineno 143 found 119963-05 - not acceptable
-- Exact match found at line 144
-- Final return status: 1
LIBCPLUSPLUS patch 119963-12 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 85
-- Final return status: 1
PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 88
-- Final return status: 1
PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-45 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 170
-- Final return status: 1
PATCHUTILS patch 119254-45 is already present.
-- chk4patch 126868-02 /tmp/.patchout_20090119135415.4112
-- older version at lineno 131 found 126868-01 - not acceptable
-- Exact match found at line 132
-- Final return status: 1
BZIP patch 126868-02 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 133
-- Final return status: 1
BZIP patch 137321-01 is already present.
-- chk4patch 119254-58 /tmp/.patchout_20090119135415.4112
-- older version at lineno 170 found 119254-45 - not acceptable
-- older version at lineno 171 found 119254-26 - not acceptable
-- older version at lineno 172 found 119254-23 - not acceptable
-- older version at lineno 173 found 119254-54 - not acceptable
-- Final return status: 0
RECOMMENDED patch 119254-58 is not present.
-- chk4patch 118833-36 /tmp/.patchout_20090119135415.4112
-- older version at lineno 3 found 118833-11 - not acceptable
-- Exact match found at line 5
-- Final return status: 1
RECOMMENDED patch 118833-36 is already present.
-- chk4patch 120011-14 /tmp/.patchout_20090119135415.4112
-- Final return status: 0

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RECOMMENDED patch 120011-14 is not present.
-- chk4patch 125358-06 /tmp/.patchout_20090119135415.4112
-- older version at lineno 218 found 125358-03 - not acceptable
-- older version at lineno 219 found 125358-05 - not acceptable
-- Exact match found at line 220
-- Final return status: 1
  NSS patch 125358-06 is already present.
-- chk4patch 119345-05 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 388
-- Final return status: 1
  SASL patch 119345-05 is already present.
-- chk4patch 136798-01 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 389
-- Final return status: 1
  LDAPCSDK6_TOOLS patch 136798-01 is already present.
-- chk4patch 119810-05 /tmp/.patchout_20090119135415.4112
-- older version at lineno 246 found 119810-04 - not acceptable
-- older version at lineno 247 found 119810-02 - not acceptable
-- Exact match found at line 248
-- Final return status: 1
  ICU patch 119810-05 is already present.
-- chk4patch 125136-09 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 285
-- Final return status: 1
  JDK patch 125136-09 is already present.
-- chk4patch 125137-09 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 286
-- Final return status: 1
  JDK patch 125137-09 is already present.
-- chk4patch 127411-01 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 146
-- Final return status: 1
  MQ patch 127411-01 is already present.
-- chk4patch 127412-01 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 387
-- Final return status: 1
  MQ patch 127412-01 is already present.
-- chk4patch 119725-04 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 394
-- Final return status: 1
  LDAPJDK patch 119725-04 is already present.
-- chk4patch 137201-03 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 390
-- Final return status: 1
  MS patch 137201-03 is already present.
-- chk4patch 137204-03 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 398
-- Final return status: 1
  MS64 patch 137204-03 is already present.
-- chk4patch 118242-03 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 399
-- Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-19 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 400
-- Final return status: 1

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DSSETUP patch 118245-19 is already present.
-- chk4patch 121581-19 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 310
-- Final return status: 1
DA patch 121581-19 is already present.
-- chk4patch 121657-32 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 403
-- Final return status: 1
CS patch 121657-32 is already present.
-- chk4patch 137571-01 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 406
-- Final return status: 1
IM_SCHA patch 137571-01 is already present.
-- chk4patch 137631-04 /tmp/.patchout_20090119135415.4112
-- Exact match found at line 407
-- Final return status: 1
IWC patch 137631-04 is already present.
===== QQQ detectProducts =====
QQQ Dumper
!!! present
$VAR1 = {
    '137571-01' => 'PRESENT',
    'DSSETUP' => {
        '6.4' => 'PRESENT'
    },
    'MQ_L10N' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    '119345-05' => 'PRESENT',
    'ICU' => {
        'ICU2,ICU3' => 'PRESENT'
    },
    'MS64' => {
        '7.0' => 'PRESENT'
    },
    '137631-04' => 'PRESENT',
    'LDAPCSDK' => {
        '5.0' => 'PRESENT'
    },
    'CE' => {
        '6.3' => 'PRESENT'
    },
    'MQ' => {
        '3.7' => 'DIFF_VERSION',
        '4.1' => 'PRESENT'
    },
    'PATCHUTILS' => {
        'Unknown' => 'PRESENT'
    },
    'IMAPI' => {
        '8.0' => 'PRESENT',
        '7.0' => 'DIFF_VERSION',
        '7.3' => 'DIFF_VERSION'
    },
    '121581-19' => 'PRESENT',

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'LDAPCSDK6_TOOLS' => {
    '6.0' => 'PRESENT'
},
'ST' => {
    '1.1.4' => 'PRESENT'
},
'121657-32' => 'PRESENT',
'118833-36' => 'PRESENT',
'IM_L10N' => {
    '7.2' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT'
},
'119725-04' => 'PRESENT',
'LDAPJDK' => {
    '4.19' => 'PRESENT'
},
'BZIP' => {
    '11.10' => 'PRESENT'
},
'119254-58' => 'NOT_PRESENT',
'IM_SCHA' => {
    '7.0' => 'DIFF_VERSION',
    '7.3' => 'PRESENT'
},
'126868-02' => 'PRESENT',
'SNMP' => {
    'Unknown' => 'NOT_PRESENT'
},
'MS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '7.0' => 'PRESENT'
},
'125358-06' => 'PRESENT',
'JHRT' => {
    '2.0' => 'PRESENT'
},
'CE_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'136798-01' => 'PRESENT',
'119810-05' => 'PRESENT',
'SASL' => {
    '2.19' => 'PRESENT'
},
'IWC' => {
    '1.0' => 'PRESENT'
},
'MS64_L10N' => {
    '6.3' => 'NOT_PRESENT'
},
'125137-09' => 'PRESENT',
'MS' => {
    '7.0' => 'PRESENT',
    '6.3' => 'NOT_PRESENT'
},

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'PKGINSTALL' => {
    'Unknown' => 'PRESENT'
},
'LIBMTMALLOC' => {
    '11.9.0' => 'NOT_PRESENT'
},
'120900-04' => 'PRESENT',
'127411-01' => 'PRESENT',
'120011-14' => 'NOT_PRESENT',
'LDAPCSDK6' => {
    '6.0' => 'PRESENT'
},
'119963-12' => 'PRESENT',
'JDK' => {
    '1.6.0' => 'PRESENT',
    '1.5.0' => 'PRESENT'
},
'CI' => {
    '6.1' => 'PRESENT'
},
'137321-01' => 'PRESENT',
'119254-45' => 'PRESENT',
'NSS' => {
    '4.2.6' => 'PRESENT'
},
'IM' => {
    '8.0' => 'PRESENT',
    '7.0' => 'DIFF_VERSION',
    '7.3' => 'DIFF_VERSION'
},
'CS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'125136-09' => 'PRESENT',
'RECOMMENDED' => {
    '2008.10.09' => 'NOT_PRESENT'
},
'CS_SCHA' => {
    '6.0' => 'DIFF_VERSION',
    '6.3' => 'PRESENT'
},
'137201-03' => 'PRESENT',
'118245-19' => 'PRESENT',
'MS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'LIBCPLUSPLUS' => {
    '5.9' => 'PRESENT'
},
'137204-03' => 'PRESENT',
'121133-02' => 'PRESENT',
'118242-03' => 'PRESENT',
'CS' => {
    '6.3' => 'PRESENT'
}

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    },
    'SSH' => {
        '11.9.0' => 'NOT_PRESENT'
    },
    'DA' => {
        '6.4' => 'PRESENT'
    },
    '127412-01' => 'PRESENT'
};
!!! pkgparams
$VAR1 = {
    'SUNWica5' => {
        '6.0,REV=2003.11.14.18.12.58' => [
            'SUNWica5',
            '/opt/sun/comms/calendar',
            '6.3-11.01'
        ]
    },
    'SUNWmsgja' => {},
    'SUNWcomic' => {
        '1.0,REV=2003.10.29' => [
            'SUNWcomic',
            '/opt/sun/comms/da',
            '6.4-3.01'
        ]
    },
    'SUNWservicetagu' => {
        '1.1.4,REV=2008.03.21.07.54' => [
            'SUNWservicetagu',
            '/',
            '1.1.4.1'
        ]
    },
    'SUNWjimid' => {},
    'SUNWdiquc' => {},
    'SUNWmsgko' => {},
    'SUNWmessaging-server-110n-64' => {},
    'SUNWics5' => {
        '6.0,REV=2003.11.14.18.12.58' => [
            'SUNWics5',
            '/opt/sun/comms/calendar',
            '6.3-11.01'
        ]
    },
    'SUNWiqlpl' => {},
    'SUNWmsgco' => {},
    'SUNWfiquc' => {},
    'SUNWjhdem' => {
        '2.0,REV=2006.10.04' => [
            'SUNWjhdem',
            '/usr',

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                '2.0/FCS'
            ]
        },
        'SUNWiqfs' => {
            '4.1,REV=2007.07.26.10.59' => [
                'SUNWiqfs',
                '/',
                '4.1.0.0'
            ]
        },
        'SUNWfimid' => {},
        'SUNWcomds' => {
            '6.3,REV=2004.08.12' => [
                'SUNWcomds',
                '/opt/sun/comms/dssetup',
                '6.4-3.01'
            ]
        },
        'SUNWjhdev' => {
            '2.0,REV=2006.10.04' => [
                'SUNWjhdev',
                '/usr',
                '2.0/FCS'
            ]
        },
        'SUNWj6rtx' => {
            '1.6.0,REV=2006.11.29.04.58' => [
                'SUNWj6rtx',
                '/usr',
                '1.6.0_07/1.6.0_07-b06'
            ]
        },
        'SUNWiqum' => {
            '4.1,REV=2007.07.26.10.59' => [
                'SUNWiqum',
                '/',
                '4.1.0.1'
            ]
        },
        'SUNWduwc' => {},
        'SUNWhiimin' => {},
        'SUNWkiimin' => {},
        'SUNWeiimd' => {},
        'SUNWj6rt' => {
            '1.6.0,REV=2006.11.29.05.57' => [
                'SUNWj6rt',
                '/usr',
                '1.6.0_07/1.6.0_07-b06'
            ]
        },
        'SUNWj5rt' => {
            '1.5.0,REV=2004.12.07.00.07' => [

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'SUNWj5rt',
'/usr',

'1.5.0_09/1.5.0_09-b03'

    ],
    'SUNWiimc-l10n' => {},
    'SUNWhiimc' => {},
    'SUNWmsg-l10n' => {},
    'SUNWfrics' => {},
    'SUNWciqu' => {},
    'SUNWkoics' => {},
    'SUNWdimid' => {},
    'SUNWjiqc' => {},
    'SUNWiimgw' => {
        '8.0,REV=2008.12.04' => [
            'SUNWiimgw',
            '/opt/sun/comms/im',
            '8.0-00'
        ]
    },
    'SUNWiimd-l10n' => {},
    'SUNWhiqc' => {},
    'SUNWzhics' => {},
    'SUNWkiimd' => {},
    'SUNWmsgmp' => {},
    'SUNWuwc' => {
        '6.1,REV=2004.04.29' => [
            'SUNWuwc',
            '/opt/sun/comms/ce',
            '6.3-11.01'
        ]
    },
    'SUNWscics' => {
        '6.3,REV=2008.03.31.18.10.20' => [
            'SUNWscics',
            '/opt/sun/comms/cs_scha',
            '6.3-1.01'
        ]
    },
    'SUNWiimc' => {
        '8.0,REV=2008.12.04' => [
            'SUNWiimc',
            '/opt/sun/comms/im',
            '8.0-00'
        ]
    },
    'SUNWhiimd' => {},
    'SUNWmessaging-server-scha' => {
        '7.0,REV=2008.05.19' => [
            'SUNWmessaging-server-scha',

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'/opt/sun/comms/msg_scha',
'7.0-0.03'
]
},
'SUNWmsglb' => {},
'SUNWt1s' => {
    '3.11.4,REV=2006.11.16.20.40' => [
        'SUNWt1s',
        '/',
        '3.11.9'
    ]
},
'SUNWj6dvx' => {
    '1.6.0,REV=2006.11.29.04.58' => [
'SUNWj6dvx',
        '/usr',
'1.6.0_07/1.6.0_07-b06'
    ]
},
'SUNWfuwc' => {},
'SUNWlibC' => {
    '5.10,REV=2004.12.22' => [
        'SUNWlibC',
        '/',
        '5.10'
    ]
},
'SUNWjiimin' => {},
'SUNWscims' => {},
'SUNWiimjd' => {
    '8.0,REV=2008.12.04' => [
        'SUNWiimjd',
'/opt/sun/comms/im',
        '8.0-00'
    ]
},
'SUNWciimd' => {},
'SUNWldapcsdk-dev' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-dev',
        '/',
'6.00'
    ]
},
'SUNWiqlen' => {},
'SUNWiimid-110n' => {},
'SUNWiqr' => {
    '4.1,REV=2007.07.26.10.58' => [
        'SUNWiqr',
        '/',

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'4.1.0.1'
]
},
'SUNWdiimc' => {},
'SUNWmsgwm' => {},
'SUNWmessaging-server-64' => {
'7.0,REV=2008.06.20' => [
'SUNWmessaging-server-64',
'/opt/sun/comms/messaging64',
'7.0-3.01'
]
},
'SUNWeiquc' => {},
'SUNWj5cfg' => {
'1.5.0,REV=2004.12.07.00.07' => [
'SUNWj5cfg',
'/usr',
'1.5.0_09/1.5.0_09-b03'
]
},
'SUNWhiqu' => {},
'SUNWiimd' => {
'8.0,REV=2008.12.04' => [
'SUNWiimd',
 '/',
'8.0-00'
]
},
'SUNWfiimd' => {},
'SUNWj5rtx' => {
'1.5.0,REV=2004.12.06.22.09' => [
'SUNWj5rtx',
'/usr',
'1.5.0_09/1.5.0_09-b03'
]
},
'SUNWiquc' => {
'4.1,REV=2007.07.26.10.59' => [
'SUNWiquc',
 '/',
'4.1.0.1'
]
},
'SUNWiimid' => {
'8.0,REV=2008.12.04' => [
'SUNWiimid',
'/opt/sun/comms/im',
'8.0-00'
]
}

```

```

]
    },
    'SUNWmsgmt' => {},
    'SUNWljdk' => {
        '1.0,REV=2004.10.11.06.02' => [
            'SUNWljdk',
            '/',
            '4.19'
        ]
    },
    'SUNWcuwc' => {},
    'SUNWldapcsdk-libs' => {
        '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-libs',
                                                                    '/',
'6.00'
                                                                    ]
    },
    'SUNWservicetagr' => {
        '1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagr',
                                                                    '/',
'1.1.4.1'
                                                                    ]
    },
    'SUNWciimc' => {},
    'SUNWjhrt' => {
        '2.0,REV=2006.10.31' => [
            'SUNWjhrt',
            '/usr',
            '2.0/FCS'
        ]
    },
    'SUNWt1sd' => {
        '3.11.4,REV=2006.11.16.20.40' => [
            'SUNWt1sd',
            '/',
            '3.11.9'
        ]
    },
    'SUNWmsgin' => {},
    'SUNWdtrc' => {
        '11.10.0,REV=2005.01.21.15.53' => [
'SUNWdtrc',
                                                                    '/',
'5.10/Generic'
                                                                    ]
    },
    'SUNWhuwc' => {},
    'SUNWiqdoc' => {

```

```

        '4.1,REV=2007.07.26.10.58' => [
            'SUNWiqdoc',
            '/',
            '4.1.0.0'
        ]
    },
    'SUNWjiimd' => {},
    'SUNWjuwc' => {},
    'SUNWiimd' => {
        '8.0,REV=2008.12.04' => [
            'SUNWiimd',
            '/opt/sun/comms/im',
            '8.0-00'
        ]
    },
    'SUNWiqcrt' => {
        '4.1,REV=2007.07.26.10.59' => [
            'SUNWiqcrt',
            '/opt',
            '4.1.0.1'
        ]
    },
    'SUNWmsgzh' => {},
    'SUNWprd' => {
        '4.6.4,REV=2006.11.16.20.40' => [
            'SUNWprd',
            '/',
            '4.7'
        ]
    },
    'SUNWmsgen' => {},
    'SUNWldk' => {
        '5.11,REV=2003.05.14.12.06' => [
            'SUNWldk',
            '/',
            '5.12'
        ]
    },
    'SUNWiwc' => {
        '1.0,REV=2008.07.07' => [
            'SUNWiwc',
            '/opt/sun/comms/iwc',
            '1.0-4.01'
        ]
    },
    'SUNWiimin-110n' => {},
    'SUNWiimsc' => {
        '7.3,REV=2008.01.07.20.24.34' => [
            'SUNWiimsc',
            '/opt/sun/comms/im_scha',
            '7.3-01'
        ]
    },
    'SUNWinstall-patch-utils-root' => {

```

```

'11.10,REV=2005.01.09.23.05' => [
'SUNWinstall-patch-utils-root',
'/',
'SNAG Development'
]
},
'SUNWiimin' => {
'8.0,REV=2008.12.04' => [
'SUNWiimin',
'/opt/sun/comms/im',
'8.0-00'
]
},
'SUNWuwc-l10n' => {},
'SUNWmsgst' => {},
'SUNWiqu' => {
'4.1,REV=2007.07.26.10.58' => [
'SUNWiqu',
'/',
'4.1.0.1'
]
},
'SUNWkiimc' => {},
'SUNWiim' => {
'8.0,REV=2008.12.04' => [
'SUNWiim',
'/opt/sun/comms/im',
'8.0-00'
]
},
'SUNWeiimin' => {},
'SUNWcimid' => {},
'SUNWiqcdv' => {
'4.1,REV=2007.07.26.10.59' => [
'SUNWiqcdv',
'/opt',
'4.1.0.1'
]
},
'SUNWldapcsdk-tools' => {
'6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-tools',
'/opt/SUNWdsee',
'6.00'
]
},
'SUNWjss' => {

```

```

        '4.2.4,REV=2006.11.16.20.40' => [
            'SUNWjss',
            '/',
            '4.2.6'
        ]
    },
    'SUNWdiqu' => {},
    'SUNWj6cfg' => {
        '1.6.0,REV=2006.11.29.05.57' => [
'SUNWj6cfg',
            '/',
'1.6.0_07/1.6.0_07-b06'
        ]
    },
    'SUNWhimid' => {},
    'SUNWciquc' => {},
    'SUNWcomms' => {
        '6.1,REV=2008.12.10' => [
'SUNWcomms',
            '/',
'6.1-0.01'
        ]
    },
    'SUNWjiqu' => {},
    'SUNWkiqu' => {},
    'SUNWkuwc' => {},
    'SUNWics-110n' => {},
    'SUNWeiqu' => {},
    'SUNWmessaging-server' => {
        '7.0,REV=2008.06.20' => [
'SUNWmessaging-server',
            '/',
'7.0-3.01'
        ]
    },
    'SUNWmsgtw' => {},
    'SUNWeiimc' => {},
    'SUNWjaics' => {},
    'SUNWpkgcmdsu' => {
        '11.11,REV=2005.01.09.23.05' => [
'SUNWpkgcmdsu',
            '/',
'SNAG
Development'
        ]
    },
    'SUNWldkx' => {
        '5.11,REV=2003.05.14.12.06' => [
'SUNWldkx',

```

```

        '/',
        '5.12'
    ]
},
'SUNWjiimc' => {},
'SUNWiqjx' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqjx',
        '/',
        '4.1.0.1'
    ]
},
'SUNWjhdoc' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdoc',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWj6dev' => {
    '1.6.0,REV=2006.11.29.05.57' => [
'SUNWj6dev',
        '/usr',
'1.6.0_07/1.6.0_07-b06'
    ]
},
'SUNWeimid' => {},
'SUNWmsges' => {},
'SUNWpr' => {
    '4.6.4,REV=2006.11.16.20.40' => [
        'SUNWpr',
        '/',
        '4.7'
    ]
},
'SUNWmsgmf' => {},
'SUNWkimid' => {},
'SUNWicu' => {
    '1.2,REV=2005.01.06.14.13' => [
        'SUNWicu',
        '/usr',
        '10/Generic'
    ]
},
'SUNWfiimin' => {},
'SUNWswmt' => {
    '11.10,REV=2005.01.10.17.19' => [
        'SUNWswmt',
        '/',
        'SNAG
Development'
    ]
},
'SUNWcomis' => {

```

```

        '1.0,REV=2003.10.29' => [
            'SUNWcomis',
'/opt/sun/comms/da',
            '6.4-3.01'
        ]
    },
    'SUNWdeics' => {},
    'SUNWtwics' => {},
    'SUNWciimin' => {},
    'SUNWmsgfr' => {},
    'SUNWdiimd' => {},
    'SUNWeuwc' => {},
    'SUNWkiqc' => {},
    'SUNWstosreg' => {
        '1.1.4,REV=2008.03.21.07.54' => [
'SUNWstosreg',
            '/',
            '1.1.4.1'
        ]
    },
    'SUNWmsgde' => {},
    'SUNWbzip' => {
        '11.10.0,REV=2005.01.08.05.16' => [
'SUNWbzip',
            '/',
'5.10/SunOS Development'
        ]
    },
    'SUNWtlsu' => {
        '3.11.4,REV=2006.11.16.20.40' => [
'SUNWtlsu',
            '/',
            '3.11.9'
        ]
    },
    'SUNWfiqc' => {},
    'SUNWsas1' => {
        '2.17,REV=2004.04.06.15.24' => [
'SUNWsas1',
            '/',
            '2.19'
        ]
    },
    'SUNWzoneu' => {
        '11.10.0,REV=2005.01.21.15.53' => [
'SUNWzoneu',
            '/',
'5.10/Generic'
        ]
    },
    },

```

```

'SUNWcsr' => {
    '11.10.0,REV=2005.01.21.15.53' => [
        'SUNWcsr',
        '/',
    ]
}

'5.10/Generic'

    },
'SUNWfiimc' => {},
'SUNWesics' => {},
'SUNWiimm' => {
    '8.0,REV=2008.12.04' => [
        'SUNWiimm',
        '/opt/sun/comms/im',
        '8.0-00'
    ]
}

};
!!! installedprod
$VAR1 = {
    'IWC' => {
        '1.0' => [
            '/opt/sun/comms/iwc',
            '1.0-4.01',
            '20081208',
            '1'
        ]
    },
    'IM' => {
        '8.0' => [
            '/opt/sun/comms/im',
            '8.0-00.06',
            '20081204',
            '8'
        ]
    },
    'SASL' => {
        '2.19' => [
            '/',
            '2.19',
            'none',
            '2.19'
        ]
    },
    'ST' => {
        '1.1.4' => [
            '/',
            '1.1.4.1',
            'none',
            '1.1.4'
        ]
    },
    'MS' => {
        '7.0' => [
            '/opt/sun/comms/messaging',
            '7.0-3.01',

```

```

        '20081209',
        '7u1'
    ]
},
'DSSETUP' => {
    '6.4' => [
        '/opt/sun/comms/dssetup',
        '6.4-3.01',
        '20080729',
        '6.4'
    ]
},
'PKGINSTALL' => {
    'Unknown' => [
        '/',
        '5.10/Generic',
        'none',
        'Unknown'
    ]
},
'CS_SCHA' => {
    '6.3' => [
        '/opt/sun/comms/cs_scha',
        '6.3-1.01',
        '20080331',
        '6.3'
    ]
},
'LDAPJDK' => {
    '4.19' => [
        '/',
        '4.19',
        'none',
        '4.19'
    ]
},
'BZIP' => {
    '11.10' => [
        '/',
        '5.10/SunOS Development',
        'none',
        '11.10'
    ]
},
'IM_SCHA' => {
    '7.3' => [
        '/opt/sun/comms/im_scha',
        '7.3-01.02',
        '20080403',
        '7.3'
    ]
},
'ICU' => {
    'ICU2,ICU3' => [
        '/usr',
        '10/Generic',

```

```

        'none',
        'ICU2,ICU3'
    ]
},
'MS64' => {
    '7.0' => [
        '/opt/sun/comms/messaging64',
        '7.0-3.01',
        '20081209',
        '7u1'
    ]
},
'LIBCPLUSPLUS' => {
    '5.9' => [
        '/',
        '5.10',
        'none',
        '5.9'
    ]
},
'LDAPCSDK' => {
    '5.0' => [
        '/',
        '5.12',
        'none',
        '5.0'
    ]
},
'LDAPCSDK6' => {
    '6.0' => [
        '/',
        '6.00',
        'none',
        '6.0'
    ]
},
'CE' => {
    '6.3' => [
        '/opt/sun/comms/ce',
        '6.3-11.01',
        '20081203',
        '6.3'
    ]
},
'JDK' => {
    '1.6.0' => [
        '/usr',
        '1.6.0_07/1.6.0_07-b06',
        'none',
        '1.6.0'
    ]
},
'MS_SCHA' => {
    '7.0' => [
        '/opt/sun/comms/msg_scha',
        '7.0-0.03',

```

```

                '20080519',
                '7.0'
            ]
        },
        'CS' => {
            '6.3' => [
                '/opt/sun/comms/calendar',
                '6.3-11.01',
                '20081122',
                '6.3'
            ]
        },
        'PATCHUTILS' => {
            'Unknown' => [
                '/',
                'SNAG Development',
                'none',
                'Unknown'
            ]
        },
        'MQ' => {
            '4.1' => [
                '/',
                '4.1.0.1',
                'none',
                '4.1'
            ]
        },
        'JHRT' => {
            '2.0' => [
                '/usr',
                '2.0/FCS',
                'none',
                '2.0'
            ]
        },
        'IMAPI' => {
            '8.0' => [
                '/',
                '8.0-00',
                'none',
                '8'
            ]
        },
        'CI' => {
            '6.1' => [
                '/opt/sun/comms/CommsInstaller',
                '6.1-0.01',
                '20081210',
                '6u1'
            ]
        },
        'DA' => {
            '6.4' => [
                '/opt/sun/comms/da',
                '6.4-3.01',

```

```

                '20081022',
                '6.4'
            ]
        },
        'LDAPCSDK6_TOOLS' => {
            '6.0' => [
                '/opt/SUNWdsee',
                '6.00',
                'none',
                '6.0'
            ]
        },
        'NSS' => {
            '4.2.6' => [
                '/',
                '4.2.6',
                'none',
                '4.2.6'
            ]
        }
    };

```

==== End QQQ detectProducts =====

Product Selection:

Communication Services Products:

Item	Description
1	Messaging Server 7u1 (7.0-3.01) Installed Version at /opt/sun/comms/messaging
2	Messaging Server (64bit) 7u1 (7.0-3.01) Installed Version at /opt/sun/comms/messaging64
3	Comms DSsetup 6.4 (6.4-3.01) Installed Version at /opt/sun/comms/dssetup
4	Comms Delegated Administrator 6.4 (6.4-3.01) Installed Version at /opt/sun/comms/da
5	Calendar Server 6.3 (6.3-11.01) Installed Version at /opt/sun/comms/calendar
6	Instant Messaging 8 (8.0-00.06) Installed Version at /opt/sun/comms/im
7	Communications Express 6.3 (6.3-11.01) Installed Version at /opt/sun/comms/ce
8	Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) Installed Version at /opt/sun/comms/msg_scha
9	Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01) Installed Version at /opt/sun/comms/cs_scha
10	Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02) Installed Version at /opt/sun/comms/im_scha
11	Convergence 1 (1.0-4.01) Installed Version at /opt/sun/comms/iwc

Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]:

```
=====
QQQ selections: MS 7.0 MS64 7.0 DSSETUP 6.4 DA 6.4 CS 6.3 IM 8.0 CE 6.3
MS_SCHA 7.0 CS_SCHA 6.3 IM_SCHA 7.3 IWC 1.0
  WILL UNINSTALL: Messaging Server 7ul (7.0-3.01)
                    at /opt/sun/comms/messaging)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server
  WILL UNINSTALL: Messaging Server (64bit) 7ul (7.0-3.01)
                    at /opt/sun/comms/messaging64)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server-64
  WILL UNINSTALL: Comms DSsetup 6.4 (6.4-3.01)
                    at /opt/sun/comms/dssetup)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomds
  WILL UNINSTALL: Comms Delegated Administrator 6.4 (6.4-3.01)
                    at /opt/sun/comms/da)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomis
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomic
  WILL UNINSTALL: Calendar Server 6.3 (6.3-11.01)
                    at /opt/sun/comms/calendar)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWica5
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWics5
  WILL UNINSTALL: Instant Messaging 8 (8.0-00.06)
                    at /opt/sun/comms/im)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimgw
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimd
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimc
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimid
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimjd
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimm
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimin
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiim
  WILL UNINSTALL: Communications Express 6.3 (6.3-11.01)
                    at /opt/sun/comms/ce)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWuwc
  WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                    at /opt/sun/comms/msg_scha)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server-scha
  WILL UNINSTALL: Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01)
                    at /opt/sun/comms/cs_scha)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWscics
  WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                    at /opt/sun/comms/im_scha)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimsc
  WILL UNINSTALL: Convergence 1 (1.0-4.01)
                    at /opt/sun/comms/iwc)
  Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiwc
=====
```

Ready to uninstall

Do you want to continue ? [yes] :

```
=====
```

```

Uninstalling Messaging Server 7u1 (7.0-3.01 at
/opt/sun/comms/messaging)...
----- Executing Task 1 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server 2>&1

Removal of <SUNWmessaging-server> was successful.
-- Exit status: 0

=====
Uninstalling Messaging Server (64bit) 7u1 (7.0-3.01 at
/opt/sun/comms/messaging64)...
----- Executing Task 2 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server-64 2>&1

Removal of <SUNWmessaging-server-64> was successful.
-- Exit status: 0

=====
Uninstalling Comms DSsetup 6.4 (6.4-3.01 at /opt/sun/comms/dssetup)...
----- Executing Task 3 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomds 2>&1

Removal of <SUNWcomds> was successful.
-- Exit status: 0

=====
Uninstalling Comms Delegated Administrator 6.4 (6.4-3.01 at
/opt/sun/comms/da)...
----- Executing Task 4 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomis 2>&1

Removal of <SUNWcomis> was successful.
-- Exit status: 0
----- Executing Task 5 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomic 2>&1

Removal of <SUNWcomic> was successful.
-- Exit status: 0

=====
Uninstalling Calendar Server 6.3 (6.3-11.01 at
/opt/sun/comms/calendar)...
----- Executing Task 6 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWica5 2>&1

Removal of <SUNWica5> was successful.
-- Exit status: 0
----- Executing Task 7 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWics5 2>&1
Error : Calling [//usr/sbin/cacaoadm undeploy com.sun.cmm.cs]
Msg: [Daemon must be running in order to perform this operation. ]
error=3

Removal of <SUNWics5> was successful.

```

```

-- Exit status: 0

=====
Uninstalling Instant Messaging 8 (8.0-00.06 at /opt/sun/comms/im)...
----- Executing Task 8 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimgw 2>&1

Removal of <SUNWiimgw> was successful.
-- Exit status: 0
----- Executing Task 9 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimd 2>&1

Removal of <SUNWiimd> was successful.
-- Exit status: 0
----- Executing Task 10 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimc 2>&1

Removal of <SUNWiimc> was successful.
-- Exit status: 0
----- Executing Task 11 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimid 2>&1

Removal of <SUNWiimid> was successful.
-- Exit status: 0
----- Executing Task 12 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimjd 2>&1

Removal of <SUNWiimjd> was successful.
-- Exit status: 0
----- Executing Task 13 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimm 2>&1

Removal of <SUNWiimm> was successful.
-- Exit status: 0
----- Executing Task 14 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimin 2>&1

Removal of <SUNWiimin> was successful.
-- Exit status: 0
----- Executing Task 15 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiim 2>&1

Removal of <SUNWiim> was successful.
-- Exit status: 0

=====
Uninstalling Communications Express 6.3 (6.3-11.01 at
/opt/sun/comms/ce)...
----- Executing Task 16 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWuwc 2>&1

Removal of <SUNWuwc> was successful.
-- Exit status: 0

=====
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03 at

```

```

/opt/sun/comms/msg_scha)...
----- Executing Task 17 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server-scha 2>&1

Removal of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0

=====
Uninstalling Calendar Server Sun Cluster HA agent 6.3 (6.3-1.01 at
/opt/sun/comms/cs_scha)...
----- Executing Task 18 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWscics 2>&1

Attempting to change the following in ics.conf
    local.server.ha.enabled="no"
    local.server.ha.agent="none"
grep: can't open "/tmp/ics.conf"
Done...

Removal of <SUNWscics> was successful.
-- Exit status: 0

=====
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02 at
/opt/sun/comms/im_scha)...
----- Executing Task 19 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiimsc 2>&1

Removal of <SUNWiimsc> was successful.
-- Exit status: 0

=====
Uninstalling Convergence 1 (1.0-4.01 at /opt/sun/comms/iwc)...
----- Executing Task 20 of 20 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWiwc 2>&1

Removal of <SUNWiwc> was successful.
-- Exit status: 0

=====
SUMMARY:

PASSED: Task 1: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server
PASSED: Task 2: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server-64
PASSED: Task 3: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWcomds
PASSED: Task 4: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWcomis
PASSED: Task 5: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWcomic
PASSED: Task 6: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWica5
PASSED: Task 7: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWics5

```

```

PASSED: Task 8: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimgw
PASSED: Task 9: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimd
PASSED: Task 10: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimc
PASSED: Task 11: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimid
PASSED: Task 12: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimjd
PASSED: Task 13: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimm
PASSED: Task 14: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimin
PASSED: Task 15: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiim
PASSED: Task 16: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWuw
PASSED: Task 17: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWmessaging-server-scha
PASSED: Task 18: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWscics
PASSED: Task 19: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiimsc
PASSED: Task 20: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWiwc

```

All tasks PASSED

Checking JES java symlink...

```
ls -l /usr/jdk /usr/java 2>&1
```

```
/usr/java:
```

```
total 2
```

```
drwxr-xr-x  3 root    root          512 Feb 12  2007 jre
```

```
/usr/jdk:
```

```
total 14
```

```
lrwxrwxrwx  1 root    root          27 Mar  1  2007 entsys-j2se ->
```

```
/usr/jdk/instances/jdk1.5.0
```

```
drwxr-xr-x  4 root    bin          512 Sep 17 12:44 instances
```

```
lrwxrwxrwx  1 root    other         7 Feb 12  2007 j2sdk1.4.2_11 ->
```

```
../j2se
```

```
lrwxrwxrwx  1 root    other         18 Oct  3 14:57 jdk1.5.0_09 ->
```

```
instances/jdk1.5.0
```

```
lrwxrwxrwx  1 root    other         18 Sep 17 12:45 jdk1.6.0_07 ->
```

```
instances/jdk1.6.0
```

```
lrwxrwxrwx  1 root    other         11 Sep 17 12:45 latest ->
```

```
jdk1.6.0_07
```

```
drwxr-xr-x  8 root    bin          512 Dec 10 11:28 packages
```

```
-- Exit status: 0
```

```
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
```

```
lrwxrwxrwx  1 root    root          27 Mar  1  2007
```

```
/usr/jdk/entsys-j2se -> /usr/jdk/instances/jdk1.5.0
```

```
lrwxrwxrwx  1 root    other         11 Sep 17 12:45 /usr/jdk/latest ->
```

```
jdk1.6.0_07
```

```
-- Exit status: 0
```

```

ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se:
total 34398
-rw-r--r--  1 root    bin          2487 Oct 12  2006 COPYRIGHT
-rw-r--r--  1 root    bin        17293 Oct 12  2006 LICENSE
-rw-r--r--  1 root    bin       20415 Oct 12  2006 README.html
drwxr-xr-x  3 root    bin         1024 Dec 10 11:28 bin
drwxr-xr-x  9 root    bin          512 Oct  3 14:59 demo
drwxr-xr-x  3 root    bin          512 Oct  3 14:58 include
drwxr-xr-x  6 root    bin          512 Oct  3 14:57 jre
drwxr-xr-x  2 root    bin          512 Oct  3 14:58 lib
drwxr-xr-x  6 root    bin          512 Oct  3 14:59 man
drwxr-xr-x  4 root    bin          512 Oct  3 14:59 sample
-rw-r--r--  1 root    bin     17537249 Oct 12  2006 src.zip

/usr/jdk/latest:
total 37258
-rw-r--r--  1 root    bin          4137 Jun 10  2008 COPYRIGHT
-rw-r--r--  1 root    bin        17058 Jun 10  2008 LICENSE
-rw-r--r--  1 root    bin       28599 Jun 10  2008 README.html
-rw-r--r--  1 root    bin       24132 Jun 10  2008 README_ja.html
-rw-r--r--  1 root    bin       18329 Jun 10  2008 README_zh_CN.html
-rw-r--r--  1 root    bin     190102 Jun 10  2008
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x  3 root    bin         1024 Dec 10 11:28 bin
drwxr-xr-x  3 root    bin          512 Sep 17 12:47 include
drwxr-xr-x  6 root    bin          512 Sep 17 12:44 jre
drwxr-xr-x  3 root    bin          512 Sep 17 12:47 lib
-r--r--r--  1 root    other       6655 Sep 17 12:46 register.html
-r--r--r--  1 root    other       7087 Sep 17 12:46 register_ja.html
-r--r--r--  1 root    other       6265 Sep 17 12:46
register_zh_CN.html
-rw-r--r--  1 root    bin     18719038 Jun 10  2008 src.zip
-- Exit status: 0
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====
-- unlink /tmp/.patchout_20090119135415.4112
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090119135415
-- Closing the log at Mon Jan 19 13:58:08 2009

```

(54 root)

Installation Comments

- shared components and OS patches are applied without prompting. This is because patches can be backed out.
- If a Shared component or OS package has to be upgraded (by doing a `pkgrm` then `pkgadd`), the user is prompted because this is irreversible (without having the original packages). In the example above, MQ (message queue) was prompted for "upgrading". Note that the user is responsible for checking to make sure that the version in CI (Comms Installer) is newer than the installed version.
 - In the MQ case, the installed version is 3.7,REV=2006.06.18.22.34 and the version in CI is 4.1
- Missing shared components are installed without prompting.
- CI itself will be installed without prompting. Note the message in the CI task list:

```
WILL INSTALL: CommsInstaller 6ul (6.1-0.01)
                to /opt/sun/comms/CommsInstaller
```
- All products are installed under the blanket `INSTALLROOT` (default is `/opt/sun/comms`).
- Since the CI tasks are dependent on what is already installed on the system, the number of tasks differs from run to run.
- CI only does "installation" (laying down the bits), it does not do initial configuration of products
- The silent file has `ACCEPTLICENSE=no`. You have to explicitly change this to `yes`, or use the `--acceptLicense` switch.
- The silent file has `UPGRADESC=no`. even though I said "yes" to each prompt of upgrading SC. You have to explicitly set this if you want it done during a silent install.

Uninstall Comments

- Only products are displayed for uninstall. SCs are not available for uninstallation. E.g. CI and LDAPSDK6 Tools are not uninstalled.

Sample Session - Communications Suite 6 Update 1 Upgrade of Messaging Server and DSsetup

Sample Session - Communications Suite 6 Update 1 Upgrade of Messaging Server and DSsetup

This sample session performs an upgrade to Communications Suite 6 Update 1 Messaging Server and DSsetup by running the Communications Suite installer, `commpkg`.

This document shows the use of `commpkg info` to check what is installed, `commpkg upgrade` to upgrade Messaging Server and DSsetup. It contains the following topics:

- [Summary of Commands Run](#)
- [Session](#)
- [Upgrade Comments](#)

Summary of Commands Run

```
(114 root) ./commpkg info
(115 root) ./commpkg upgrade --acceptLicense
(116 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120223902
(117 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20090120223902.log
(118 root) ./commpkg info
(120 root) /opt/sun/comms/messaging64/bin/imsimta version
(121 root) /opt/sun/comms/messaging64/sbin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-03
(122 root) /opt/sun/comms/dssetup/sbin/comm_dssetup.pl
(123 root) ls /var/opt/SUNWdsee/dsins1/
(124 root) /opt/SUNWdsee/ds6/bin/dsadm start /var/opt/SUNWdsee/dsins1
(125 root) /opt/sun/comms/dssetup/sbin/comm_dssetup.pl
(126 root) stty -echo
(127 root) /opt/sun/comms/dssetup/sbin/comm_dssetup.pl
(128 root) /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-03
```

Session

```
(114 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090120223839.log
=====
Detecting Installed Products...
  NOTICE: Java Help Runtime is present with a different pkg VERSION.
  NOTICE: CommsInstaller is present with a different pkg VERSION.
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
           has not been applied. Specifically the following
```

```

        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
ALTROOT: /
NAME: <none>
Product: Messaging Server (64bit) 7
        Version: 7.0-0.04
        Basedir: /opt/sun/comms/messaging64
        Build Date: 20080620
Product: Comms DSsetup 6.4
        Version: 6.4-2.01
        Basedir: /opt/sun/comms/dssetup
        Build Date: 20080506

(115 root) ./commpkg upgrade --acceptLicense
-- LOGFILE: /tmp/CommsInstaller_20090120223902.log
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone

CommsInstaller version 6.1-0.01 built on Wed Dec 10 12:33:59 PST 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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Use is subject to license terms.

=====
Detecting Installed Products...
NOTICE: Java Help Runtime is present with a different pkg VERSION.
NOTICE: CommsInstaller is present with a different pkg VERSION.
Detecting Installed Patches...
NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
        has not been applied. Specifically the following
        patches are missing:
        119254-58 120011-14
NOTICE: It is highly recommended that you apply the
        latest OS Recommended Patch Cluster
Do you want to continue ? [yes] :
=====
Product Selection:

Communication Services Products:

Item  Description
----  -
1     Messaging Server (64bit) 7u1 (7.0-3.01)
      Installed Version 7 (7.0-0.04) at /opt/sun/comms/messaging64
2     Comms DSsetup 6.4 (6.4-3.01)
      Installed Version 6.4 (6.4-2.01) at /opt/sun/comms/dssetup

Enter the items you wish to upgrade. Enter q to quit.

```

You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1, 2]:

=====

Checking for Shared Component Upgrade Requirements...

Shared component Java Help Runtime has a different pkg version installed

Description: Java Help Runtime

Current pkg Version (SUNWjhrt): 2.0,REV=2006.10.04

To be installed pkg version (SUNWjhrt): 2.0,REV=2006.10.31

Product Version: 2.0

Note that changing pkg versions is irreversible

On the other hand, if you do not change it,

some products may not work properly

An alternative is to start over and do a multi-install using --altroot

Do you wish to change pkg versions for Java Help Runtime [n] : y

CommsInstaller has a different pkg version installed

Description: The CommsInstaller installed as a package so it can be patched

Current pkg Version (SUNWcomms): 6.0,REV=2008.07.09

To be installed pkg version (SUNWcomms): 6.1,REV=2008.12.10

Product Version: 6ul

Note that changing pkg versions is irreversible

Do you wish to change pkg versions for CommsInstaller [n] : y

=====

WILL INSTALL: patch 126868-02 for BZIP OS Component

WILL INSTALL: patch 137321-01 for BZIP OS Component

WILL INSTALL: patch 119963-12 for LIBCPLUSPLUS

WILL INSTALL: JDK 1.6.0

NOTICE: Java Help Runtime will be upgraded...

Removing the old version is an irreversible process.

WILL REMOVE EXISTING: Java Help Runtime 2.0,REV=2006.10.04 (2.0/FCS)

WILL INSTALL: Java Help Runtime 2.0

NOTICE: CommsInstaller will be upgraded...

Removing the old version is an irreversible process.

WILL REMOVE EXISTING: CommsInstaller 6.0 (6.0-0.05)

WILL INSTALL: CommsInstaller 6ul (6.1-0.01)

to /opt/sun/comms/CommsInstaller

NOTICE: Upgrading Messaging Server (64bit) 7 (7.0-0.04)

to 7ul (7.0-3.01 at /opt/sun/comms/messaging64)

Upgrade will be done by applying a patch

WILL INSTALL: patch 137204-03 for Messaging Server (64bit)

NOTICE: Upgrading Comms DSsetup 6.4 (6.4-2.01)

to 6.4 (6.4-3.01 at /opt/sun/comms/dssetup)

Upgrade will be done by applying a patch

WILL INSTALL: patch 118245-19 for Comms DSsetup

=====

Ready to upgrade

Do you want to continue ? [yes] :

=====

```

Installing patch 126868-02 for BZIP OS Component...
----- Executing Task 1 of 22 ...

=====
Installing patch 137321-01 for BZIP OS Component...
----- Executing Task 2 of 22 ...

=====
Installing patch 119963-12 for LIBCPLUSPLUS...
----- Executing Task 3 of 22 ...

=====
Installing JDK 1.6.0...
----- Executing Task 4 of 22 ...
----- Executing Task 5 of 22 ...
----- Executing Task 6 of 22 ...
----- Executing Task 7 of 22 ...
----- Executing Task 8 of 22 ...

=====
Removing existing Java Help Runtime 2.0,REV=2006.10.04 (2.0/FCS)...
----- Executing Task 9 of 22 ...
----- Executing Task 10 of 22 ...
----- Executing Task 11 of 22 ...
----- Executing Task 12 of 22 ...

=====
Installing Java Help Runtime 2.0...
----- Executing Task 13 of 22 ...
----- Executing Task 14 of 22 ...
----- Executing Task 15 of 22 ...
----- Executing Task 16 of 22 ...

=====
Removing existing CommsInstaller 6.0 (6.0-0.05)...
----- Executing Task 17 of 22 ...

=====
Installing CommsInstaller 6u1 (6.1-0.01)...
----- Executing Task 18 of 22 ...

=====
Upgrading Messaging Server (64bit) 7 (7.0-0.04 at
/opt/sun/comms/messaging64)...
----- Executing Task 19 of 22 ...
-- /var/tmp/ci61/SunOS_sparc/MS64/CI/preupgrade 7.0-0.04
/opt/sun/comms/messaging64 0

=====
Installing patch 137204-03 for Messaging Server (64bit)...
----- Executing Task 20 of 22 ...
----- Executing Task 21 of 22 ...
-- /var/tmp/ci61/SunOS_sparc/MS64/CI/postupgrade 7.0-0.04
/opt/sun/comms/messaging64 0
=====
Done Upgrading Messaging Server (64bit) to 7 (7.0-3.01 at

```

```

/opt/sun/comms/messaging64)

=====
Upgrading Comms DSsetup 6.4 (6.4-2.01 at /opt/sun/comms/dssetup)...

=====
Installing patch 118245-19 for Comms DSsetup...
----- Executing Task 22 of 22 ...
=====
Done Upgrading Comms DSsetup to 6.4 (6.4-3.01 at /opt/sun/comms/dssetup)
=====
SUMMARY:

All tasks PASSED

Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120223902
NOTICE: LOGFILE created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20090120223902.log
(116 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120223902
#
# Silent File for CommsInstaller 6.1-0.01
# Generated on 20090120223902
#
#
# NOTE: You must set ACCEPTLICENSE=yes below or alternatively
#       use --acceptLicense on the command line
#
#
# verb used to create this silent file
VERB=upgrade

#
# alternate distro path if not found where commpkg resides
#   and no --distro switch specified is
#
ALTDISTROPATH=/var/tmp/ci61

#
# flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches

```

```

#
EXCLUDEEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDEESC=no

#
# flag to indicate acceptance of the software license
#
ACCEPTLICENSE=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADEESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to perform upgrade using pkgrm/pkgadd
#
USEPKGUPGRADE=no

#
# list of components (using mnemonics)
#
COMPONENTS=MS64 DSSETUP
COMPONENT_VERSIONS= 7.0 6.4
(117 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20090120223902.log
===== LOGFILE started Tue Jan 20 22:39:02 2009 =====
LOGFILE = /tmp/CommsInstaller_20090120223902.log
Running /usr/bin/perl ./commpkg --acceptLicense
-- /usr/bin/perl ./commpkg upgrade --acceptLicense
-- perl version: 5.008004 pid: 14842
-- basetime: 1232519942 Tue Jan 20 22:39:02 2009
-- scriptDir: /var/tmp/ci61
-- LOGFILE: /tmp/CommsInstaller_20090120223902.log
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
-- Exit status: 0
!!! ENV
$VAR1 = {
    'CAPSAVE' => '/home/dl111122/.termcap',
    'PS1' => '# ',
    'LINES' => '55',
    'COLUMNS' => '80',
    'PWD' => '/var/tmp/ci61',
    'USER' => 'dl111122',

```

```

        'VISUAL' => 'gnuclient',
        'LOGNAME' => 'dl111122',
        'EMACS' => 't',
        'REMOTE' => '/home/dl111122/.remote',
        'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc:./home/dl111122/bin:/new/local/bin'
'EMACS_TYPE' => 'pc',
        'EMACSPACKAGEPATH' => '/new/local/lib/xemacs/xemacs-packages',
        'MORE' => '-c',
        'TERM' => 'emacs',
        'PAGER' => 'cat',
        'LM_LICENSE_FILE' =>
'/usr/dist/share/devpro_lic,v1.0/license_dir/sunpro.lic.site,1',
        'HOME' => '/home/dl111122',
        'LD_LIBRARY_PATH' => '/usr/dt/lib:/usr/openwin/lib',
        'MANPATH' =>
'/usr/cluster/man:/tools/ns/man:/usr/openwin/man:/usr/man',
        'TERMSAVE' => 'emacs',
        'CDPATH' => '...../home/dl111122',
        'EDITOR' => 'gnuclient',
        'MAIL' => '/var/mail/dl111122',
        'TZ' => 'US/Pacific',
        'ESHELL' => '/bin/csh',
        'INFOPATH' =>
'/new/local/info:/new/local-generic/share/emacs/19.34/info:/usr/local/info'
'MOTIFHOME' => '/usr/dt',
        'CVSROOT' =>
':pserver:dl111122@redcvs.red.iplanet.com:/m/src',
        'OPENWINHOME' => '/usr/openwin',
        'RCSINIT' => '-zLT',
        'SHELL' => '/bin/csh',
        'HZ' => '100',
        'TERMCAP' => '/home/dl111122/.termcap'
};
cat /etc/release 2>&1
                Solaris 10 6/06 s10s_u2wos_08 SPARC
                Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
                Use is subject to license terms.
                Assembled 01 May 2006

-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
$VAR1 = [
        'MS',
        'MS64',
        'DSSETUP',
        'DA',
        'CS',
        'IM',
        'CE',
        'MS_SCHA',
        'CS_SCHA',
        'IM_SCHA',
        'IWC'
];
/usr/bin/pkgcond -n is_what 2>&1

```

```

can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=0
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=1
is_path_writable=1
is_running_system=0
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=1
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 0
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone
Reading Product Files...
Reading /var/tmp/ci61/.install/Product/NSS/NSS.in...
mapFile /var/tmp/ci61/.install/Product/NSS/NSS.map does not exist...
Reading /var/tmp/ci61/.install/Product/SASL/SASL.in...
mapFile /var/tmp/ci61/.install/Product/SASL/SASL.map does not exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK/LDAPCSDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.in...
mapFile /var/tmp/ci61/.install/Product/LDAPCSDK6/LDAPCSDK6.map does not
exist...
Reading
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.in...
mapFile
/var/tmp/ci61/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ICU/ICU.in...
mapFile /var/tmp/ci61/.install/Product/ICU/ICU.map does not exist...
Reading /var/tmp/ci61/.install/Product/JDK/JDK.in...
mapFile /var/tmp/ci61/.install/Product/JDK/JDK.map does not exist...
Reading /var/tmp/ci61/.install/Product/JHRT/JHRT.in...
mapFile /var/tmp/ci61/.install/Product/JHRT/JHRT.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ/MQ.in...
mapFile /var/tmp/ci61/.install/Product/MQ/MQ.map does not exist...
Reading /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.in...
mapFile /var/tmp/ci61/.install/Product/MQ_L10N/MQ_L10N.map does not
exist...
Reading /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.in...
mapFile /var/tmp/ci61/.install/Product/LDAPJDK/LDAPJDK.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.in...
Reading /var/tmp/ci61/.install/Product/IMAPI/IMAPI.map...
Reading /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.in...
mapFile /var/tmp/ci61/.install/Product/LIBMTMALLOC/LIBMTMALLOC.map does
not exist...

```

```

Reading /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.in...
mapFile /var/tmp/ci61/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.map
does not exist...
Reading /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.in...
mapFile /var/tmp/ci61/.install/Product/PKGINSTALL/PKGINSTALL.map does
not exist...
Reading /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.in...
mapFile /var/tmp/ci61/.install/Product/PATCHUTILS/PATCHUTILS.map does
not exist...
Reading /var/tmp/ci61/.install/Product/SNMP/SNMP.in...
mapFile /var/tmp/ci61/.install/Product/SNMP/SNMP.map does not exist...
Reading /var/tmp/ci61/.install/Product/BZIP/BZIP.in...
mapFile /var/tmp/ci61/.install/Product/BZIP/BZIP.map does not exist...
Reading /var/tmp/ci61/.install/Product/SSH/SSH.in...
mapFile /var/tmp/ci61/.install/Product/SSH/SSH.map does not exist...
Reading /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.in...
mapFile /var/tmp/ci61/.install/Product/RECOMMENDED/RECOMMENDED.map does
not exist...
Reading /var/tmp/ci61/.install/Product/ST/ST.in...
mapFile /var/tmp/ci61/.install/Product/ST/ST.map does not exist...
Reading /var/tmp/ci61/.install/Product/CI/CI.in...
Reading /var/tmp/ci61/.install/Product/CI/CI.map...
Reading /var/tmp/ci61/.install/Product/MS/MS.in...
Reading /var/tmp/ci61/.install/Product/MS/MS.map...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.in...
Reading /var/tmp/ci61/.install/Product/MS64/MS64.map...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.in...
Reading /var/tmp/ci61/.install/Product/DSSETUP/DSSETUP.map...
Reading /var/tmp/ci61/.install/Product/DA/DA.in...
Reading /var/tmp/ci61/.install/Product/DA/DA.map...
Reading /var/tmp/ci61/.install/Product/CS/CS.in...
Reading /var/tmp/ci61/.install/Product/CS/CS.map...
Reading /var/tmp/ci61/.install/Product/IM/IM.in...
Reading /var/tmp/ci61/.install/Product/IM/IM.map...
Reading /var/tmp/ci61/.install/Product/CE/CE.in...
Reading /var/tmp/ci61/.install/Product/CE/CE.map...
Reading /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/MS_SCHA/MS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/CS_SCHA/CS_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.in...
mapFile /var/tmp/ci61/.install/Product/IM_SCHA/IM_SCHA.map does not
exist...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.in...
Reading /var/tmp/ci61/.install/Product/IWC/IWC.map...
Reading OLD /var/tmp/ci61/.install/Product/MS/6.3/MS.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.0/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/IM/7.3/IM.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_SCHA/6.0/MS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_SCHA/6.0/CS_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_SCHA/7.0/IM_SCHA.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.2/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS_L10N/6.3/MS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/MS64_L10N/6.3/MS64_L10N.in...

```

```

Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.2/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CS_L10N/6.3/CS_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.0/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IM_L10N/7.2/IM_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.2/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/CE_L10N/6.3/CE_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/JDK/1.5.0/JDK.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ/3.7/MQ.in...
Reading OLD /var/tmp/ci61/.install/Product/MQ_L10N/3.7/MQ_L10N.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.0/IMAPI.in...
Reading OLD /var/tmp/ci61/.install/Product/IMAPI/7.3/IMAPI.in...
===== QQQ findGetVersion =====
!!! getVersion
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '/var/tmp/ci61/SunOS_sparc/IWC/CI/getVersion',
    'MS64_L10N' => 'none',
    'MS' => '/var/tmp/ci61/SunOS_sparc/MS/CI/getVersion',
    'DSSETUP' =>
'/var/tmp/ci61/SunOS_sparc/DSSETUP/CI/getVersion',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '/var/tmp/ci61/SunOS_sparc/MS64/CI/getVersion',
    'LDAPCSDK' => 'none',
    'LDAPCSDK6' => 'none',
    'JDK' => 'none',
    'CE' => '/var/tmp/ci61/SunOS_sparc/CE/CI/getVersion',
    'PATCHUTILS' => 'none',
    'MQ' => 'none',
    'IMAPI' => 'none',
    'CI' =>
'/var/tmp/ci61/.install/Product/CI/SunOS_sparc/getVersion',
    'LDAPCSDK6_TOOLS' => 'none',
    'NSS' => 'none',
    'CS_L10N' => 'none',
    'ST' => 'none',
    'IM' => '/var/tmp/ci61/SunOS_sparc/IM/CI/getVersion',
    'RECOMMENDED' => 'none',
    'IM_L10N' => 'none',
    'CS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/CS_SCHA/CI/getVersion',
    'LDAPJDK' => 'none',
    'BZIP' => 'none',
    'IM_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/IM_SCHA/CI/getVersion',
    'MS_L10N' => 'none',
    'LIBCPLUSPLUS' => 'none',
    'SNMP' => 'none',
    'MS_SCHA' =>
'/var/tmp/ci61/SunOS_sparc/MS_SCHA/CI/getVersion',
    'CS' => '/var/tmp/ci61/SunOS_sparc/CS/CI/getVersion',
    'JHRT' => 'none',
    'CE_L10N' => 'none',
    'SSH' => 'none',

```

```

        'DA' => '/var/tmp/ci61/SunOS_sparc/DA/CI/getVersion'
    };
!!! prod_getVers
$VAR1 = {
    'SASL' => 0,
    'IWC' => '1.0-4.01',
    'MS64_L10N' => 0,
    'MS' => '7.0-3.01',
    'DSSETUP' => '6.4-3.01',
    'PKGINSTALL' => 0,
    'LIBMTMALLOC' => 0,
    'MQ_L10N' => 0,
    'ICU' => 0,
    'MS64' => '7.0-3.01',
    'LDAPCSDK' => 0,
    'LDAPCSDK6' => 0,
    'JDK' => 0,
    'CE' => '6.3-11.01',
    'PATCHUTILS' => 0,
    'MQ' => 0,
    'IMAPI' => 0,
    'CI' => '6.1-0.01',
    'LDAPCSDK6_TOOLS' => 0,
    'NSS' => 0,
    'CS_L10N' => 0,
    'ST' => 0,
    'IM' => '8.0-00.06',
    'RECOMMENDED' => 0,
    'IM_L10N' => 0,
    'CS_SCHA' => '6.3-1.01',
    'LDAPJDK' => 0,
    'BZIP' => 0,
    'IM_SCHA' => '7.3-01.02',
    'MS_L10N' => 0,
    'LIBCPLUSPLUS' => 0,
    'SNMP' => 0,
    'MS_SCHA' => '7.0-0.03',
    'CS' => '6.3-11.01',
    'JHRT' => 0,
    'CE_L10N' => 0,
    'SSH' => 0,
    'DA' => '6.4-3.01'
};
!!! prod_builddate
$VAR1 = {
    'SASL' => 'none',
    'IWC' => '20081208',
    'MS64_L10N' => 'none',
    'MS' => '20081209',
    'DSSETUP' => '20080729',
    'PKGINSTALL' => 'none',
    'LIBMTMALLOC' => 'none',
    'MQ_L10N' => 'none',
    'ICU' => 'none',
    'MS64' => '20081209',
    'LDAPCSDK' => 'none',

```

```

        'LDAPCSDK6' => 'none',
        'JDK' => 'none',
        'CE' => '20081203',
        'PATCHUTILS' => 'none',
        'MQ' => 'none',
        'IMAPI' => 'none',
        'CI' => '20081210',
        'LDAPCSDK6_TOOLS' => 'none',
        'NSS' => 'none',
        'CS_L10N' => 'none',
        'ST' => 'none',
        'IM' => '20081204',
        'RECOMMENDED' => 'none',
        'IM_L10N' => 'none',
        'CS_SCHA' => '20080331',
        'LDAPJDK' => 'none',
        'BZIP' => 'none',
        'IM_SCHA' => '20080403',
        'MS_L10N' => 'none',
        'LIBCPLUSPLUS' => 'none',
        'SNMP' => 'none',
        'MS_SCHA' => '20080519',
        'CS' => '20081122',
        'JHRT' => 'none',
        'CE_L10N' => 'none',
        'SSH' => 'none',
        'DA' => '20081022'
    };
==== End QQQ findGetVersion =====
INFO: prod_mktVers{NSS} (no map) = 4.2.6
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK} (no map) = 5.0
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.1
INFO: prod_mktVers{MQ_L10N} (no map) = 4.1
INFO: prod_mktVers{LDAPJDK} (no map) = 4.19
INFO: prod_mktVers{IMAPI} (w/ map) = 8
INFO: prod_mktVers{LIBMTMALLOC} (no map) = 11.9.0
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PKGINSTALL} (no map) = Unknown
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{SNMP} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{SSH} (no map) = 11.9.0
INFO: prod_mktVers{RECOMMENDED} (no map) = 2008.10.09
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 6u1
INFO: prod_mktVers{MS} (w/ map) = 7u1
INFO: prod_mktVers{MS64} (w/ map) = 7u1
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DA} (w/ map) = 6.4
INFO: prod_mktVers{CS} (w/ map) = 6.3

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```
INFO: prod_mktVers{IM} (w/ map) = 8
INFO: prod_mktVers{CE} (w/ map) = 6.3
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{CS_SCHA} (no map) = 6.3
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
INFO: prod_mktVers{IWC} (w/ map) = 1
```

CommsInstaller version 6.1-0.01 built on Wed Dec 10 12:33:59 PST 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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```
=====
Detecting Installed Products...
Checking LIBMTMALLOC 11.9.0 ...
  LIBMTMALLOC 11.9.0 is not present.
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibc... already present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PKGINSTALL Unknown ...
  Checking pkg SUNWcsr... already present.
  PKGINSTALL Unknown is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmds... already present.
  Checking pkg SUNWswmt... already present.
  Checking pkg SUNWinstall-patch-utils-root... already present.
  Checking pkg SUNWcsr... already present.
  Checking pkg SUNWdtrc... already present.
  Checking pkg SUNWzoneu... already present.
  PATCHUTILS Unknown is already present.
Checking SNMP Unknown ...
  SNMP Unknown is not present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... already present.
  BZIP 11.10 is already present.
Checking SSH 11.9.0 ...
  SSH 11.9.0 is not present.
Checking RECOMMENDED 2008.10.09 ...
  RECOMMENDED 2008.10.09 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... already present.
  Checking pkg SUNWservicetagu... already present.
  Checking pkg SUNWstosreg... already present.
  ST 1.1.4 is already present.
Checking NSS 4.2.6 ...
  Checking pkg SUNWjss... already present.
  Checking pkg SUNWpr... already present.
  Checking pkg SUNWprd... already present.
  Checking pkg SUNWtls... already present.
  Checking pkg SUNWtlsd... already present.
```

```

    Checking pkg SUNWt1su... already present.
    NSS 4.2.6 is already present.
Checking SASL 2.19 ...
    Checking pkg SUNWsas1... already present.
    SASL 2.19 is already present.
Checking LDAPCS DK 5.0 ...
    Checking pkg SUNWldk... already present.
    Checking pkg SUNWldkx... already present.
    LDAPCS DK 5.0 is already present.
Checking LDAPCS DK6 6.0 ...
    Checking pkg SUNWldapcsdk-libs... already present.
    Checking pkg SUNWldapcsdk-dev... already present.
    LDAPCS DK6 6.0 is already present.
Checking LDAPCS DK6_TOOLS 6.0 ...
    Checking pkg SUNWldapcsdk-tools... already present.
    LDAPCS DK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
    Checking pkg SUNWicu... already present.
    ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
    Checking pkg SUNWj6rt... not present.
    Checking pkg SUNWj6rtx... not present.
    Checking pkg SUNWj6dev... not present.
    Checking pkg SUNWj6dvx... not present.
    Checking pkg SUNWj6cfg... not present.
    JDK 1.6.0 is not present.
Checking JDK 1.5.0 ...
    Checking pkg SUNWj5rt... already present.
    Checking pkg SUNWj5rtx... already present.
    Checking pkg SUNWj5cfg... already present.
    JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
    Checking pkg SUNWjhrt... present but with a different pkg VERSION.
        checking SUNWjhrt 2.0,REV=2006.10.31
    Checking pkg SUNWjhdev... already present.
    Checking pkg SUNWjhdev... already present.
    Checking pkg SUNWjhdoc... already present.
    NOTICE: Java Help Runtime is present with a different pkg VERSION.
Checking MQ 4.1 ...
    Checking pkg SUNWiqr... already present.
    Checking pkg SUNWiqu... already present.
    Checking pkg SUNWiqdoc... already present.
    Checking pkg SUNWiquc... already present.
    Checking pkg SUNWiquq... already present.
    Checking pkg SUNWiqjx... already present.
    Checking pkg SUNWiqfs... already present.
    Checking pkg SUNWiqcrt... already present.
    Checking pkg SUNWiqcdv... already present.
    MQ 4.1 is already present.
Checking MQ 3.7 ...
    Checking pkg SUNWiqr... present but with a different pkg VERSION.
        checking SUNWiqr 3.7,REV=2006.06.18.22.34
    Checking pkg SUNWiqu... present but with a different pkg VERSION.
        checking SUNWiqu 3.7,REV=2006.06.18.22.34
    Checking pkg SUNWiq1pl... not present.
    Checking pkg SUNWiqdoc... present but with a different pkg VERSION.

```

```

    checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqqlen... not present.
NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.1 ...
    Checking pkg SUNWfiqu... not present.
    Checking pkg SUNWfiquc... not present.
    Checking pkg SUNWdiqu... not present.
    Checking pkg SUNWdiquc... not present.
    Checking pkg SUNWjiqu... not present.
    Checking pkg SUNWjiquc... not present.
    Checking pkg SUNWeiqu... not present.
    Checking pkg SUNWeiquc... not present.
    Checking pkg SUNWkiqu... not present.
    Checking pkg SUNWkiquc... not present.
    Checking pkg SUNWciqu... not present.
    Checking pkg SUNWciquc... not present.
    Checking pkg SUNWhiqu... not present.
    Checking pkg SUNWhiquc... not present.
MQ_L10N 4.1 is not present.
Checking MQ_L10N 3.7 ...
    Checking pkg SUNWfiqu... not present.
    Checking pkg SUNWfiquc... not present.
    Checking pkg SUNWdiqu... not present.
    Checking pkg SUNWdiquc... not present.
    Checking pkg SUNWjiqu... not present.
    Checking pkg SUNWjiquc... not present.
    Checking pkg SUNWeiqu... not present.
    Checking pkg SUNWeiquc... not present.
    Checking pkg SUNWkiqu... not present.
    Checking pkg SUNWkiquc... not present.
    Checking pkg SUNWciqu... not present.
    Checking pkg SUNWciquc... not present.
    Checking pkg SUNWhiqu... not present.
    Checking pkg SUNWhiquc... not present.
MQ_L10N 3.7 is not present.
Checking LDAPJDK 4.19 ...
    Checking pkg SUNWljdk... already present.
LDAPJDK 4.19 is already present.
Checking IMAPI 8.0 ...
    Checking pkg SUNWiimd... not present.
IMAPI 8.0 is not present.
Checking IMAPI 7.0 ...
    Checking pkg SUNWiimd... not present.
IMAPI 7.0 is not present.

```

```

Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.3 is not present.
Checking CI 6.1 ...
  Checking pkg SUNWcomms...
/opt/sun/comms/CommsInstaller/lib/getVersion VERSION BUILDDATE 2>&1
6.0-0.05
20080709
-- Exit status: 0
  present but with a different pkg VERSION.
    checking SUNWcomms 6.1,REV=2008.12.10
  NOTICE: CommsInstaller is present with a different pkg VERSION.
Checking MS 7.0 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.0 is not present.
Checking MS 6.3 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3 is not present.
Checking MS64 7.0 ...
  Checking pkg SUNWmessaging-server-64...
/opt/sun/comms/messaging64/lib/getVersion VERSION BUILDDATE 2>&1
7.0-0.04
20080620
-- Exit status: 0
  already present.
  MS64 7.0 is already present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds...
/opt/sun/comms/dssetup/lib/getVersion VERSION BUILDDATE 2>&1
6.4-2.01
20080506
-- Exit status: 0
  already present.
  DSSETUP 6.4 is already present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking IM 8.0 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.

```

```
Checking pkg SUNWiimc... not present.
Checking pkg SUNWiimd... not present.
Checking pkg SUNWiimgw... not present.
IM 8.0 is not present.
Checking IM 7.0 ...
Checking pkg SUNWiimin... not present.
Checking pkg SUNWiim... not present.
Checking pkg SUNWiimm... not present.
Checking pkg SUNWiimjd... not present.
Checking pkg SUNWiimid... not present.
Checking pkg SUNWiimc... not present.
Checking pkg SUNWiimd... not present.
IM 7.0 is not present.
Checking IM 7.3 ...
Checking pkg SUNWiim... not present.
Checking pkg SUNWiimin... not present.
Checking pkg SUNWiimm... not present.
Checking pkg SUNWiimjd... not present.
Checking pkg SUNWiimid... not present.
Checking pkg SUNWiimc... not present.
Checking pkg SUNWiimd... not present.
IM 7.3 is not present.
Checking CE 6.3 ...
Checking pkg SUNWuwc... not present.
CE 6.3 is not present.
Checking MS_SCHA 7.0 ...
Checking pkg SUNWmessaging-server-scha... not present.
MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
Checking pkg SUNWscims... not present.
MS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
Checking pkg SUNWscics... not present.
CS_SCHA 6.3 is not present.
Checking CS_SCHA 6.0 ...
Checking pkg SUNWscics... not present.
CS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
Checking pkg SUNWiimsc... not present.
IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
Checking pkg SUNWiimsc... not present.
IM_SCHA 7.0 is not present.
Checking IWC 1.0 ...
Checking pkg SUNWiwc... not present.
IWC 1.0 is not present.
Checking MS_L10N 6.2 ...
Checking pkg SUNWmsgde... not present.
Checking pkg SUNWmsges... not present.
Checking pkg SUNWmsgfr... not present.
Checking pkg SUNWmsgja... not present.
Checking pkg SUNWmsgko... not present.
Checking pkg SUNWmsgzh... not present.
Checking pkg SUNWmsgtw... not present.
MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
```

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Checking pkg SUNWmsg-l10n... not present.
MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
Checking pkg SUNWmessaging-server-l10n-64... not present.
MS64_L10N 6.3 is not present.
Checking CS_L10N 6.2 ...
Checking pkg SUNWdeics... not present.
Checking pkg SUNWesics... not present.
Checking pkg SUNWfrics... not present.
Checking pkg SUNWjaics... not present.
Checking pkg SUNWkoics... not present.
Checking pkg SUNWzhics... not present.
Checking pkg SUNWtwics... not present.
CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
Checking pkg SUNWics-l10n... not present.
CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
Checking pkg SUNWdiimc... not present.
Checking pkg SUNWdiimd... not present.
Checking pkg SUNWdimid... not present.
Checking pkg SUNWeiimc... not present.
Checking pkg SUNWeiimd... not present.
Checking pkg SUNWeiimin... not present.
Checking pkg SUNWeimid... not present.
Checking pkg SUNWfiimc... not present.
Checking pkg SUNWfiimd... not present.
Checking pkg SUNWfiimin... not present.
Checking pkg SUNWfimid... not present.
Checking pkg SUNWjiimc... not present.
Checking pkg SUNWjiimd... not present.
Checking pkg SUNWjiimin... not present.
Checking pkg SUNWjimid... not present.
Checking pkg SUNWkiimc... not present.
Checking pkg SUNWkiimd... not present.
Checking pkg SUNWkiimin... not present.
Checking pkg SUNWkimid... not present.
Checking pkg SUNWciimc... not present.
Checking pkg SUNWciimd... not present.
Checking pkg SUNWciimin... not present.
Checking pkg SUNWcimid... not present.
Checking pkg SUNWhiimc... not present.
Checking pkg SUNWhiimd... not present.
Checking pkg SUNWhiimin... not present.
Checking pkg SUNWhimid... not present.
IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
Checking pkg SUNWiimc-l10n... not present.
Checking pkg SUNWiimd-l10n... not present.
Checking pkg SUNWiimid-l10n... not present.
Checking pkg SUNWiimin-l10n... not present.
IM_L10N 7.2 is not present.
Checking CE_L10N 6.2 ...
Checking pkg SUNWduwc... not present.
Checking pkg SUNWeuwc... not present.
Checking pkg SUNWfuwc... not present.
```

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Checking pkg SUNWjuwc... not present.
Checking pkg SUNWkuwc... not present.
Checking pkg SUNWcuwc... not present.
Checking pkg SUNWhuwc... not present.
CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
Checking pkg SUNWuwc-l10n... not present.
CE_L10N 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-12 /tmp/.patchout_20090120223902.14842
-- Running patchadd -p report...
-- Generating /tmp/.patchout_20090120223902.14842
patchadd -p > /tmp/.patchout_20090120223902.14842 2>>
/tmp/CommsInstaller_20090120223902.log 2>&1
-- Exit status: 0
-- older version at lineno 141 found 119963-05 - not acceptable
-- Final return status: 0
LIBCPLUSPLUS patch 119963-12 is not present.
-- chk4patch 120900-04 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 85
-- Final return status: 1
PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 88
-- Final return status: 1
PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-45 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 167
-- Final return status: 1
PATCHUTILS patch 119254-45 is already present.
-- chk4patch 126868-02 /tmp/.patchout_20090120223902.14842
-- older version at lineno 131 found 126868-01 - not acceptable
-- Final return status: 0
BZIP patch 126868-02 is not present.
-- chk4patch 137321-01 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
BZIP patch 137321-01 is not present.
-- chk4patch 119254-58 /tmp/.patchout_20090120223902.14842
-- older version at lineno 167 found 119254-45 - not acceptable
-- older version at lineno 168 found 119254-26 - not acceptable
-- older version at lineno 169 found 119254-23 - not acceptable
-- older version at lineno 170 found 119254-54 - not acceptable
-- Final return status: 0
RECOMMENDED patch 119254-58 is not present.
-- chk4patch 118833-36 /tmp/.patchout_20090120223902.14842
-- older version at lineno 3 found 118833-11 - not acceptable
-- Exact match found at line 5
-- Final return status: 1
RECOMMENDED patch 118833-36 is already present.
-- chk4patch 120011-14 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
RECOMMENDED patch 120011-14 is not present.
-- chk4patch 125358-06 /tmp/.patchout_20090120223902.14842
-- older version at lineno 215 found 125358-03 - not acceptable
-- older version at lineno 216 found 125358-05 - not acceptable
-- Exact match found at line 217

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-- Final return status: 1
   NSS patch 125358-06 is already present.
-- chk4patch 119345-05 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 381
-- Final return status: 1
   SASL patch 119345-05 is already present.
-- chk4patch 136798-01 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 382
-- Final return status: 1
   LDAPCSDK6_TOOLS patch 136798-01 is already present.
-- chk4patch 119810-05 /tmp/.patchout_20090120223902.14842
-- older version at lineno 243 found 119810-04 - not acceptable
-- older version at lineno 244 found 119810-02 - not acceptable
-- Exact match found at line 245
-- Final return status: 1
   ICU patch 119810-05 is already present.
-- chk4patch 125136-09 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
   JDK patch 125136-09 is not present.
-- chk4patch 125137-09 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
   JDK patch 125137-09 is not present.
-- chk4patch 127411-01 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 143
-- Final return status: 1
   MQ patch 127411-01 is already present.
-- chk4patch 127412-01 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 380
-- Final return status: 1
   MQ patch 127412-01 is already present.
-- chk4patch 119725-04 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 389
-- Final return status: 1
   LDAPJDK patch 119725-04 is already present.
-- chk4patch 137201-03 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
   MS patch 137201-03 is not present.
-- chk4patch 137204-03 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
   MS64 patch 137204-03 is not present.
-- chk4patch 118242-03 /tmp/.patchout_20090120223902.14842
-- Exact match found at line 383
-- Final return status: 1
   DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-19 /tmp/.patchout_20090120223902.14842
-- older version at lineno 384 found 118245-18 - not acceptable
-- Final return status: 0
   DSSETUP patch 118245-19 is not present.
-- chk4patch 121581-19 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
   DA patch 121581-19 is not present.
-- chk4patch 121657-32 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
   CS patch 121657-32 is not present.
-- chk4patch 137571-01 /tmp/.patchout_20090120223902.14842
-- Final return status: 0

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IM_SCHA patch 137571-01 is not present.
-- chk4patch 137631-04 /tmp/.patchout_20090120223902.14842
-- Final return status: 0
IWC patch 137631-04 is not present.
===== QQQ detectProducts =====
QQQ Dumper
!!! present
$VAR1 = {
    '137571-01' => 'NOT_PRESENT',
    'DSSETUP' => {
        '6.4' => 'PRESENT'
    },
    'MQ_L10N' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    '119345-05' => 'PRESENT',
    'ICU' => {
        'ICU2,ICU3' => 'PRESENT'
    },
    'MS64' => {
        '7.0' => 'PRESENT'
    },
    '137631-04' => 'NOT_PRESENT',
    'LDAPCSDK' => {
        '5.0' => 'PRESENT'
    },
    'CE' => {
        '6.3' => 'NOT_PRESENT'
    },
    'MQ' => {
        '3.7' => 'DIFF_VERSION',
        '4.1' => 'PRESENT'
    },
    'PATCHUTILS' => {
        'Unknown' => 'PRESENT'
    },
    'IMAPI' => {
        '8.0' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT',
        '7.3' => 'NOT_PRESENT'
    },
    '121581-19' => 'NOT_PRESENT',
    'LDAPCSDK6_TOOLS' => {
        '6.0' => 'PRESENT'
    },
    'ST' => {
        '1.1.4' => 'PRESENT'
    },
    '121657-32' => 'NOT_PRESENT',
    '118833-36' => 'PRESENT',
    'IM_L10N' => {
        '7.2' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT'
    },
    '119725-04' => 'PRESENT',

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```

'LDAPJDK' => {
    '4.19' => 'PRESENT'
},
'BZIP' => {
    '11.10' => 'PRESENT'
},
'119254-58' => 'NOT_PRESENT',
'IM_SCHA' => {
    '7.0' => 'NOT_PRESENT',
    '7.3' => 'NOT_PRESENT'
},
'126868-02' => 'NOT_PRESENT',
'SNMP' => {
    'Unknown' => 'NOT_PRESENT'
},
'MS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT'
},
'125358-06' => 'PRESENT',
'JHRT' => {
    '2.0' => 'DIFF_VERSION'
},
'CE_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'136798-01' => 'PRESENT',
'119810-05' => 'PRESENT',
'SASL' => {
    '2.19' => 'PRESENT'
},
'IWC' => {
    '1.0' => 'NOT_PRESENT'
},
'MS64_L10N' => {
    '6.3' => 'NOT_PRESENT'
},
'125137-09' => 'NOT_PRESENT',
'MS' => {
    '7.0' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'PKGINSTALL' => {
    'Unknown' => 'PRESENT'
},
'LIBMTMALLOC' => {
    '11.9.0' => 'NOT_PRESENT'
},
'120900-04' => 'PRESENT',
'127411-01' => 'PRESENT',
'120011-14' => 'NOT_PRESENT',
'LDAPCSDK6' => {
    '6.0' => 'PRESENT'
},
'119963-12' => 'NOT_PRESENT',

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'JDK' => {
    '1.6.0' => 'NOT_PRESENT',
    '1.5.0' => 'PRESENT'
},
'CI' => {
    '6.1' => 'DIFF_VERSION'
},
'137321-01' => 'NOT_PRESENT',
'119254-45' => 'PRESENT',
'NSS' => {
    '4.2.6' => 'PRESENT'
},
'IM' => {
    '8.0' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT',
    '7.3' => 'NOT_PRESENT'
},
'CS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'125136-09' => 'NOT_PRESENT',
'RECOMMENDED' => {
    '2008.10.09' => 'NOT_PRESENT'
},
'CS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'137201-03' => 'NOT_PRESENT',
'118245-19' => 'NOT_PRESENT',
'MS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'LIBCPLUSPLUS' => {
    '5.9' => 'PRESENT'
},
'137204-03' => 'NOT_PRESENT',
'121133-02' => 'PRESENT',
'118242-03' => 'PRESENT',
'CS' => {
    '6.3' => 'NOT_PRESENT'
},
'SSH' => {
    '11.9.0' => 'NOT_PRESENT'
},
'DA' => {
    '6.4' => 'NOT_PRESENT'
},
'127412-01' => 'PRESENT'
};
!!! pkgparams
$VAR1 = {
    'SUNWica5' => {},
    'SUNWmsgja' => {},

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```

'SUNWcomic' => {},
'SUNWservicetagu' => {
    '1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagu',
    '/',
'1.1.4.1'
    ]
},
'SUNWjimid' => {},
'SUNWdiquc' => {},
'SUNWmsgko' => {},
'SUNWmessaging-server-110n-64' => {},
'SUNWics5' => {},
'SUNWiqlpl' => {},
'SUNWmsgco' => {},
'SUNWfiquc' => {},
'SUNWjhdem' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdem',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWiqfs' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqfs',
        '/',
        '4.1.0.0'
    ]
},
'SUNWfimid' => {},
'SUNWcomds' => {
    '6.3,REV=2004.08.12' => [
        'SUNWcomds',
'/opt/sun/comms/dssetup',
        '6.4-2.01'
    ]
},
'SUNWjhdev' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdev',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWj6rtx' => {},
'SUNWiqum' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqum',
        '/',
        '4.1.0.1'
    ]
},
},

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'SUNWduwc' => {},
'SUNWhiimin' => {},
'SUNWkiimin' => {},
'SUNWeiimd' => {},
'SUNWj6rt' => {},
'SUNWj5rt' => {
    '1.5.0,REV=2004.12.07.00.07' => [
        'SUNWj5rt',
        '/usr',
    ]
},
'1.5.0_09/1.5.0_09-b03'
},
'SUNWiimc-l10n' => {},
'SUNWhiimc' => {},
'SUNWmsg-l10n' => {},
'SUNWfrics' => {},
'SUNWciqu' => {},
'SUNWkoics' => {},
'SUNWdimid' => {},
'SUNWjiquc' => {},
'SUNWiimgw' => {},
'SUNWiimd-l10n' => {},
'SUNWhiquc' => {},
'SUNWzhics' => {},
'SUNWkiimd' => {},
'SUNWmsgmp' => {},
'SUNWuwc' => {},
'SUNWscics' => {},
'SUNWiimc' => {},
'SUNWhiimd' => {},
'SUNWmessaging-server-scha' => {},
'SUNWmsglb' => {},
'SUNWtls' => {
    '3.11.4,REV=2006.11.16.20.40' => [
        'SUNWtls',
        '/',
        '3.11.9'
    ]
},
'SUNWj6dvx' => {},
'SUNWfuwc' => {},
'SUNWlibc' => {
    '5.10,REV=2004.12.22' => [
        'SUNWlibc',
        '/',
        '5.10'
    ]
},
'SUNWjiimin' => {},
'SUNWscims' => {},
'SUNWiimjd' => {},
'SUNWciimd' => {},
'SUNWldapcsdk-dev' => {
    '6.00,REV=2006.12.11.00.08' => [

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'SUNWldapcsdk-dev',
                                                                    '/',
'6.00'
                                                                    ]
                                                                    },
'SUNWiqlen' => {},
'SUNWiimid-110n' => {},
'SUNWiqr' => {
    '4.1,REV=2007.07.26.10.58' => [
        'SUNWiqr',
        '/',
        '4.1.0.1'
    ]
},
'SUNWdiimc' => {},
'SUNWmsgwm' => {},
'SUNWmessaging-server-64' => {
    '7.0,REV=2008.06.20' => [
'SUNWmessaging-server-64',
'/opt/sun/comms/messaging64',
'7.0-0.04'
                                                                    ]
                                                                    },
'SUNWeiquc' => {},
'SUNWj5cfg' => {
    '1.5.0,REV=2004.12.07.00.07' => [
'SUNWj5cfg',
                                                                    '/usr',
'1.5.0_09/1.5.0_09-b03'
                                                                    ]
                                                                    },
'SUNWhiqu' => {},
'SUNWiimd' => {},
'SUNWfiimd' => {},
'SUNWj5rtx' => {
    '1.5.0,REV=2004.12.06.22.09' => [
'SUNWj5rtx',
                                                                    '/usr',
'1.5.0_12/1.5.0_12-b04'
                                                                    ]
                                                                    },
'SUNWiquc' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiquc',
        '/',
        '4.1.0.1'
    ]
},
                                                                    },

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'SUNWiimid' => {},
'SUNWmsgmt' => {},
'SUNWljdk' => {
    '1.0,REV=2004.10.11.06.02' => [
        'SUNWljdk',
        '/',
        '4.19'
    ]
},
'SUNWcuwc' => {},
'SUNWldapcsdk-libs' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-libs',
        '/',
'6.00'
    ]
},
'SUNWservicetagr' => {
    '1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagr',
        '/',
'1.1.4.1'
    ]
},
'SUNWciimc' => {},
'SUNWjhrt' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhrt',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWtlsd' => {
    '3.11.4,REV=2006.11.16.20.40' => [
        'SUNWtlsd',
        '/',
        '3.11.9'
    ]
},
'SUNWmsgin' => {},
'SUNWdtrc' => {
    '11.10.0,REV=2005.01.21.15.53' => [
'SUNWdtrc',
        '/',
'5.10/Generic'
    ]
},
'SUNWhuwc' => {},
'SUNWiqdoc' => {
    '4.1,REV=2007.07.26.10.58' => [

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        'SUNWiqdoc',
        '/',
        '4.1.0.0'
    ]
    },
    'SUNWjiimd' => {},
    'SUNWjuwc' => {},
    'SUNWiimd' => {},
    'SUNWiqcrt' => {
        '4.1,REV=2007.07.26.10.59' => [
            'SUNWiqcrt',
            '/opt',
            '4.1.0.1'
        ]
    },
    'SUNWmsgzh' => {},
    'SUNWprd' => {
        '4.6.4,REV=2006.11.16.20.40' => [
            'SUNWprd',
            '/',
            '4.7'
        ]
    },
    'SUNWmsgen' => {},
    'SUNWldk' => {
        '5.11,REV=2003.05.14.12.06' => [
            'SUNWldk',
            '/',
            '5.12'
        ]
    },
    'SUNWiwc' => {},
    'SUNWiimin-110n' => {},
    'SUNWiimsc' => {},
    'SUNWinstall-patch-utils-root' => {
        '11.10,REV=2005.01.09.23.05' => [
            'SUNWinstall-patch-utils-root',
            '/',
            'SNAG Development'
        ]
    },
    'SUNWiimin' => {},
    'SUNWuwc-110n' => {},
    'SUNWmsgst' => {},
    'SUNWiqu' => {
        '4.1,REV=2007.07.26.10.58' => [
            'SUNWiqu',
            '/',
            '4.1.0.1'
        ]
    },
    },

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'SUNWkiimc' => {},
'SUNWiim' => {},
'SUNWeiimin' => {},
'SUNWcimid' => {},
'SUNWiqcdv' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqcdv',
        '/opt',
        '4.1.0.1'
    ]
},
'SUNWldapcsdk-tools' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-tools',
'/opt/SUNWdsee',
'6.00'
    ]
},
'SUNWjss' => {
    '4.2.4,REV=2006.11.16.20.40' => [
        'SUNWjss',
        '/',
        '4.2.6'
    ]
},
'SUNWdiqu' => {},
'SUNWj6cfg' => {},
'SUNWhimid' => {},
'SUNWciquc' => {},
'SUNWcomms' => {
    '6.0,REV=2008.07.09' => [
        'SUNWcomms',
'/opt/sun/comms/CommsInstaller',
'6.0-0.05'
    ]
},
'SUNWjiqu' => {},
'SUNWkiqu' => {},
'SUNWkuwc' => {},
'SUNWics-110n' => {},
'SUNWeiqu' => {},
'SUNWmessaging-server' => {},
'SUNWmsgtw' => {},
'SUNWeiimc' => {},
'SUNWjaics' => {},
'SUNWpkgcmdsu' => {
    '11.11,REV=2005.01.09.23.05' => [
'SUNWpkgcmdsu',
        '/',
        'SNAG
Development'
    ]
}

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```

    ],
'SUNWldkx' => {
    '5.11,REV=2003.05.14.12.06' => [
        'SUNWldkx',
        '/',
        '5.12'
    ]
},
'SUNWjiimc' => {},
'SUNWiqjx' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqjx',
        '/',
        '4.1.0.1'
    ]
},
'SUNWjhdoc' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdoc',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWj6dev' => {},
'SUNWeimid' => {},
'SUNWmsges' => {},
'SUNWpr' => {
    '4.6.4,REV=2006.11.16.20.40' => [
        'SUNWpr',
        '/',
        '4.7'
    ]
},
'SUNWmsgmf' => {},
'SUNWkimid' => {},
'SUNWicu' => {
    '1.2,REV=2005.01.06.14.13' => [
        'SUNWicu',
        '/usr',
        '10/Generic'
    ]
},
'SUNWfiimin' => {},
'SUNWswmt' => {
    '11.10,REV=2005.01.10.17.19' => [
        'SUNWswmt',
        '/',
        'SNAG
Development'
    ]
},
'SUNWcomis' => {},
'SUNWdeics' => {},
'SUNWtwics' => {},
'SUNWciimin' => {}

```

```

'SUNWmsgfr' => {},
'SUNWdiimd' => {},
'SUNWeuwc' => {},
'SUNWkiquc' => {},
'SUNWstosreg' => {
    '1.1.4,REV=2008.03.21.07.54' => [
'SUNWstosreg',
    '/',
    '1.1.4.1'
    ]
    },
'SUNWmsgde' => {},
'SUNWbzip' => {
    '11.10.0,REV=2005.01.08.05.16' => [
'SUNWbzip',
    '/',
'5.10/SunOS Development'
    ]
    },
'SUNWt1su' => {
    '3.11.4,REV=2006.11.16.20.40' => [
'SUNWt1su',
    '/',
    '3.11.9'
    ]
    },
'SUNWfiqu' => {},
'SUNWsas1' => {
    '2.17,REV=2004.04.06.15.24' => [
'SUNWsas1',
    '/',
    '2.19'
    ]
    },
'SUNWzoneu' => {
    '11.10.0,REV=2005.01.21.15.53' => [
'SUNWzoneu',
    '/',
'5.10/Generic'
    ]
    },
'SUNWcsr' => {
    '11.10.0,REV=2005.01.21.15.53' => [
'SUNWcsr',
    '/',
'5.10/Generic'
    ]
    },
'SUNWfiimc' => {},
'SUNWesics' => {},

```

```

        'SUNWiimm' => {}
    };
!!! installedprod
$VAR1 = {
    'SASL' => {
        '2.19' => [
            '/',
            '2.19',
            'none',
            '2.19'
        ]
    },
    'ST' => {
        '1.1.4' => [
            '/',
            '1.1.4.1',
            'none',
            '1.1.4'
        ]
    },
    'DSSETUP' => {
        '6.4' => [
            '/opt/sun/comms/dssetup',
            '6.4-2.01',
            '20080506',
            '6.4'
        ]
    },
    'PKGINSTALL' => {
        'Unknown' => [
            '/',
            '5.10/Generic',
            'none',
            'Unknown'
        ]
    },
    'LDAPJDK' => {
        '4.19' => [
            '/',
            '4.19',
            'none',
            '4.19'
        ]
    },
    'BZIP' => {
        '11.10' => [
            '/',
            '5.10/SunOS Development',
            'none',
            '11.10'
        ]
    },
    'ICU' => {
        'ICU2,ICU3' => [
            '/usr',
            '10/Generic',

```

```

        'none',
        'ICU2,ICU3'
    ]
},
'MS64' => {
    '7.0' => [
        '/opt/sun/comms/messaging64',
        '7.0-0.04',
        '20080620',
        '7'
    ]
},
'LIBCPLUSPLUS' => {
    '5.9' => [
        '/',
        '5.10',
        'none',
        '5.9'
    ]
},
'LDAPCSDK' => {
    '5.0' => [
        '/',
        '5.12',
        'none',
        '5.0'
    ]
},
'LDAPCSDK6' => {
    '6.0' => [
        '/',
        '6.00',
        'none',
        '6.0'
    ]
},
'JDK' => {
    '1.5.0' => [
        '/usr',
        '1.5.0_09/1.5.0_09-b03',
        'none',
        '1.5.0'
    ]
},
'PATCHUTILS' => {
    'Unknown' => [
        '/',
        'SNAG Development',
        'none',
        'Unknown'
    ]
},
'MQ' => {
    '4.1' => [
        '/',
        '4.1.0.1',

```

```

        'none',
        '4.1'
    ]
    },
    'JHRT' => {
        '2.0,REV=2006.10.04' => [
            '/usr',
            '2.0/FCS',
            'none',
            '2.0,REV=2006.10.04'
        ]
    },
    'CI' => {
        '6.0,REV=2008.07.09' => [
            '/opt/sun/comms/CommsInstaller',
            '6.0-0.05',
            '20080709',
            '6.0'
        ]
    },
    'LDAPCSDK6_TOOLS' => {
        '6.0' => [
            '/opt/SUNWdsee',
            '6.00',
            'none',
            '6.0'
        ]
    },
    'NSS' => {
        '4.2.6' => [
            '/',
            '4.2.6',
            'none',
            '4.2.6'
        ]
    }
};

```

==== End QQQ detectProducts =====

-- Checking for RECOMMENDED patch 119254-58

patch 119254-58: NOT_PRESENT

-- Checking for RECOMMENDED patch 118833-36

patch is PRESENT

-- Checking for RECOMMENDED patch 120011-14

patch 120011-14: NOT_PRESENT

NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)

has not been applied. Specifically the following

patches are missing:

119254-58 120011-14

NOTICE: It is highly recommended that you apply the

latest OS Recommended Patch Cluster

Do you want to continue ? [yes] :

=====

INFO: isUpgradable MS64 7.0: 1

This version is upgradable to distro version (7.0-3.01)

```
INFO: isUpgradable DSSETUP 6.4: 1
      This version is upgradable to distro version (6.4-3.01)
```

```
===== QQQ =====
```

```
QQQ Dumper
```

```
!!! isUpgradable
```

```
$VAR1 = {
  'MS64' => {
    '7.0' => {
      'status' => '1'
    }
  },
  'DSSETUP' => {
    '6.4' => {
      'status' => '1'
    }
  }
};
```

```
!!! usePkgUpgradeFlag
```

```
$VAR1 = {
  'MS64' => {
    '7.0' => 0
  },
  'DSSETUP' => {
    '6.4' => 0
  }
};
```

```
Product Selection:
```

```
Communication Services Products:
```

Item	Description
1	Messaging Server (64bit) 7u1 (7.0-3.01) Installed Version 7 (7.0-0.04) at /opt/sun/comms/messaging64
2	Comms DSsetup 6.4 (6.4-3.01) Installed Version 6.4 (6.4-2.01) at /opt/sun/comms/dssetup

```
Enter the items you wish to upgrade. Enter q to quit.
```

```
You can enter multiple items using commas to separate them.
```

```
For example: 1,2
```

```
Please select the products you wish to upgrade [1, 2]:
```

```
=====
```

```
QQQ selections: MS64 7.0 DSSETUP 6.4
```

```
INFO: sc_dependencies - ICU PATCHUTILS NSS BZIP LIBCPLUSPLUS LDAPCSDK6  
LDAPCSDK6_TOOLS SASL ST JDK JHRT MQ CI
```

```
Checking for Shared Component Upgrade Requirements...
```

```
Shared component Java Help Runtime has a different pkg version installed  
Description: Java Help Runtime
```

```
Current pkg Version (SUNWjhrt): 2.0,REV=2006.10.04
```

```
To be installed pkg version (SUNWjhrt): 2.0,REV=2006.10.31
```

```
Product Version: 2.0
```

```
Note that changing pkg versions is irreversible
```

```
On the other hand, if you do not change it,
```

```

some products may not work properly
An alternative is to start over and do a multi-install using --altroot

Do you wish to change pkg versions for Java Help Runtime [n] : y

CommsInstaller has a different pkg version installed
Description: The CommsInstaller installed as a package so it can be
patched
  Current pkg Version (SUNWcomms): 6.0,REV=2008.07.09
  To be installed pkg version (SUNWcomms): 6.1,REV=2008.12.10
  Product Version: 6ul
Note that changing pkg versions is irreversible

Do you wish to change pkg versions for CommsInstaller [n] : y
=====
WILL INSTALL: patch 126868-02 for BZIP OS Component
Task: patchadd /var/tmp/ci61/SunOS_sparc/BZIP/Patches/126868-02
WILL INSTALL: patch 137321-01 for BZIP OS Component
Task: patchadd /var/tmp/ci61/SunOS_sparc/BZIP/Patches/137321-01
WILL INSTALL: patch 119963-12 for LIBCPLUSPLUS
Task: patchadd
/var/tmp/ci61/SunOS_sparc/LIBCPLUSPLUS/Patches/119963-12
WILL INSTALL: JDK 1.6.0
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6rt
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6rtx
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6dev
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6dvx
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6cfg
NOTICE: Java Help Runtime will be upgraded...
      Removing the old version is an irreversible process.
WILL REMOVE EXISTING: Java Help Runtime 2.0,REV=2006.10.04 (2.0/FCS)
-- QQQ30 removeProductPkgs (product=JHRT pkg=SUNWjhdoc
2.0,REV=2006.10.04 i=6: realpkg=SUNWjhdoc base=/usr
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhdoc
-- QQQ30 removeProductPkgs (product=JHRT pkg=SUNWjhdem
2.0,REV=2006.10.04 i=4: realpkg=SUNWjhdem base=/usr
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhdem
-- QQQ30 removeProductPkgs (product=JHRT pkg=SUNWjhdev
2.0,REV=2006.10.04 i=2: realpkg=SUNWjhdev base=/usr
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhdev
-- QQQ30 removeProductPkgs (product=JHRT pkg=SUNWjhrt 2.0,REV=2006.10.04
i=0: realpkg=SUNWjhrt base=/usr
Task: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhrt
WILL INSTALL: Java Help Runtime 2.0
Task: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r

```


The following requested patches have packages not installed on the system
Package SUNWbzipS from directory SUNWbzipS in patch 126868-02 is not installed on the system. Changes for package SUNWbzipS will not be applied to the system.

Checking patches that you specified for installation.

Done!

Approved patches will be installed in this order:

126868-02

Checking installed patches...

Verifying sufficient filesystem capacity (dry run method)...

Installing patch packages...

/var/sadm/pkg

Patch 126868-02 has been successfully installed.

See /var/sadm/patch/126868-02/log for details

Patch packages installed:

SUNWbzip

SUNWsfman

-- Exit status: 0

=====

Installing patch 137321-01 for BZIP OS Component...

----- Executing Task 2 of 22 ...

patchadd /var/tmp/ci61/SunOS_sparc/BZIP/Patches/137321-01 2>&1

Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!

Approved patches will be installed in this order:

137321-01

Checking installed patches...

Verifying sufficient filesystem capacity (dry run method)...

```

Installing patch packages...
/var/sadm/pkg

Patch 137321-01 has been successfully installed.
See /var/sadm/patch/137321-01/log for details

Patch packages installed:
  SUNWbzip

-- Exit status: 0

=====
Installing patch 119963-12 for LIBCPLUSPLUS...
----- Executing Task 3 of 22 ...
patchadd /var/tmp/ci61/SunOS_sparc/LIBCPLUSPLUS/Patches/119963-12 2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!

Approved patches will be installed in this order:

119963-12

Checking installed patches...
Verifying sufficient filesystem capacity (dry run method)...
Installing patch packages...
/var/sadm/pkg

Patch 119963-12 has been successfully installed.
See /var/sadm/patch/119963-12/log for details

Patch packages installed:
  SUNWlibc

-- Exit status: 0

=====
Installing JDK 1.6.0...
----- Executing Task 4 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6rt 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

```

```

Installation of <SUNWj6rt> was successful.
-- Exit status: 0
----- Executing Task 5 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6rtx 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWj6rtx> was successful.
-- Exit status: 0
----- Executing Task 6 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6dev 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWj6dev> was successful.
-- Exit status: 0
----- Executing Task 7 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6dvx 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWj6dvx> was successful.
-- Exit status: 0
----- Executing Task 8 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6cfg 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWj6cfg> was successful.
-- Exit status: 0

=====
Removing existing Java Help Runtime 2.0,REV=2006.10.04 (2.0/FCS)...
----- Executing Task 9 of 22 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhdoc 2>&1

Removal of <SUNWjhdoc> was successful.
-- Exit status: 0
----- Executing Task 10 of 22 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhdem 2>&1

Removal of <SUNWjhdem> was successful.
-- Exit status: 0
----- Executing Task 11 of 22 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhdev 2>&1

Removal of <SUNWjhdev> was successful.

```

```

-- Exit status: 0
----- Executing Task 12 of 22 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWjhrt 2>&1

Removal of <SUNWjhrt> was successful.
-- Exit status: 0

=====
Installing Java Help Runtime 2.0...
----- Executing Task 13 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhrt 2>&1
Copyright 2006 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
1127 blocks

Installation of <SUNWjhrt> was successful.
-- Exit status: 0
----- Executing Task 14 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhdev 2>&1
Copyright 2006 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
709 blocks

Installation of <SUNWjhdev> was successful.
-- Exit status: 0
----- Executing Task 15 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhdem 2>&1
Copyright 2006 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
6466 blocks

Installation of <SUNWjhdem> was successful.
-- Exit status: 0
----- Executing Task 16 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n -d
/var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhdoc 2>&1
Copyright 2006 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
10385 blocks

Installation of <SUNWjhdoc> was successful.
-- Exit status: 0

=====
Removing existing CommsInstaller 6.0 (6.0-0.05)...
----- Executing Task 17 of 22 ...
pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet SUNWcomms 2>&1

Removal of <SUNWcomms> was successful.

```

```

-- Exit status: 0

=====
Installing CommsInstaller 6u1 (6.1-0.01)...
----- Executing Task 18 of 22 ...
pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance -n -d
/var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090120223902 SUNWcomms 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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Installation of <SUNWcomms> was successful.
-- Exit status: 0

=====
Upgrading Messaging Server (64bit) 7 (7.0-0.04 at
/opt/sun/comms/messaging64)...
----- Executing Task 19 of 22 ...
/var/tmp/ci61/SunOS_sparc/MS64/CI/preupgrade 7.0-0.04
/opt/sun/comms/messaging64 0 2>&1
-- Exit status: 0
-- /var/tmp/ci61/SunOS_sparc/MS64/CI/preupgrade 7.0-0.04
/opt/sun/comms/messaging64 0

=====
Installing patch 137204-03 for Messaging Server (64bit)...
----- Executing Task 20 of 22 ...
patchadd /var/tmp/ci61/SunOS_sparc/MS64/Patches/137204-03 2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!

Approved patches will be installed in this order:

137204-03

Checking installed patches...
Executing prepatch script...
-- Stopping Messaging Server...
Verifying sufficient filesystem capacity (dry run method)...
Installing patch packages...
/var/sadm/pkg

Patch 137204-03 has been successfully installed.

```

```

See /var/sadm/patch/137204-03/log for details
Executing postpatch script...
--
-- To generate updated config files, run
-- /opt/sun/comms/messaging64/sbin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-03
-- After that, to install the updated config files, run
-- /opt/sun/comms/messaging64/sbin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-03

Patch packages installed:
  SUNWmessaging-server-64

-- Exit status: 0
----- Executing Task 21 of 22 ...
/var/tmp/ci61/SunOS_sparc/MS64/CI/postupgrade 7.0-0.04
/opt/sun/comms/messaging64 0 2>&1
-- Exit status: 0
-- /var/tmp/ci61/SunOS_sparc/MS64/CI/postupgrade 7.0-0.04
/opt/sun/comms/messaging64 0
=====
Done Upgrading Messaging Server (64bit) to 7 (7.0-3.01 at
/opt/sun/comms/messaging64)

=====
Upgrading Comms DSsetup 6.4 (6.4-2.01 at /opt/sun/comms/dssetup)...

=====
Installing patch 118245-19 for Comms DSsetup...
----- Executing Task 22 of 22 ...
patchadd /var/tmp/ci61/SunOS_sparc/DSETUP/Patches/118245-19 2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!

Approved patches will be installed in this order:

118245-19

Checking installed patches...
Executing prepatch script...
Verifying sufficient filesystem capacity (dry run method)...
Installing patch packages...
/var/sadm/pkg

```

Patch 118245-19 has been successfully installed.
See /var/sadm/patch/118245-19/log for details
Executing postpatch script...

Patch packages installed:
SUNWcomds

-- Exit status: 0

=====
Done Upgrading Comms DSsetup to 6.4 (6.4-3.01 at /opt/sun/comms/dssetup)
=====

SUMMARY:

PASSED: Task 1: patchadd
/var/tmp/ci61/SunOS_sparc/BZIP/Patches/126868-02
PASSED: Task 2: patchadd
/var/tmp/ci61/SunOS_sparc/BZIP/Patches/137321-01
PASSED: Task 3: patchadd
/var/tmp/ci61/SunOS_sparc/LIBCPLUSPLUS/Patches/119963-12
PASSED: Task 4: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6rt
PASSED: Task 5: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6rtx
PASSED: Task 6: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6dev
PASSED: Task 7: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6dvx
PASSED: Task 8: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JDK/Packages -r
/tmp/.response_JDK_20090120223902 SUNWj6cfg
PASSED: Task 9: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWjhdoc
PASSED: Task 10: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWjhdem
PASSED: Task 11: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWjhdev
PASSED: Task 12: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet
SUNWjhrt
PASSED: Task 13: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhrt
PASSED: Task 14: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhdev
PASSED: Task 15: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhdem
PASSED: Task 16: pkgadd -a /var/tmp/ci61/.install/Tools/admin.quiet -n
-d /var/tmp/ci61/SunOS_sparc/JHRT/Packages -r
/tmp/.response_JHRT_20090120223902 SUNWjhdoc
PASSED: Task 17: pkgrm -n -a /var/tmp/ci61/.install/Tools/admin.quiet

```

SUNWcomms
PASSED: Task 18: pkgadd -a /var/tmp/ci61/.install/Tools/admin.instance
-n -d /var/tmp/ci61/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20090120223902 SUNWcomms
PASSED: Task 19: preupgrade /var/tmp/ci61/SunOS_sparc/MS64/CI/preupgrade
7.0-0.04 /opt/sun/comms/messaging64 0
PASSED: Task 20: patchadd
/var/tmp/ci61/SunOS_sparc/MS64/Patches/137204-03
PASSED: Task 21: postupgrade
/var/tmp/ci61/SunOS_sparc/MS64/CI/postupgrade 7.0-0.04
/opt/sun/comms/messaging64 0
PASSED: Task 22: patchadd
/var/tmp/ci61/SunOS_sparc/DSSETUP/Patches/118245-19

```

All tasks PASSED

Checking JES java symlink...

```

ls -l /usr/jdk /usr/java 2>&1
/usr/java:

```

```

total 2
drwxr-xr-x  3 root    root          512 Feb 12  2007 jre

```

```

/usr/jdk:

```

```

total 14
lrwxrwxrwx  1 root    root          27 Mar  1  2007 entsys-j2se ->
/usr/jdk/instances/jdk1.5.0
drwxr-xr-x  4 root    bin          512 Sep 17 12:44 instances
lrwxrwxrwx  1 root    other         7 Feb 12  2007 j2sdk1.4.2_11 ->
../j2se
lrwxrwxrwx  1 root    other        18 Oct  3 14:57 jdk1.5.0_09 ->
instances/jdk1.5.0
lrwxrwxrwx  1 root    other        18 Jan 20 22:40 jdk1.6.0_07 ->
instances/jdk1.6.0
lrwxrwxrwx  1 root    other        11 Jan 20 22:40 latest ->
jdk1.6.0_07
drwxr-xr-x  8 root    bin          512 Jan 20 22:44 packages

```

```
-- Exit status: 0
```

```
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
```

```

lrwxrwxrwx  1 root    root          27 Mar  1  2007
/usr/jdk/entsys-j2se -> /usr/jdk/instances/jdk1.5.0
lrwxrwxrwx  1 root    other        11 Jan 20 22:40 /usr/jdk/latest ->
jdk1.6.0_07

```

```
-- Exit status: 0
```

```
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
```

```

/usr/jdk/entsys-j2se:
total 34398
-rw-r--r--  1 root    bin          2487 Oct 12  2006 COPYRIGHT
-rw-r--r--  1 root    bin         17293 Oct 12  2006 LICENSE
-rw-r--r--  1 root    bin        20415 Oct 12  2006 README.html
drwxr-xr-x  3 root    bin          1024 Jan 20 22:44 bin
drwxr-xr-x  9 root    bin           512 Oct  3 14:59 demo
drwxr-xr-x  3 root    bin           512 Oct  3 14:58 include
drwxr-xr-x  6 root    bin           512 Oct  3 14:57 jre
drwxr-xr-x  2 root    bin           512 Oct  3 14:58 lib
drwxr-xr-x  6 root    bin           512 Oct  3 14:59 man
drwxr-xr-x  4 root    bin           512 Oct  3 14:59 sample

```

```

-rw-r--r--  1 root    bin      17537249 Oct 12  2006 src.zip

/usr/jdk/latest:
total 37258
-rw-r--r--  1 root    bin        4137 Jun 10  2008 COPYRIGHT
-rw-r--r--  1 root    bin       17058 Jun 10  2008 LICENSE
-rw-r--r--  1 root    bin      28599 Jun 10  2008 README.html
-rw-r--r--  1 root    bin     24132 Jun 10  2008 README_ja.html
-rw-r--r--  1 root    bin     18329 Jun 10  2008 README_zh_CN.html
-rw-r--r--  1 root    bin    190102 Jun 10  2008
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x  3 root    bin        1024 Jan 20  22:44 bin
drwxr-xr-x  3 root    bin         512 Jan 20  22:43 include
drwxr-xr-x  6 root    bin         512 Jan 20  22:40 jre
drwxr-xr-x  3 root    bin         512 Jan 20  22:43 lib
-r--r--r--  1 root    other     6655 Jan 20  22:43 register.html
-r--r--r--  1 root    other     7087 Jan 20  22:43 register_ja.html
-r--r--r--  1 root    other     6265 Jan 20  22:43
register_zh_CN.html
-rw-r--r--  1 root    bin    18719038 Jun 10  2008 src.zip
-- Exit status: 0
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====
-- unlink /tmp/.response_JDK_20090120223902
-- unlink /tmp/.response_JHRT_20090120223902
-- unlink /tmp/.response_CI_20090120223902
-- unlink /tmp/.patchout_20090120223902.14842
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20090120223902
-- Closing the log at Fri Jan 23 11:25:51 2009
(118 root) ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20090123113940.log
=====
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2008.10.09)
           has not been applied. Specifically the following
           patches are missing:
           119254-58 120011-14
  NOTICE: It is highly recommended that you apply the
           latest OS Recommended Patch Cluster

ALROOT: /
NAME: <none>
Product: Messaging Server (64bit) 7u1
        Version: 7.0-3.01
        Basedir: /opt/sun/comms/messaging64
        Build Date: 20081209
Product: Comms DSsetup 6.4
        Version: 6.4-3.01
        Basedir: /opt/sun/comms/dssetup

```

Build Date: 20080729

```
(119 root) /opt/sun/comms/messaging64/bin/version
/opt/sun/comms/messaging64/bin/version: Command not found
(120 root) /opt/sun/comms/messaging64/bin/imsimta version
Sun Java(tm) System Messaging Server 7.0-3.01 64bit (built Dec  9 2008)
libimta.so 7.0-3.01 64bit (built 09:57:35, Dec  9 2008)
Using /opt/sun/comms/messaging64/config/imta.cnf
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
(121 root) /opt/sun/comms/messaging64/sbin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-03
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-03/patch-config_20090123121
Getting hosted domains...
-- hosted_domains found: jmqNotification.com example.com
-- Checking default domain
-- New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- Checking hosted domain jmqNotification.com
-- Checking hosted domain example.com
--
-- Number of new config files: 2
-- Number of config files to delete: 0
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-03/newconfig.list

/opt/sun/comms/messaging64/install/patch/137204-03/jmqNotification.com_newc
/opt/sun/comms/messaging64/install/patch/137204-03/example.com_newconfig.li
The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-03/delconfig.list

/opt/sun/comms/messaging64/install/patch/137204-03/jmqNotification.com_delc
/opt/sun/comms/messaging64/install/patch/137204-03/example.com_delconfig.li
Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-03

(122 root) /opt/sun/comms/dssetup/sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool for
Sun Java(tm) System communication services.
dssetup Version 6.4-3.01 (built Tue Jul 29 11:25:22 PDT 2008)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20090123143220.log.

Do you want to continue [y]:

Please enter the full path to the directory where the
```

Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/SUNWdsee/dsins1] :

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Directory server does not appear to be running or not listening to port
390.

Bad DS version (0,0) Please correct the problem and re-run this script.
at /opt/sun/comms/dssetup/sbin/comm_dssetup.pl line 1016.

(123 root) ls /var/opt/SUNWdsee/dsins1/

ls /var/opt/SUNWdsee/dsins1/

total 44

2 alias/	2 db2bak*	2 restart-slapd*
2 bak/	2 db2ldif*	8 start-slapd*
2 bak2db*	2 ldif/	4 stop-slapd*
2 conf_bk/	2 ldif2db*	2 tmp/
2 confbak/	2 locks/	
2 config/	2 logs/	
2 db/	2 plugins/	

(124 root) /opt/SUNWdsee/ds6/bin/dsadm start /var/opt/SUNWdsee/dsins1

Server started: pid=5838

(125 root) /opt/sun/comms/dssetup/sbin/comm_dssetup.pl

/opt/sun/comms/dssetup/sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool for
Sun Java(tm) System communication services.
dssetup Version 6.4-3.01 (built Tue Jul 29 11:25:22 PDT 2008)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20090123143326.log.

Do you want to continue [y]: n

n

Exiting....(126 root) stty -echo

stty -echo

(127 root) /opt/sun/comms/dssetup/sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool for
Sun Java(tm) System communication services.
dssetup Version 6.4-3.01 (built Tue Jul 29 11:25:22 PDT 2008)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20090123143335.log.

Do you want to continue [y]:

Please enter the full path to the directory where the Directory Server instance(s) reside ("server-root"), or an explicit Directory Server instance directory

Directory server root [/var/opt/SUNWdsee/dsins1] :

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Detected DS version 6.0

Warning: This version of comm_dssetup.pl (6.4 3.01) has been run previously (6.4 3.01), you do not need to run it again unless you wish to specify different parameters to this program

Do you want to continue [y]:

Will this directory server be used for users/groups [yes]:

A list of suffixes are as follows:

dc=red,dc=iplanet,dc=com
o=comms-config
o=pab
o=PiServerDb

Please enter the Users/Groups base suffix [dc=red,dc=iplanet,dc=com] :

There are 3 possible schema types:

- 1 - schema 1 for systems with iMS 5.x data
- 1.5 - schema 2 compatibility for systems with iMS 5.x data that has been converted with commdirmig
- 2 - schema 2 native for systems using Access Manager

Please enter the Schema Type (1, 1.5, 2) [2]:

Do you want to update the schema files [yes]: no
no

Do you want to configure new indexes [yes]: no
no

Here is a summary of the settings that you chose:

Server Root	: /var/opt/SUNWdsee
Server Instance	: dsins1
Users/Groups Directory	: yes
Update Schema	: no
Schema Type	: 2
DC Root	: dc=red,dc=iplanet,dc=com
User/Group Root	: dc=red,dc=iplanet,dc=com
Add New Indexes	: no
Directory Manager DN	: cn=Directory Manager

```

Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]: n
n
Exiting....
(128 root) /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-03
/opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-03
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-03/install-newconfig_200901
Getting hosted domains...
-- hosted_domains found: jmqNotification.com example.com
-- Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
-- Checking default domain
copy
/opt/sun/comms/messaging64/install/patch/137204-03/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-03/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
-- Checking hosted domain jmqNotification.com
-- Checking hosted domain example.com
-- Number of different files: 2
-- Number of deleted files: 0
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-03/config_20090123143828
-- Running imsimta clbuild, chbuild, cnbuild, version...
/opt/sun/comms/messaging64/bin/imsimta clbuild
-image_file=IMTA_COMMAND_DATA IMTA_BIN:pmdf.cld
/opt/sun/comms/messaging64/bin/imsimta chbuild
/opt/sun/comms/messaging64/bin/imsimta cnbuild
/opt/sun/comms/messaging64/bin/imsimta version
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
Sun Java(tm) System Messaging Server 7.0-3.01 64bit (built Dec 9 2008)
libimta.so 7.0-3.01 64bit (built 09:57:35, Dec 9 2008)
Using /opt/sun/comms/messaging64/config/imta.cnf
-- Running imsimta test -rewrite postmaster (output to logfile only)...
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/lib/patch/ugdir_diff.ldif
-- to the user/group Directory

```

```
-- This is not performed automatically, you must do this manually
```

Upgrade Comments

- Only products that are upgradable are listed. E.g. if MS was already at version 7.0-3.01, then it would not be displayed as a selection for upgrade.
- Different products may require additional steps after upgrade. Dssetup in particular requires that you run the new version to update the DS. For MS, there are no additional steps required unless you are in a cluster.
 - But unfortunately due to bug 6794689 postupgrade does not do patch-config if upgrade is done via patchadd
 - You must run patch-config/install-newconfig manually if you upgrade from a MS 7.x version, i.e. if the MS upgrade was done via a patch.
- Shared components will be upgraded as required. In this session several OS patches were applied, and JHRT was upgraded. In addition JDK 6 was installed. The CI version is not up to date and is offered for upgrade.
- Note that upgrade will either do a pkgrm/pkgadd or a patchadd for the upgrade depending on what is installed. In the case of MS for this session, patchadd is done. If the original MS installation was 6.3, a pkgrm/pkgadd would have been done. For Dssetup, the new version is a patch, so patchadd is used. Note that you can backout a patch with patchrm, but there is no easy way to backout an upgrade that uses pkgrm/pkgadd. In either case, it is always advisable to have a backup of your system.

Sample Session - Installing Communications Suite 6 on a Solaris Zone

Deployment Example: Installing Communications Suite 6 on a Solaris Zone

The sample sessions in this article describes how to install Communications Suite 6 software on a Solaris zone.

Installation Overview

This scenario provides an example of how to install Communications Suite 6 into a Solaris zone. It accomplishes these salient goals:

- Installs and configures the Convergence client and the other Communications Suite 6 components.
- Installs the Sun Java System software products required by Communications Suite.
- Creates a ZFS file system for the zone.
- Installs Delegated Administrator for user provisioning.
- Installs Sun Java System Access Manager, required by Delegated Administrator.

To complete the scenario, perform these tasks:

1. Obtain an IP address for the zone.
2. Download the software.
3. Install service tags in the global zone.
4. Create a zone configured with a ZFS file system.
5. Install Application Server 9.1 with the JDK.
6. Install the Communications Suite with the Communications Suite installer, `commpkg`.
7. Install Sun Java System Directory Server.
8. Install the Identity Management Suite: Sun Java System Web Server and Sun Java System Access Manager.
9. Run the Comms Directory Server Setup script, `comm_dssetup.pl`.
10. Configure Delegated Administrator on Web Server 7. Create user accounts.
11. Configure Messaging Server 7.0.
12. Configure Calendar Server 6.3 Update 2.
13. Configure Instant Messaging Server 7.3.
14. Deploy and Configure Convergence 1.0.
15. Take a ZFS snapshot of the software you have installed in this zone.

These tasks are described in the remaining sections in this document.

How to Use This Document

Each section below records the command-line interactions that perform one installation or configuration task. Taken together, these sessions demonstrate one particular installation scenario.

You can use this document in the following ways:

- If this scenario matches your installation goals, follow all the sessions described below.
- If you have different installation objectives, use any sessions that apply to your own scenario.

This document is intended for any system administrator or installation technician who wants to install and configure the services delivered by these components. It assumes you are familiar with creating and

configuring Solaris zones.

Which Components Are Installed?

This example installs and configures the following Communications Suite and dependent Sun Java System components:

Communication Suite Products:

- Comms DSsetup 6.4 (6.4-1.02)
- Comms Delegated Administrator 6.4 (6.4-2.03)
- Messaging Server 7.0 (7.0-0.01)
- Calendar Server 6.3 (6.3-6.01)
- Instant Messaging 7.3 (7.3)
- Convergence 1.0 (Integrated Web Client 0.1) (0.1)

Sun Java System products required by Communications Suite:

- Application Server 9.1 Update 1
- Sun Java System Directory Server 6.3
- Sun Java System Access Manager 7.1 (required by Delegated Administrator)
- Sun Java System Web Server 7.0 (required by Access Manager)

Obtain an IP address for the zone.

In this example, IP addresses are obtained for four zones:

```
192.168.100.22    niag1-z4.example.mydomain.com niag1-z4
192.168.100.23    niag-fe.example.mydomain.com niag-fe
192.168.100.24    niag1-z1.example.mydomain.com niag1-z1
192.168.100.25    niag1-z3.example.mydomain.com niag1-z3
```

Download the software.

Go here to link to the software download sites: [Get the Software to Install a Communications Suite Deployment](#).

Install service tags in the global zone.

Before you can create and configure the zone in which Communications Suite will be installed, you need to install service tags in the global zone.

You can accomplish this by running the Communications Suite installer to install one Comms component, the Comms Directory Server setup script, `comm_dssetup.pl`. The following example installs

- `comm_dssetup.pl`
- The Communications Suite installer, `commpkg`
- Service tags

Service tags are installed in the global zone.

```

# perl compkg install

Communication Services Products:

Item  Description
----  -
1    Messaging Server 7.0 (7.0-0.01)
2    Messaging Server (64bit) 7.0 (7.0-0.01)
3    Comms DSsetup 6.4 (6.4-1.02)
4    Comms Delegated Administrator 6.4 (6.4-2.03)
5    Calendar Server 6.3 (6.3-6.01)
6    Calendar Server Localization 6.3
7    Instant Messaging 7.3 (7.3)
8    Integrated Web Client 0.1 (0.1)
9    Communications Express 6.3 (6.3-3.01)
10   Messaging Server Sun Cluster HA agent 7.0 (7.0-0.01)

Enter the items you wish to install.
Prefix an item with ~ to indicate you only want
to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,
9, 10]: 3
=====
Generating list of things to install...
Checking for Shared Component Upgrade Requirements...
=====
WILL INSTALL: Comms DSsetup 6.4
WILL INSTALL: CommsInstaller 6.0
WILL INSTALL: Service Tags 1.0
=====
Ready to install

```

Create a Solaris zone configured with a ZFS file system.

This session creates a Solaris zone (`niag1-z4.example.mydomain.com`) and configures a ZFS file system called `onebox` for the zone. The session comprises the following steps:

- Create a ZFS pool.
- Create file system for the zone.
- Create, configure, and verify the zone.
- Remove unneeded directories from the zone.
- Install and boot the zone.



These steps are just one particular way to create a zone. For more information about creating zones, see [OpenSolaris Community: Zones](#).

Create a ZFS pool.

This step creates a ZFS pool called `zones` on the two physical drives named below in a mirror

configuration. It then creates a ZFS file system called `zones/onebox`. (Note: You do not need to add this file system to `/etc/vfstab` because ZFS automatically mounts it during system startup.)

```
# zpool create zones mirror clt2d0s6 clt1d0s6
# zfs create zones/onebox
# chmod 700 /zones/onebox
```

(Note: if you forget to do the `chmod`, you will get an error later when you do `zoneadm verify`.)

Create, configure, and verify the zone.

This step configures a zone called `onebox-comms`.

```
/net/brandy/wspace/jhawk/msg70/comms-lab/onebox-comms

# zonecfg -z onebox-coms
onebox-coms: No such zone configured
Use 'create' to begin configuring a new zone.
zonecfg:onebox-coms> create
zonecfg:onebox-coms> set zonepath=/zones/onebox
zonecfg:onebox-coms> set autoboot=true
zonecfg:onebox-coms> add net
zonecfg:onebox-coms:net> set address=192.168.100.22
zonecfg:onebox-coms:net> set physical=ipge0
zonecfg:onebox-coms:net> end
zonecfg:onebox-coms> add attr
zonecfg:onebox-coms:attr> set name=comment
zonecfg:onebox-coms:attr> set type=string
zonecfg:onebox-coms:attr> set value="onebox comms zone"
zonecfg:onebox-coms:attr> end
zonecfg:onebox-coms> remove inherit-pkg-dir dir=/usr
zonecfg:onebox-coms> remove inherit-pkg-dir dir=/sbin
zonecfg:onebox-coms> verify
zonecfg:onebox-coms> commit
zonecfg:onebox-coms> exit
# zoneadm -z onebox-coms verify
```

(Note: the `remove inherit-pkg-dir` lines above remove the *inheritance* of the specified directory by the zone. By default, `/usr`, `/sbin`, `/lib`, and `/platform` are inherited from the global zone - meaning it will be a *sparse* zone. By removing the `inherit-pkg-dir` directive, you cause the zone to get its own copy of the specified directory, thus making it a whole-root zone. In this example, `/lib` and `/platform` are still inherited from the global zone, but the zone will have its own copy of `/usr` and `/sbin`.)

Install and boot the zone.

```

# zoneadm -z onebox-coms verify
# time zoneadm -z onebox-coms install
Preparing to install zone <onebox-coms>.
Creating list of files to copy from the global zone.
Copying <120988> files to the zone.
Initializing zone product registry.
Determining zone package initialization order.
Preparing to initialize <1063> packages on the zone.
Initialized <1063> packages on zone.
Zone <onebox-coms> is initialized.
Installation of these packages generated errors:
<SUNWgnome-ally-libs-share>
The file </zones/onebox/root/var/sadm/system/logs/install_log> contains
a log of the zone installation.

real    17:44.7
user    3:54.7
sys     9:26.4
#

# zoneadm -z onebox-coms ready
# zoneadm -z onebox-coms boot
# zlogin -C onebox-coms

```

Install Application Server 9.1 with the JDK.

This session installs the Java Platform, Enterprise Edition 5 SDK, which includes Application Server 9.1 and Sun Java System Message Queue 4.1:

```

# cp java_ee_sdk-5_04-solaris-sparc.bin /tmp
# cd /tmp
# chmod 777 java_ee_sdk-5_04-solaris-sparc.bin
# ./java_ee_sdk-5_04-solaris-sparc.bin -console

```

The Java Platform, Enterprise Edition 5 SDK components will be installed in the following directory, which is referred to as the "Installation Directory". To use this directory, press only the Enter key. To use a different directory, type in the full path of the directory to use followed by pressing the Enter key.

Installation Directory [/opt/SDK] {"<" goes back, "!" exits}:

The directory "/opt/SDK" does not exist.
Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

```

Enter the number corresponding to your choice [1] {"<" goes back, "!"
exits} 1
Supply the admin user's password and override any of the other initial
configuration settings as necessary.
Admin User [admin] {"<" goes back, "!" exits}:
Admin User's Password (8 chars minimum):
Re-enter Password:
Do you want to store admin user name and password in .asadminpass file
in
user's home directory [yes] {"<" goes back, "!" exits}?
Admin Port [4848] {"<" goes back, "!" exits}:
HTTP Port [8080] {"<" goes back, "!" exits}:
HTTPS Port [8181] {"<" goes back, "!" exits}:

Please choose installation options.

Do you want to enable Updatecenter client [yes] {"<" goes back, "!"
exits}?
Do you want to upgrade from previous Application Server version [no]
{"<"
goes back, "!" exits}?

Checking disk space...

The following items for the product Java Platform, Enterprise Edition 5
SDK
will be installed:

Product: Java Platform, Enterprise Edition 5 SDK
Location: /opt/SDK
Space Required: 266.89 MB
-----
Java 2 SDK, Standard Edition 6.0
Sun Java System Message Queue 4.1
Sun Java System Application Server 9.1
Sample Applications
Java BluePrints
Your First Cup: An Introduction to the Java EE Platform

Ready to Install

1. Install Now
2. Start Over
3. Exit Installation

What would you like to do [1] {"<" goes back, "!" exits}?
Installing Java Platform, Enterprise Edition 5 SDK
|-1%-----25%-----50%-----75%-----
Successful.

Next Steps:

```

```
1. Access the About Java EE 5 SDK welcome page at:
   file:///opt/SDK/docs/about.html

2. Start the Application Server by executing:
   /opt/SDK/bin/asadmin start-domain domain1

3. Start the Admin Console:
   http://localhost:4848
   Please press Enter/Return key to exit the installation program.
{"!" exits}

Deleting temporary files...

# /opt/SDK/bin/asadmin start-domain domain1

Starting Domain domain1, please wait.
Log redirected to /opt/SDK/domains/domain1/logs/server.log.
Redirecting output to /opt/SDK/domains/domain1/logs/server.log
Domain domain1 is ready to receive client requests. Additional services
are being started in background.
Domain [domain1] is running [Sun Java System Application Server 9.1_01
(build b09d-fcs)] with its configuration and logs at:
[/opt/SDK/domains].
Admin Console is available at [http://localhost:4848].
Use the same port [4848] for "asadmin" commands.
User web applications are available at these URLs:
[http://localhost:8080 https://localhost:8181 ].
Following web-contexts are available:
[/web1 /__wstx-services ].
Standard JMX Clients (like JConsole) can connect to JMXServiceURL:
[service:jmx:rmi:///jndi/rmi://niag1-z4.example.mydomain.com:8686/jmxrmi]
for domain management purposes.

Domain listens on at least following ports for connections:
[8080 8181 4848 3700 3820 3920 8686 ].
```

```
Domain does not support application server clusters and other standalone instances.
```

Install the Communications Suite with the Communications Suite installer, `commpkg`.

This session runs the Communications Suite installer, `commpkg`, to install these components:

- Messaging Server 7.0 (7.0-0.01)
- Comms DSsetup 6.4 (6.4-1.02)
- Comms Delegated Administrator 6.4 (6.4-2.03)
- Calendar Server 6.3 (6.3-6.01)
- Instant Messaging 7.3 (7.3)
- Convergence 1.0 (Integrated Web Client 0.1) (0.1)
- Communications Express 6.3 (6.3-3.01)

This step invokes the installer:

```
# perl commpkg install
```

The installer prompts which components you want to install. This step selects the components:

Communication Services Products:

Item	Description
1	Messaging Server 7.0 (7.0-0.01)
2	Messaging Server (64bit) 7.0 (7.0-0.01)
3	Comms DSsetup 6.4 (6.4-1.02)
4	Comms Delegated Administrator 6.4 (6.4-2.03)
5	Calendar Server 6.3 (6.3-6.01)
6	Calendar Server Localization 6.3
7	Instant Messaging 7.3 (7.3)
8	Integrated Web Client 0.1 (0.1)
9	Communications Express 6.3 (6.3-3.01)
10	Messaging Server Sun Cluster HA agent 7.0 (7.0-0.01)

Enter the items you wish to install.

Prefix an item with ~ to indicate you only want

to install shared component dependencies of that product

You can enter multiple items using commas to separate them.

For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]: 1,3,4,5,7,8,9

```
=====
Generating list of things to install...
Checking for Shared Component Upgrade Requirements...
=====
WILL INSTALL: Messaging Server 7.0
WILL INSTALL: Comms DSsetup 6.4
WILL INSTALL: Comms Delegated Administrator 6.4
WILL INSTALL: Calendar Server 6.3
WILL INSTALL: Instant Messaging 7.3
WILL INSTALL: Integrated Web Client 0.1
WILL INSTALL: Communications Express 6.3
WILL INSTALL: CommsInstaller 6.0
=====
Ready to install
```



A Note About Installing the Directory Server Setup Script

In the preceding task, you install `comm_dssetup.pl` with the Comms Suite installer before you install Directory Server (described in the next step). If you follow this sequence, you will have the up-to-date version of `comm_dssetup.pl`. The Directory Server installation process does not overwrite the latest version.

If you install or upgrade Directory Server *before* you run the Communications Suite installer, the Directory Server installation process places an outdated version of `comm_dssetup.pl` on your system. You must use the current version of `comm_dssetup.pl` provided by the Communications Suite installer. However, the Comms Suite installer cannot install a new version with the `commpkg install` command. Instead, run the `commpkg upgrade` command to upgrade to the latest version of `comm_dssetup.pl`.

Install Sun Java System Directory Server 6.3

This session comprises the following steps:

- Install and configure Directory Server Enterprise Edition 6.3.
- Create the Directory Manager user ID.
- Start Directory Server.

Install and configure Directory Server Enterprise Edition 6.3

This example installs the zip file version of Directory Server 6.3. (It does not install the older 6.2 version of Directory Server available with the Sun Java Identity Management Suite.)

Note that you do not need to install the "Directory Preparation Tool" (also called the Comms Directory Server setup script, `comm_dssetup.pl`), because the latest version of `comm_dssetup.pl` was already installed by the Communications Suite installer in an earlier step.

```
# cd /<root>/DSEE_ZIP_Distribution
# ./dsee_deploy install -i /opt/SUNWdsee

Sun Microsystems, Inc. ("Sun") SOFTWARE LICENSE AGREEMENT ("SLA")
and ENTITLEMENT for SOFTWARE

A. ENTITLEMENT for SOFTWARE
Software: <List of Sun software and Third-Party software...>

B. SOFTWARE LICENSE AGREEMENT
<Definitions and Terms of Software License Agreement...>

Do you accept the license terms ? <yes/no> : yes

Check availability of port 11169
Checking running Directory Server instances
Checking running Directory Proxy Server instances
Unzipping sun-ldap-base.zip ...
Unzipping sun-ldap-dsrk6.zip ...
Unzipping sun-ldap-dsrk-man.zip ...
Unzipping sun-ldapcsdk-tools.zip ...
```

```
Unzipping sun-ldapcsdk-dev.zip ...
Unzipping sun-ldap-ljdk.zip ...
Unzipping sun-ldap-jre.zip ...
Unzipping sun-ldap-shared.zip ...
Unzipping sun-ldap-shared-l10n.zip ...
Unzipping sun-ldap-directory.zip ...
Unzipping sun-ldap-directory-l10n.zip ...
Unzipping sun-ldap-directory-config.zip ...
Unzipping sun-ldap-directory-man.zip ...
Unzipping sun-ldap-directory-dev.zip ...
Unzipping sun-ldap-mfwk.zip ...
Unzipping sun-ldap-cacao.zip ...
Unzipping sun-ldap-console-agent.zip ...
Unzipping sun-ldap-console-cli.zip ...
Unzipping sun-ldap-console-common.zip ...
Unzipping sun-ldap-console-var.zip ...
Unzipping sun-ldap-jdmk.zip ...
Unzipping sun-ldap-directory-client.zip ...
Unzipping sun-ldap-directory-client-l10n.zip ...
Unzipping sun-ldap-proxy.zip ...
Unzipping sun-ldap-proxy-l10n.zip ...
Unzipping sun-ldap-proxy-man.zip ...
Unzipping sun-ldap-proxy-client.zip ...
Unzipping sun-ldap-proxy-client-l10n.zip ...
Unzipping sun-ldap-console-gui.zip ...
Unzipping sun-ldap-console-gui-help.zip ...
Unzipping sun-ldap-console-gui-l10n.zip ...
Unzipping sun-ldap-console-gui-help-l10n.zip ...
Creating WAR file for Console

Configuring Cacao at /opt/SUNWdsee/dsee6/cacao_2
Setting Cacao parameter jdmk-home with default value
[/opt/SUNWdsee/dsee6/private]
Setting Cacao parameter java-home with default value [/opt/SUNWdsee/jre]
Setting Cacao parameter nss-lib-home with default value
[/opt/SUNWdsee/dsee6/private/lib]
Setting Cacao parameter nss-tools-home with default value
[/opt/SUNWdsee/dsee6/bin]
Setting Cacao parameter jmxmp-connector-port with value [11169]
Registering DSCC agent into cacao
Starting Cacao if necessary
Registering JESMF agent into Cacao
Making a copy of dsee_deploy
Making a copy of listrunnings64
```

```
You can now start your Directory Server Instances
You can now start your Directory Proxy Server Instances
```

Create the Directory Manager user ID.

```
#cd /opt/SUNWdsee/ds6/bin
#./dsadm create -p 389 -D "cn=Directory Manager" -P 636
/opt/SUNWdsee/dsins1
Choose the Directory Manager password:
Confirm the Directory Manager password:
```

Start Directory Server.

You must start Directory Server before you run the Comms Directory Server setup script, `comm_dssetup.pl`, during a later step.

```
# ./dsadm info /opt/SUNWdsee/dsins1
Instance Path: /opt/SUNWdsee/dsins1
Owner: dsuser(dsuser)
Non-secure port: 389
Secure port: 636
Bit format: 64-bit
State: Stopped
DSCC url: -
SMF application name: -
Instance version: D-A00
```

```
#./dsadm start /opt/SUNWdsee/dsins1
Server started: pid=29494
```

```
# ldapsearch -b "" -s base objectclass=top
version: 1
dn:
objectClass: top
namingContexts: o=ugdata
```

From the Sun Java Identity Management Suite: Install Sun Java System Web Server and Sun Java System Access Manager.

This session comprises the following steps:

- Install and configure Access Manager 7.1 and Web Server 7.0 Update 1 by running the Identity Management Suite installer.
- Start Web Server.
- Log in to the Access Manager console, `amconsole`.

Install and configure Access Manager 7.1 and Web Server 7.0 Update 1 by running the Identity Management Suite installer.

This session configures Access Manager in Legacy mode. Delegated Administrator requires that Access Manager run in Legacy mode.

```

# ./installer -nodisplay

Choose Software Components - Main Menu
-----
Note: "*" indicates that the selection is disabled

[X] 1. Web Server 7.0 Update 1
* * Directory Preparation Tool 6.4
[ ] 3. Application Server Enterprise Edition 8.2 Patch 2
* * Directory Server Enterprise Edition 6.2
[ ] 5. Monitoring Console 1.0 Update 1
[ ] 6. High Availability Session Store 4.4.3
[ ] 7. Access Manager 7.1
[ ] 8. Message Queue 3.7 UR2
[ ] 9. Java DB 10.2.2.1
* * All Shared Components

Enter a comma separated list of products to install, or press R to
refresh
the list [1] {"<" goes back, "!" exits}: 7

Choose Software Components - Confirm Choices
-----

Based on product dependencies for your selections, the installer will
install:

[X] 7. Access Manager 7.1

Press "Enter" to Continue or Enter a comma separated list of products
to
deselect. Enter "-" with product number to deselect a product (for eg.
-5
will deselect product number 5). To return to the component selection
list,
press "r". [1] {"<" goes back, "!" exits}

Component Selection - Selected Product "Access Manager 7.1 "
-----

*[X] 1. Access Manager Core Services
*[X] 2. Access Manager Administration Console
*[X] 3. Common Domain Services for Federation Management
*[X] 4. Access Manager SDK
*[ ] 5. Access Manager Distributed Authentication User Interface
*[ ] 6. Access Manager Client SDK
*[ ] 7. Access Manager Session Failover Client

Enter a comma separated list of components to install (or A to install
all )
[A] {"<" goes back, "!" exits}

*[X] 1. Access Manager Core Services

```

- *[X] 2. Access Manager Administration Console
- *[X] 3. Common Domain Services for Federation Management
- *[X] 4. Access Manager SDK
- *[X] 5. Access Manager Distributed Authentication User Interface
- *[X] 6. Access Manager Client SDK
- *[X] 7. Access Manager Session Failover Client

Press "Enter" to Continue or Enter a comma separated list of products to
deselect. Enter "-" with product number to deselect a product (for eg.
-5
will deselect product number 5). To return to the component selection
list,
press "r". [1] {"<" goes back, "!" exits}

Install multilingual package(s) for all selected components [Yes] {"<"
goes
back, "!" exits}:

For component product [Access Manager 7.1]

-
1. Web Server 7.0 Update 1
 2. Application Server Enterprise Edition 8.2 Patch 2
 3. A compatible web container previously installed on this system.

Please choose a web container for your selected products [1] {"<" goes
back,
"!" exits} 1

Installation Directories

Enter the name of the target installation directory for each product:

Access Manager [/opt] {"<" goes back, "!" exits}:
Web Server [/opt] {"<" goes back, "!" exits}:
Web Server Instance [/var/opt/SUNWwbsvr7] {"<" goes back, "!" exits}:

Checking System Status

Available disk space...	: Checking OK
Memory installed...	: Checking OK
Swap space installed...	: Checking OK
Operating system patches...	: Checking OK
Operating system resources...	: Checking OK

System ready for installation

System Ready for Installation. Memory detection is disabled in a
non-global zone.

Enter 1 to continue [1] {"<" goes back, "!" exits}

Screen for selecting Type of Configuration

1. Configure Now - Selectively override defaults or express through
2. Configure Later - Manually configure following installation

Select Type of Configuration [1] {"<" goes back, "!" exits}

Specify Administrator Account Preferences

You must specify administrator accounts and passwords for most Java Enterprise System products.

1. Use a single administrator account when possible.
2. Use different administrator account for each product.

Enter 1 or 2 [1] {"<" goes back, "!" exits}:
Administrator User Id [admin] {"<" goes back, "!" exits}
Administrator Password [] {"<" goes back, "!" exits} Retype
Password [] {"<" goes back, "!" exits}

Specify Common Server Settings

Enter Host Name [niagl-z4] {"<" goes back, "!" exits}
Enter DNS Domain Name [example.mydomain.com] {"<" goes back, "!" exits}
Enter IP Address [192.168.100.22] {"<" goes back, "!" exits}
Enter System User [root] {"<" goes back, "!" exits} dsuser
Enter System Group [root] {"<" goes back, "!" exits} dsuser

Web Server: Choose Configuration Type

Warning: If you plan to deploy Access Manager (or) Portal Server in this Web Server, please select 'Admin'.

Configure Administration Instance as Server OR Node. Valid values are Admin and Node [Admin] {"<" goes back, "!" exits}
Start servers after system startup [No] {"<" goes back, "!" exits} yes

Web Server: Specify Administration Server Settings

```
Enter Host Name [niag1-z4.example.mydomain.com] {"<" goes back, "!"
exits}:
Enter Runtime User ID [root] {"<" goes back, "!" exits}:
Enter SSL Administration Port [8989] {"<" goes back, "!" exits}:
Enter Non SSL Administration Port [8800] {"<" goes back, "!" exits}:
```

Web Server: Specify Instance Settings

```
Server Name [niag1-z4.example.mydomain.com] {"<" goes back, "!"
exits}:
Enter HTTP Port [80] {"<" goes back, "!" exits}:
Enter Runtime UNIX User ID [webservd] {"<" goes back, "!" exits}:
dsuser
```

If you plan to deploy Portal Server in this instance of Web Server, set Runtime User ID to superuser (usually root) and the Runtime Group to the superuser's group (usually other).

```
Enter Document Root Directory
[/var/opt/SUNWwbsvr7/https-niag1-z4.example.
mydomain.com/docs] {"<" goes back, "!" exits}:
```

Access Manager: Specify Configuration Information

```
Install type (Realm/Legacy) Mode [Legacy] {"<" goes back, "!" exits}:
Administrator User ID: amAdmin
Administrator Password [] {"<" goes back, "!" exits}:      Retype
Password [] {"<" goes back, "!" exits}:      LDAP User ID: amldapuser
LDAP Password [] {"<" goes back, "!" exits}:      Retype Password []
{"<" goes back, "!" exits}: Passwords for LDAP User do not match.
```

```
LDAP User ID: amldapuser
LDAP Password [] {"<" goes back, "!" exits}:      Retype Password []
{"<" goes back, "!" exits}:      Password Encryption Key
[g98luZpRMHiBcm40H/uhgoPZyLCYeVni] {"<" goes back,
"!" exits}: thequickfoxrandownthehill
```

Access Manager: Choose Deployment Container

1. Sun Java(TM) System Application Server
2. Sun Java(TM) System Web Server

```
Select the container to deploy the component and hit enter key [2]
{"<" goes
back, "!" exits}
```

Access Manager: Specify Web Container for Running Access Manager Services

```
Host Name [niag1-z4.example.mydomain.com] {"<" goes back, "!" exits}:
```

```

Services Deployment URI [amserver] {"<" goes back, "!" exits}:
Common Domain Deployment URI [amcommon] {"<" goes back, "!" exits}:
Cookie Domain(Assure it is not a top level domain) [.mydomain.com]
{"<" goes
back, "!" exits}: .example.mydomain.com
Password Deployment URI [ampassword] {"<" goes back, "!" exits}:

1. HTTP
2. HTTPS

Console Protocol [1] {"<" goes back, "!" exits}:

Access Manager: Choose Access Manager Console

Administration Console [Yes] {"<" goes back, "!" exits}:
Console Deployment URI [amconsole] {"<" goes back, "!" exits}:

Access Manager: Specify Directory Server Information

Directory Server Host [] {"<" goes back, "!" exits}:
niag1-z4.example.mydomain.com
Directory Server Port [389] {"<" goes back, "!" exits}:
Directory Root Suffix [dc=example,dc=mydomain,dc=com] {"<" goes back,
"!" exits}: o=ugdata
Directory Manager DN [cn=Directory Manager] {"<" goes back, "!"
exits}:
Directory Manager Password [] {"<" goes back, "!" exits}:
Access Manager: Specify Directory Server Data

Is Directory Server provisioned with user data [No] {"<" goes back,
"!"
exits}?
Ready to Install
-----
The following components will be installed.

Product: Java Enterprise System Identity Management Suite
Uninstall Location: /var/sadm/prod/SUNWident-entsys5u1
Space Required: 189.14 MB
-----
Sun Java(TM) System Web Server 7.0 Update 1
  Sun Java(TM) System Web Server 7.0 Update 1 Samples
  Sun Java(TM) System Web Server 7.0 Update 1 CLI
  Sun Java(TM) System Web Server 7.0 Update 1 Core
Sun Java(TM) System Access Manager 7.1
  ClientSDK
  SessionFailOverClient
  DistributedAuthentication
  Common Domain Services for Federation Management
  Access Manager SDK
  Access Manager Administration Console
  Access Manager Core Services

1. Install

```

2. Start Over
3. Exit Installation

Start Web Server 7.0.

This step first starts the Admin Server, then starts Web Server.

```
# cd /var/opt/SUNWwbsvr7/admin-server/bin/
# ./startserv
Sun Java System Web Server 7.0U1 B07/18/2007 15:51
info: CORE3016: daemon is running as super-user
info: CORE5076: Using [Java HotSpot(TM) Server VM, Version 1.5.0_12]
from [Sun Microsystems Inc.]
info: WEB0100: Loading web module in virtual server [admin-server] at
[/admingui]
info: WEB0100: Loading web module in virtual server [admin-server] at
[/jmxconnector]
info: HTTP3072: admin-ssl-port:
https://niagl-z4.example.mydomain.com:8989 ready to accept requests
info: HTTP3072: admin-http-port:
http://niagl-z4.example.mydomain.com:8800 ready to accept requests
info: CORE3274: successful server startup
#

# cd /var/opt/SUNWwbsvr7/https-niagl-z4.example.mydomain.com/bin/
# ./stopserv
server has been shutdown
# ./startserv
Sun Java System Web Server 7.0U1 B07/18/2007 15:51
info: CORE5076: Using [Java HotSpot(TM) Server VM, Version 1.5.0_12]
from [Sun Microsystems Inc.]
info: WEB0100: Loading web module in virtual server
[niagl-z4.example.mydomain.com] at [/amserver]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niagl-z4.example.mydomain.com] at [/ampassword]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niagl-z4.example.mydomain.com] at [/amcommon]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niagl-z4.example.mydomain.com] at [/amconsole]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: url:
jar:file:/opt/SUNWmfwk/lib/mfwk_instrum_tk.jar!/com/sun/mfwk/config/MfConfi
"mfwk.multicast.disableloopback" set to false
info: url:
jar:file:/opt/SUNWmfwk/lib/mfwk_instrum_tk.jar!/com/sun/mfwk/config/MfConfi
LogFile is: //var/opt/SUNWmfwk/logs/instrum.%g
```

```
warning: Warning: unable to initialize log file!  
warning: Couldn't get lock for //var/opt/SUNWmfwk/logs/instrum.%g  
info: group = 227.227.227.1, port = 54320  
info: Set Time-to-live to 0  
info: join Group /227.227.227.1  
info: Starting listening thread  
info: sends initial RESP message in SDK  
info: Packet received  
info: HTTP3072: http-listener-1: http://niag1-z4.example.mydomain.com:80
```

```
ready to accept requests
info: CORE3274: successful server startup
```

Log in to the Access Manager console, *amconsole*.

```
try to log into http://niag1-z4.example.mydomain.com/amconsole
user name: amadmin
password: adminpass
```

Run the Comms Directory Server Setup script, *comm_dssetup.pl*.

This task prepares Directory Server by installing the schema needed to support Communications Suite. You set up the directory by running the *comm_dssetup.pl* script. This session installs Schema 2, required for Delegated Administrator and Access Manager.

Before you run *comm_dssetup.pl*, be sure that Directory Server is running (see earlier step).

```
/opt/sun/comms/dssetup/sbin
# ls
comm_dssetup.pl  schema
# perl comm_dssetup.pl

Welcome to the Directory Server preparation tool for
Sun Java(tm) System communication services.
dssetup Version 6.4-1.02 (built Wed Oct 10 13:54:08 PDT 2007)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20071220160633.log.

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/SUNWdsee/dsins1] :

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Detected DS version 6.2

Will this directory server be used for users/groups [yes]:
A list of suffixes are as follows:
o=ugdata

Please enter the Users/Groups base suffix [o=ugdata] :
```

There are 3 possible schema types:

- 1 - schema 1 for systems with iMS 5.x data
- 1.5 - schema 2 compatibility for systems with iMS 5.x data that has been converted with commdirmig
- 2 - schema 2 native for systems using Access Manager

Please enter the Schema Type (1, 1.5, 2) [1]: 2

Access Manager does not appear to have been installed for this suffix

Note that you will not be able to use features that depend on Access Manager

Are you sure you want this schema type? [n]: y

Do you want to update the schema files [yes]:

Do you want to configure new indexes [yes]:

Do you want to Reindex the new indexes now [yes]:

Here is a summary of the settings that you chose:

Server Root	: /var/opt/SUNWdsee
Server Instance	: dsins1
Users/Groups Directory	: yes
Update Schema	: yes
Schema Type	: 2
DC Root	: o=ugdata
User/Group Root	: o=ugdata
Add New Indexes	: yes
ReIndex New Indexes Now	: yes
Directory Manager DN	: cn=Directory Manager

Now ready to generate a shell script and ldif file to modify the Directory.

No changes to the Directory Server will be made this time.

Do you want to continue [y]:

```
# ldapsearch -b "" -s base objectclass=top
version: 1
dn:
objectClass: top
namingContexts: o=PiServerDb
namingContexts: o=pab
```

```
namingContexts: o=comms-config
namingContexts: o=ugdata
```

Configure Delegated Administrator on Web Server 7 and create user accounts.

This session comprises the following steps:

- Run the Delegated Administrator configuration program, `config-commda`.
- Stop and restart Web Server.
- Create user accounts with the Delegated Administrator command-line utility, `commadmin`.

Run the Delegated Administrator configuration program, `config-commda`.

This session runs the Delegated Administrator configuration program, `config-commda`. In this configuration, Delegated Administrator is deployed to Web Server 7.0. Next, you use Delegated Administrator to create user accounts.

The session accepts the default values for the configuration attributes. The session selects Web Server as the web container. Note that the Web Server configuration and administration details appear *twice*. This is because both the Delegated Administrator console and the Delegated Administrator server must be configured to a web container.

Before you run the Delegated Administrator configuration program, be sure that Web Server is running.

```
# ./config-commda -nodisplay

Specify the directory in which the configuration and data files should
be
installed [/var/opt/sun/comms/da] {"<" goes back, "!" exits}:

Delegated Administrator components showing a checked box will be
configured.
Please change selection accordingly.

[X] 1 Delegated Administrator Utility      0 bytes
[X] 2 Delegated Administrator Console     0 bytes
[X] 3 Delegated Administrator Server      0 bytes

To check a particular component, enter its number, or 0 when you are
finished [0] {"<" goes back, "!" exits}:
Checking Disk Space

Please enter the Access Manager Host name and Port number

Hostname [niag1-z4] {"<" goes back, "!" exits}:
Port [8080] {"<" goes back, "!" exits}:

Please enter the default domain that will be used if none is specified
on the
command line.
```

```
Enter Default Domain [example.mydomain.com] {"<" goes back, "!" exits}
```

Please enter the default SSL Port that the Delegated Administrator Utility will use if none is specified.

The default SSL Port if none is specified to the Delegated Administrator Utility

```
Enter Default SSL Port [443] {"<" goes back, "!" exits}
You can deploy Delegated Administrator Console on Web Server or
Application
Server
```

```
Type WEB, WEB7, APP7 or APP8 to specify your web container (WEB, WEB7,
APP7
```

```
or APP8) [WEB] {"<" goes back, "!" exits}? WEB7
```

Web Server Configuration Details

Specify the local Web Server instance details used by the configurator to configure Delegated Administrator Console on Web Server. Enter the following web server instance details to configure Delegated Administrator Console:

Install Root Directory Name: Enter the local directory in which Web Server is installed.

Instance Root Directory: Enter the local directory in which Web Server instances are created.

Server Instance Identifier: Enter the Web Server Identifier for which Delegated Administrator Console is to be configured.

Virtual Server Identifier: Enter the Virtual Server Identifier for which Delegated Administrator Console is to be configured.

HTTP Port Number: Enter the Web Server port number where HTTP service is available.

```
Enter Web Server Install Root Directory [/opt/SUNWwbsvr7]:
```

```
Enter Web Server Instance Root Directory [/var/opt/SUNWwbsvr7]:
```

```
Enter Web Server Instance Identifier [niagl-z4.example.mydomain.com]:
```

```
Enter Virtual Server Identifier [niagl-z4.example.mydomain.com]:
```

```
Enter Web Server HTTP Port [80]:
```

Please Wait: Verifying whether the Web Server Instance connection is alive

Web Server: Administration Instance Details

Enter the following Administration Server instance details to configure Delegated Administrator Console:

Administration Server Port: Enter the Administration Server port number.

Administrator User ID: Enter the administrator user identifier.

Administrator Password: Enter the administrator password.

Secure Administration Server Instance: Specify whether the Web Server's Administration Instance is running in secure mode.

Enter the Administration Server Port [8800]:

Enter the Administrator User ID [admin]:

Enter the Administrator Password []:

Is the Administration Server instance running in the secure mode [no]?

Please Wait: Verifying whether the Administration Server instance connection is alive

Information

You have specified that the Web Server's Administration Server instance is running in the normal mode.

Please enter the domain separator for user logon authentication

The domain separator for user logon authentication

Enter domain separator [@] {"<" goes back, "!" exits}

Please enter the Access Manager Base Directory

Access Manager Base Directory [/opt/SUNWam] {"<" goes back, "!" exits}:

Web Server Configuration Details

Specify the local Web Server instance details used by the configurator to configure Delegated Administrator Server on Web Server. Enter the following web server instance details to configure Delegated Administrator Server:

Install Root Directory Name: Enter the local directory in which Web Server is installed.

Instance Root Directory: Enter the local directory in which Web Server instances are created.

Server Instance Identifier: Enter the Web Server Identifier for which Delegated Administrator Server is to be configured.

Virtual Server Identifier: Enter the Virtual Server Identifier for which Delegated Administrator Server is to be configured.

HTTP Port Number: Enter the Web Server port number where HTTP service is available.

```
Enter Web Server Install Root Directory [/opt/SUNWwbsvr7]:
Enter Web Server Instance Root Directory [/var/opt/SUNWwbsvr7]:
Enter Web Server Instance Identifier [niagl-z4.example.mydomain.com]:
Enter Virtual Server Identifier [niagl-z4.example.mydomain.com]:
Enter Web Server HTTP Port [80]:
```

Please Wait: Verifying whether the Web Server Instance connection is alive

Web Server: Administration Instance Details

Enter the following Administration Server instance details to configure Delegated Administrator Server:

Administration Server Port: Enter the Administration Server port number.

Administrator User ID: Enter the administrator user identifier.

Administrator Password: Enter the administrator password.

Secure Administration Server Instance: Specify whether the Web Server's Administration Instance is running in secure mode.

```
Enter the Administration Server Port [8800]:
Enter the Administrator User ID [admin]:
Enter the Administrator Password []:
Is the Administration Server instance running in the secure mode
```

[no]?

Please Wait: Verifying whether the Administration Server instance connection is alive

Information

You have specified that the Web Server's Administration Server instance is running in the normal mode.

Please specify the Directory (LDAP) server. The Ldap Server URL is an url link to the directory server on which the console component is configured. The url should be in the format of ldap://<hostname>:<port>. e.g.

```
ldap://ldapserverserver.mycompany.com:390.
```

The default bind DN is the distinguished name for the directory manager. Also note that you should point the URL at the master Directory Server and not a replica, as you normally would not be able to write to the replica.

```
LdapURL [ldap://niag1-z4.example.mydomain.com:389]:  
Bind As [cn=Directory Manager]:  
Password:
```

Please enter the Access Manager Admin User and Password. The username is hard coded.

```
Username: amadmin
```

```
Password:
```

Please enter the Access Manager Internal LDAP Authentication Password. The username is hard coded.

```
Username: amldapuser
```

```
Password:
```

The Organization DN will be the LDAP subtree under which all email users and groups that belong to the default email domain are located. Note that the DN must be located under the user/group suffix.

```
Enter Organization DN [o=example.mydomain.com,o=ugdata] {"<" goes  
back, "!"  
exits}
```

Please enter the User and Password for a top level administrator to be created in the Default Organization Name

```
Username [admin]:  
Password:  
Confirm Password:
```

Please choose whether to load sample Service Packages and Organizations into Directory

```
Do you want to load sample service packages [Y]?
```

```
Do you want to load sample organizations [Y]?
```

```
Please enter preferred mailhost for the sample organizations  
[niag1-z4] {"<"  
goes back, "!" exits} niag1-z4.example.mydomain.com
```

```
Checking disk space...
```

The following items for the product Delegated Administrator will be configured:

Product: Delegated Administrator
Location: /opt/SUNWam
Space Required: 0 bytes

Delegated Administrator Utility
Delegated Administrator Console
Delegated Administrator Server

Ready to Configure

1. Configure Now
2. Start Over
3. Exit Configure Program

What would you like to do [1] {"<" goes back, "!" exits}? 1
Starting Task Sequence

All Tasks Passed. Please check install log
/opt/sun/comms/da/install/commda-
config_20071220190220.log for further details.

The web server configuration was modified. For the changes to take effect, you must restart the Web Server.

<Press ENTER to continue> {"!" exits}

To enable mail and calendar service on the default domain,
please use commadmin domain modify -S mail -S cal -H mailhost

after restarting the web container. Please consult documentation for details.

<Press ENTER to continue> {"!" exits}

Configuration Details:

Product	Result	More Information
1. Delegated Administrator	Installed	Available
2. Done		

Enter the number corresponding to the desired selection for more information, or enter 2 to continue [2] {"!" exits}:
mv /opt/sun/comms/da/install/saveState20071220190214

```
/opt/sun/comms/da/install/commda-config_20071220190220/saveState
Copying factory settings to /opt/sun/comms/da/data/setup
```

Stop and restart Web Server.

```
# /var/opt/SUNWwbsvr7/https-niag1-z4.example.mydomain.com/bin/stopserv
server not responding to exit command
killing process group
# /var/opt/SUNWwbsvr7/https-niag1-z4.example.mydomain.com/bin/startserv
Sun Java System Web Server 7.0U1 B07/18/2007 15:51
info: CORE5076: Using [Java HotSpot(TM) Server VM, Version 1.5.0_12]
from [Sun Microsystems Inc.]
info: WEB0100: Loading web module in virtual server
[niag1-z4.example.mydomain.com] at [/amserver]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niag1-z4.example.mydomain.com] at [/ampassword]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niag1-z4.example.mydomain.com] at [/amcommon]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niag1-z4.example.mydomain.com] at [/amconsole]
warning: WEB6100: locale-charset-info is deprecated, please use
parameter-encoding
info: WEB0100: Loading web module in virtual server
[niag1-z4.example.mydomain.com] at [/da]
info: WEB0100: Loading web module in virtual server
[niag1-z4.example.mydomain.com] at [/commcli]
info: url:
jar:file:/opt/SUNWmfwk/lib/mfwk_instrum_tk.jar!/com/sun/mfwk/config/MfConf:
"mfwk.multicast.disableloopback" set to false
info: url:
jar:file:/opt/SUNWmfwk/lib/mfwk_instrum_tk.jar!/com/sun/mfwk/config/MfConf:
LogFile is: //var/opt/SUNWmfwk/logs/instrum.%g
warning: Warning: unable to initialize log file!
warning: Couldn't get lock for //var/opt/SUNWmfwk/logs/instrum.%g
info: group = 227.227.227.1, port = 54320
info: Set Time-to-live to 0
info: join Group /227.227.227.1
info: Starting listening thread
info: sends initial RESP message in SDK
info: Packet received
```

Create user accounts with the Delegated Administrator command-line utility, *commadmin*.

Before adding user accounts with the `commadmin` utility, the session must add mail and calendar service to the default domain configured by the Delegated Administrator configuration program. To do this, use the `commadmin domain modify` command.

Next, the session runs the `commadmin user create` command to add three user accounts to the

LDAP directory.

```
# ./commadmin domain modify -D admin -w adminpass -X
niagl-z4.example.mydomain.com -H niagl-z4.example.mydomain.com -n
example.mydomain.com -d example.mydomain.com -p 80 -S mail,cal -T
"America/Los_Angeles"

# ./commadmin user create -D admin -w adminpass -n example.mydomain.com
-F Test -L User -l testuser -p 80 -E testuser@example.mydomain.com -W
demo -S mail,cal
OK

# ./commadmin user create -D admin -w adminpass -n example.mydomain.com
-F Postmaster -L User -l postmaster-user -p 80 -E
postmaster-user@example.mydomain.com -W demo -S mail,cal
OK

# ./commadmin user create -D admin -w adminpass -n example.mydomain.com
-F John -L Doe -l jhawk -p 80 -E John.Doe@example.mydomain.com -W demo
-S mail,cal
OK
```

Configure Messaging Server 7.0.

This session configures Messaging Server; it comprises the following steps:

- Configure DNS setup.
- Disable Sendmail.
- Configure Messaging Server by running the configuration program, `configure`.
- Start Messaging Server.
- Send a test message via telnet.
- Enable logging on the MTA.
- Configure the http port.

Configure DNS setup.

A high-quality caching DNS server on the local network is a requirement for a production deployment of Messaging Server. Messaging Server depends heavily on the responsiveness and scalability of the DNS server.

This step ensures that the DNS setup is properly configured, and that it specifies how to route to hosts that are not on the local subnet. The `/etc/nsswitch.conf` and `/etc/resolve.conf` files are edited.

```

# vi /etc/nsswitch.conf
"/etc/nsswitch.conf" 43 lines, 1228 characters
#
# /etc/nsswitch.nis:
#
# An example file that could be copied over to /etc/nsswitch.conf; it
# uses NIS (YP) in conjunction with files.
#
# "hosts:" and "services:" in this file are used only if the
# /etc/netconfig file has a "-" for nametoaddr_libs of "inet"
# transports.

# NIS service requires that svc:/network/nis/client:default be enabled
# and online.

# the following two lines obviate the "+" entry in /etc/passwd and
# /etc/group.
passwd:      files nis
group:       files nis

# consult /etc "files" only if nis is down.
hosts:       dns nis [NOTFOUND=return] files

# Note that IPv4 addresses are searched for in all of the ipnodes
# databases
# before searching the hosts databases.
ipnodes:     nis [NOTFOUND=return] files

# vi /etc/resolv.conf
"/etc/resolv.conf" [New file]
domain example.mydomain.com
nameserver 192.168.100.149
nameserver 192.168.100.150
search example.mydomain.com west.sesta.com sesta.com

```

Disable Sendmail.

Sendmail must be disabled to allow Messaging Server to send and receive mail properly.

```
# svcadm disable Sendmail
```

Configure Messaging Server 7.0.

This step runs the `configure` program.

```

# cd /opt/sun/comms/messaging/sbin

# ./configure -nodisplay

Enter fully qualified host name [niag1-z4.example.mydomain.com] {"<"
goes back,
"!" exits}

```

```

Directory to install Messaging Server configuration and data files
[/var/opt/sun/comms/messaging] {"<" goes back, "!" exits}:

[X] 1 Message Transfer Agent    0 bytes
[X] 2 Message Store             0 bytes
[X] 3 Webmail Server            0 bytes
[ ] 4 Messaging Multiplexor     0 bytes

To check a particular component, enter its number, or 0 when you are
finished [0] {"<" goes back, "!" exits}:

Enter Username [mailsrv]: dsuser
Enter Unix Group [mail]: dsuser

User/Group Server LdapURL [ldap://niagl-z4.example.mydomain.com:389]
{"<" goes
back, "!" exits}:
Bind As [cn=Directory Manager] {"<" goes back, "!" exits}:
Password {"<" goes back, "!" exits}: adminpass

Enter Postmaster email address [] {"<" goes back, "!" exits}
postmaster-user@example.mydomain.com

Enter password [] {"<" goes back, "!" exits}: adminpass
Re-enter password to verify [] {"<" goes back, "!" exits}: adminpass

Enter Email Default Domain [example.mydomain.com] {"<" goes back, "!"
exits}

Enter Organization DN [o=example.mydomain.com,o=ugdata] {"<" goes
back, "!"
exits}

The following items for the product Messaging Server will be configured:

Product: Messaging Server
Location: /var/opt/sun/comms/messaging
Space Required: 0 bytes
-----
Message Transfer Agent
Message Store
Webmail Server

Ready to Configure

1. Configure Now
2. Start Over
3. Exit Configure Program

```

```
What would you like to do [1] {"<" goes back, "!" exits}?
```

Start Messaging Server with the `./start-msg` command.

```
# ./start-msg
Connecting to watcher ...
Launching watcher ... 24020
Starting store server .... 24021
Checking store server status ..... ready
Starting purge server .... 24022
Starting imap server .... 24023
Starting pop server .... 24024
Starting http server .... 24025
Starting sched server ... 24026
Starting dispatcher server .... 24028
Starting job_controller server .... 24034
```

Send a test message through Messaging Server via telnet.

```
# telnet . 25
Trying 0.0.0.0...
Connected to ..
Escape character is '^]'.
220 niag1-z4.example.mydomain.com -- Server ESMTP (Sun Java(tm) System
Messaging Server 7.0-0.01 32bit (built Nov 21 2007))
ehlo example.mydomain.com
250-niag1-z4.example.mydomain.com
250-8BITMIME
250-PIPELINING
250-CHUNKING
250-DSN
250-ENHANCEDSTATUSCODES
250-EXPN
250-HELP
250-XADR
250-XSTA
250-XCIR
250-XGEN
250-XLOOP A0DCB6E4B6F1EA64A997266D291AAE2C
250-ETRN
250-NO-SOLICITING
250 SIZE 0
mail from: John.Doe@sesta.com
250 2.5.0 Address Ok.
rcpt to: John.Doe@example.mydomain.com
250 2.1.5 John.Doe@example.mydomain.com OK.
data
354 Enter mail, end with a single ".".
Subject: Welcome to Messaging Server 7.0!!

I hope everything works as planned!
```

```
Jon
.
250 2.5.0 Ok.
quit
221 2.3.0 Bye received. Goodbye.
Connection to . closed by foreign host.
#

# telnet . 110
Trying 0.0.0.0...
Connected to ..
Escape character is '^]'.
+OK niag1-z4.example.mydomain.com POP3 service (Sun Java(tm) System
Messaging Server 7.0-0.01 32bit (built Nov 21 2007))
user jhawk
+OK Name is a valid mailbox
pass demo
+OK Maildrop ready
list
+OK scan listing follows
1 713
.
retr 1
+OK 713 octets
Return-path: <John.Doe@sesta.com>red.
Received: from example.mydomain.com ([127.0.0.1]) by
niag1-z4.example.mydomain.com
(Sun Java(tm) System Messaging Server 7.0-0.01 32bit (built Nov 21
2007))
with ESMTTP id <0JU200I02YYJJK00@niag1-z4.example.mydomain.com> for
John.Doe@example.mydomain.com; Thu, 03 Jan 2008 10:21:34 -0800 (PST)
Original-recipient: rfc822;John.Doe@example.mydomain.com
From: John.Doe@sesta.com
Date-warning: Date header was inserted by niag1-z4.example.mydomain.com
Date: Thu, 03 Jan 2008 10:21:24 -0800 (PST)
Message-id: <0JU200I03YYVJK00@niag1-z4.example.mydomain.com>
Subject: Welcome to Messaging Server 7.0!!
To: Undisclosed recipients: ;

I hope everything works asplanned!

Jon
.
quit
+OK
```

```
Connection to . closed by foreign host.  
#
```

Enable logging on the MTA.

```
# cd /var/opt/sun/comms/messaging/config/  
# cp imta.cnf imta.cnf.orig  
# vi imta.cnf  
  
!  
! part II : channel blocks  
!  
defaults logging notices 1 2 4 7 copywarnpost copysendpost postheadonly  
noswitchchannel immnonurgent maxjobs 7 defaulthost example.mydomain.com  
example.mydomain.com  
  
!  
! delivery channel to local /var/mail store  
l subdirs 20 viaaliasrequired maxjobs 7  
niag1-z4.example.mydomain.com
```

Configure the http port.

This step reconfigures the `mshttpd` port number from the default value of 80 to 85. It configures this value by modifying the `configutil service.http.port` option.

```

# ./configutil -o service.http.port -v 85
OK SET
# ./stop-msg
Connecting to watcher ...
shutting down all servers...
Stopping job_controller server 24034 .... done
Stopping dispatcher server 24028 ... done
Stopping sched server 24026 ... done
Stopping http server 24025 ... done
Stopping pop server 24024 ... done
Stopping imap server 24023 ... done
Stopping purge server 24022 ... done
Stopping store server 24021 .... done
stopping watcher process 24020 ... done
# ./start-msg
Connecting to watcher ...
Launching watcher ... 24367
Starting store server .... 24368
Checking store server status .... ready
Starting purge server .... 24370
Starting imap server .... 24371
Starting pop server .... 24372
Starting http server .... 24373
Starting sched server ... 24374
Starting dispatcher server .... 24376
Starting job_controller server .... 24382
# telnet . 85
Trying 0.0.0.0...
Connected to ..
Escape character is '^]'.
GET / HTTP/1.1

HTTP/1.1 404
Date: Thu, 03 Jan 2008 19:15:13 GMT
Content-type: text/html
Content-length: 108
Last-modified: Thu, 03 Jan 2008 19:15:13 GMT
Pragma: no-cache
Expires: 0
Cache-Control: no-cache

```

Configure Calendar Server 6.3 Update 2.

This session runs the `csconfigurator.sh` utility to configure Calendar Server. The Calendar Server front end and back end are both configured into this zone.

```

# cd /opt/sun/comms/calendar/SUNWics5/cal/sbin/
# ./csconfigurator.sh -nodisplay

User Preferences Directory
  LDAP Server Host Name [niag1-z4.example.mydomain.com]:
  LDAP Server Port [389]:

```

```
Directory Manager DN [cn=Directory Manager]:
Directory Manager Password []: adminpass
```

Here is a list of the existing domains

1. abc.com
2. example.mydomain.com
3. siroe.com
4. <New Default domain>

```
Select the default domain from the list above [2]: 2
Calendar administrator user name [calmaster]:
Calendar administrator password []: adminpass
Calendar administrator email address [root@example.mydomain.com]:
calmaster-user@example.mydomain.com
```

Is this user also the site administrator?

1. Yes
2. No

Enter your choice [1]:

Please Wait: The configuration program is verifying the credentials for the
Calendar administrator

User calmaster@example.mydomain.com could not be found on LDAP server
niag1-z4.example.mydomain.com.

1. Create it
2. Choose New

Enter the number corresponding to your choice [1]

Front End / Back End settings

1. Yes
2. No

Set up a Front End / Back End deployment [2] 1

1. Front End
2. Back End
3. Both

```
Set up this server as [1] 3
Back end service port [59779]
Hostname of the back-end server [] niag1-z4.example.mydomain.com
IP address of the back-end server [192.168.100.22]
Port on which to contact the back-end server [59779]
```

1. View the back-end servers list
2. Add a back-end server
3. Set the default backend server
4. Edit one of the back-end server
5. Remove a back-end server
6. Validate your choices and go to next configuration panel

What do you want to do [6]? 1

1. niag1-z4.example.mydomain.com (192.168.100.22) on port 59779 *

1. View the back-end servers list
2. Add a back-end server
3. Set the default backend server
4. Edit one of the back-end server
5. Remove a back-end server
6. Validate your choices and go to next configuration panel

What do you want to do [6]?

Please Wait: The configuration program is checking that the local DWP service port is available

Email and Email Alarms

Administrator Email Address [calmaster-user@example.mydomain.com]:
SMTP Host Name [niag1-z4.example.mydomain.com]

Please Wait: The configuration program is verifying that the SMTP Server system is reachable on the network.

Runtime configuration

Service Port [80] 2080
Maximum Sessions [5000]
Maximum Threads [20]
Number of server processes [1] 5
Runtime User ID [icsuser] dsuser
Runtime Group ID [icsgroup] dsuser

1. Yes
2. No

Start after sucessful configuration [2] 1

1. Yes
2. No

Start on system startup [1]

Please Wait: The configuration program is checking that the local web service port is available.

Please Wait: Verifying User...

Directories to store configuration and data files

Config Directory [/etc/opt/sun/comms/calendar/SUNWics5/config]:
Database Directory [/var/opt/sun/comms/calendar/SUNWics5/csdb]:
Attachment store Directory
[/var/opt/sun/comms/calendar/SUNWics5/astore]:
Logs Directory [/var/opt/sun/comms/calendar/SUNWics5/logs]:
Temporary Files Directory [/var/opt/sun/comms/calendar/SUNWics5/tmp]:

The directory /etc/opt/sun/comms/calendar/SUNWics5/config" does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

The directory /var/opt/sun/comms/calendar/SUNWics5/csdb" does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

The directory /var/opt/sun/comms/calendar/SUNWics5/astore" does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

The directory /var/opt/sun/comms/calendar/SUNWics5/logs" does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

The directory `/var/opt/sun/comms/calendar/SUNWics5/tmp` does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

Archive and Hot Backup configuration

1. enable
2. disabled

Do you want to enable archiving [1]?

Enter the path where you want archives to be stored

`[/var/opt/sun/comms/calendar/SUNWics5/csdb/archive]`

What is the minimum number of days to keep these archives [3]?

What is the maximum number of days to keep these archives [6]?

1. enable
2. disabled

Do you want to enable hotbackup [1]?

Please enter the path where you want hot backups to be stored

`[/var/opt/sun/comms/calendar/SUNWics5/csdb/hotbackup]`

What is the minimum number of days to keep these hot backups [3]?

What is the maximum number of days to keep these hot backups [6]?

The directory `/var/opt/sun/comms/calendar/SUNWics5/csdb/archive` does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

The directory `/var/opt/sun/comms/calendar/SUNWics5/csdb/hotbackup` does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1]

Checking disk space...

The following items for the product Sun Java(tm) System Calendar Server will be configured:

Product: Sun Java(tm) System Calendar Server

Location: /opt/sun/comms/calendar/SUNWics5

Space Required: 0 bytes

CalServer6

Ready to Configure

1. Configure Now
2. Start Over
3. Exit Configure Program

```
What would you like to do [1]?
```

Configure Instant Messaging Server 7.3.

This session runs the Instant Messaging `configure` utility to configure Instant Messaging.

```
# cd /opt/sun/comms/im/SUNWiim/
# ./configure -nodisplay
# ./configure -nodisplay
Java Accessibility Bridge for GNOME loaded.
Select all components you wish to configure.

    1. [X] Server components
    2. [X] Client components

Enter the index of a component to change its state, or 0 when you are
finished [0]

User Management Options

Use Access Manager for Single-Sign-On [no]:
Use Access Manager for Policy [no]:

Instant Messaging user properties can be maintained using one of the
following storage systems:

    1. File System
    2. LDAP Directory
Enter the number corresponding to your choice [2]:

Runtime Options

Runtime User ID [inetuser]: dsuser
Runtime Group ID [inetgroup]: dsuser

Runtime Directory [/var/opt/sun/comms/im]:

Network Access Points

Domain Name [example.mydomain.com]:
XMPP Port [5222]:
Multiplexed XMPP Port [45222]:
Disable Server (enable only multiplexor) [no]?
```

Directory Server Options

LDAP Host Name [niagl-z4.example.mydomain.com]: LDAP Port Number
[389]:
Base DN [dc=example,dc=mydomain,dc=com]: o=ugdata
Bind DN []: cn=Directory Manager
Bind Password:

Mail Server Options

Enable Email Integration [yes]
SMTP Server Host Name [niagl-z4.example.mydomain.com]:
Do you want to enable Email Archiving [yes]?

Messenger Resources Deployment Options

Do you want to deploy Instant Messenger Resources [yes]?

Messenger Resources Code Base URL
[http://niagl-z4.example.mydomain.com:80/im]:

The following information is used to invoke your web container's
deployment

interfaces. Your web container may not require all fields to be filled.

Web Administration URL [https://niagl-z4.example.mydomain.com:4849/]:
Web Administrator User ID [admin]:
Web Administrator Password:

Contacting admin server and processing the supplied information

Verify the configuration information provided.
Unable to obtain information from admin server using these.

<Press ENTER to continue>

Messenger Resources Deployment Options

Do you want to deploy Instant Messenger Resources [yes]? no

Please enter the relevant info to configure the HTTP Gateway.

Do you want to deploy the XMPP/HTTP Gateway [yes]? no

Calendar Agent configuration

Do you want to enable calendar integration [no]? yes
Notification Server Hostname [niagl-z4.example.mydomain.com]:
Notification Server Port [57997]:
Calendar alarm URL [enp:///ics/customalarm]:

Startup Options

```
Start services after successful configuration [yes]?
Start services on system startup [yes]?
```

Deploy and Configure Convergence 1.0.

```
Script started on Wed 09 Apr 2008 01:57:17 PM PDT
# pwd
/opt/sun/comms/iwc/sbin
# ./init-config -nodisplay -saveState /tmp/iwc_in.NEW
/usr/jdk/entsys-j2se/bin/java -Djava.library.path=/opt/sun/comms/iwc/lib
-Djava.awt.headless=true -classpath
/opt/sun/comms/iwc/lib:/usr/jdk/entsys-j2se/lib/classes.zip config-iwc
-saveState /opt/sun/comms/iwc/install/saveState20080409135736 -nodisplay
Finished Loading Default Properties...
```

You are running the configuration program for Sun Convergence. This program asks you to supply configuration preference settings that it uses to configure the server.

The configuration program consists of one or more selections that provide you with information and let you enter preferences that determine how Sun Convergence is configured.

When you are presented with the following question, the configuration process pauses to allow you to read the information that has been presented. When you are ready, press Enter to continue.

```
<Press ENTER to Continue>
```

Some questions require more detailed information that you are required to type.

The question may have a default value that is displayed inside of brackets [].

For example, the following question has a default answer of yes:

```
Are you sure? [yes]
```

If you want to accept the default answer, press only the Enter key (which on some keyboards is labeled Return).

If you want to provide a different answer, type it at the command prompt and then press Enter.

If yes is your answer, type yes or y at the command prompt and press Enter. If

your answer is no, type no or n and press Enter.

At any point in the configuration program, if you wish to exit the configuration program midway, press the ! key and you will be given the option to exit or continue.

<Press ENTER to Continue>

Welcome to the Sun Convergence Configuration Program.

<Press ENTER to Continue>

Please specify the directory in which the configuration and data files should be installed. It is recommended that you configure the Sun Convergence in the directory suggested by this configurator program.

Specify the directory in which the configuration and data files should be

installed [/var/opt/sun/comms/iwc] {"<" goes back, "!" exits}:

The directory "/var/opt/sun/comms/iwc" does not exist.

Do you want to create it now or choose another directory?

1. Create Directory
2. Choose New

Enter the number corresponding to your choice [1] {"<" goes back, "!" exits}

Please wait for the components to be loaded...

Loading components...

Select the components to be configured.

```
[X] 1 Mail Service      0 bytes
[X] 2 Calendar Service  0 bytes
[X] 3 Instant Messaging Service  0 bytes
```

To select a component, enter its number, or 0 when you are done [0] {"<"

goes back, "!" exits}:

Checking Disk Space

Please verify that the host name and DNS domain name mentioned in the fields

below are correct for this system, then click Next. The configuration program will again attempt to establish a network connection to this system using these values.

The host name or DNS domain name field will be blank if the configuration program is unable to detect its value.

Host Name [niag1-z4] {"<" goes back, "!" exits}:

DNS Domain Name [example.mydomain.com] {"<" goes back, "!" exits}:

Application Server Configuration Details

Specify the local Application Server instance details used by the configurator to configure Sun Convergence on Application Server. Enter the following application server instance details to configure Sun Convergence:

Install Directory: Enter the local directory in which the Application Server is installed.

Domain Directory: Enter the Application Server domain directory.

Document Root Directory: Enter the Application Server document root directory.

Server Target Name: Enter the Application Server Name for which the Sun Convergence is to be configured.

Virtual Server Identifier: Enter the Virtual Server Identifier for which the Sun Convergence is to be configured.

Server Instance HTTP Port: Enter the Application Server port number where HTTP service is available.

Enter Application Server Install Directory [/opt/SUNWappserver] {"<" goes

back, "!" exits}:

Enter Application Server Domain Directory

[/opt/SUNWappserver/domains/domain1] {"<" goes back, "!" exits}:

Enter Application Server Document Root Directory

[/opt/SUNWappserver/domains/domain1/docroot] {"<" goes back, "!" exits}:

Enter Application Server Instance HTTP Port [8080] {"<" goes back, "!"

exits}:

Please Wait: Verifying whether the Application Server Instance connection is alive

Application Server: Administration Instance Details

Specify Application Server's Administration instance details used by the configurator to configure Sun Convergence on Application Server.

```
Enter the Administration Server Port [4848] {"<" goes back, "!"
exits}:
Enter the Administrator User ID [admin] {"<" goes back, "!" exits}:
Enter the Administrator Password [] {"<" goes back, "!" exits}:
Is the Administration Server instance running in the secure mode
[no] {"<"
goes back, "!" exits}?
Please Wait: Verifying whether the Administration Server instance
connection is
alive
```

Information

You have specified that the Application Server's Administration Server instance is running in the normal mode.

URI Path

Enter the URI Path for Sun Convergence.

URI Path: Enter the URI Path where the Sun Convergence is to be deployed.

Note: Ensure you have specified a new URI Path. If there exists a web application already configured at the specified URI, it will be deleted before Sun Convergence is deployed.

```
Enter URI Path for Sun Convergence [/iwc] {"<" goes back, "!" exits}:
```

Do you want Hosted Domain support ?

This step enables you to select Hosted Domain support.

```
Do you want Hosted Domain support for Sun Convergence [yes] {"<"
goes back,
"!" exits}?
```

INFO: Hosted Domain support will be "enabled"

Enter the User/Group LDAP Server details. The User/Group LDAP Server URL should be in the format ldap://<hostname>:<port>. For example, ldap://ldapserversiroe.com:389

```
Ldap URL [ldap://niag1-z4.example.mydomain.com:389] {"<" goes back,
"!" exits}:
```

```
Bind DN [cn=Directory Manager] {"<" goes back, "!" exits}:
```

Bind Password {"<" goes back, "!" exits}:

DC Tree Suffix

Specify the base distinguished name for the DC Tree Suffix. This suffix is used

by Sun Convergence to search for configured hosted domains.

Enter DC Tree Suffix [o=mailQA] {"<" goes back, "!" exits}:

Please enter the Default Domain Name

Enter the Default Domain Name. This is the default domain that will be used

when a user logs in without specifying a domain name.

Enter the Default Domain Name [example.mydomain.com] {"<" goes back, "!" exits}

Mail Service Configuration Details

Enter the Webmail Server host name, port number, whether to use SSL, Admin User ID and password.

Enter the Webmail Server Host Name [niag1-z4.example.mydomain.com] {"<" goes

back, "!" exits}:

Enter the Webmail Server Port Number [8990] {"<" goes back, "!" exits}:

Is the webmail server running in secure mode [no] {"<" goes back, "!" exits}?

INFO: Access to webmail will be in non-SSL mode

Enter the Webmail Server Admin UserID [admin] {"<" goes back, "!" exits}:

Enter the Webmail Admin User Password [] {"<" goes back, "!" exits}:
Please Wait: Verifying whether the Webmail Server Instance connection is alive

Calendar Service Configuration Details

Enter the Calendar Server host name, port number, whether to use SSL, administrator ID and password.

Enter the Calendar Server Host Name [niag1-z4.example.mydomain.com] {"<" goes

back, "!" exits}:

Enter the Calendar Server Port Number [80] {"<" goes back, "!" exits}: 98

Is the calendar server running in secure mode [no] {"<" goes back, "!"

```
exits}?
Enter the Calendar Server Administrator User ID [calmaster] {"<" goes
back,
"! " exits}
Enter the Calendar Server Administrator Password [] {"<" goes back,
"! "
exits}
```

INFO: Access to calendar server will be in non-SSL mode
Please Wait: Verifying whether the Calendar Server Instance connection
is alive

Instant Messaging Service Configuration Details

Enter the IM Server default domain, host name, port number, httpbind
component

JID and password, and avatar component JID and password.

```
Enter the Server Domain Name [example.mydomain.com] {"<" goes back,
"! " exits}:
Enter the Server Host Name [niag1-z4.example.mydomain.com] {"<" goes
back, "! "
exits}:
Enter the Server Port Number [5222] {"<" goes back, "! " exits}:
Enter the httpbind component JID
[niag1-z4.httpbind.example.mydomain.com] {"<"
goes back, "! " exits}:
Enter the httpbind Component Password [] {"<" goes back, "! " exits}:
Enter the avatar component JID [niag1-z4.avatar.example.mydomain.com]
{"<" goes
back, "! " exits}:
Enter the avatar Component Password [] {"<" goes back, "! " exits}:
```

Please enter the Sun Convergence Administrator User ID and Password.

```
Username [admin]:
Password:
Password Again:
```

Checking disk space...

The following items for the product Sun Convergence will be configured:

```
Product: Sun Convergence
Location: /var/opt/sun/comms/iwc
Space Required: 0 bytes
```

```
-----
Mail Service
Calendar Service
Instant Messaging Service
```

Ready to Configure

1. Configure Now
2. Start Over
3. Exit Configure Program

What would you like to do [1]?

Starting Task Sequence

==== Wed Apr 09 13:59:37 PDT 2008 =====

```
Running /bin/rm -rf /opt/sun/comms/iwc/config /opt/sun/comms/iwc/data
/opt/sun/comms/iwc/log
```

==== Wed Apr 09 13:59:38 PDT 2008 =====

```
Running /opt/sun/comms/iwc/lib/devinstall -l
schema2native:pkgcfg:config:iwc -v
-m -i /opt/sun/comms/iwc/lib/config-templates/config.ins
/opt/sun/comms/iwc/lib/config-templates /opt/sun/comms/iwc/lib
```

==== Wed Apr 09 13:59:38 PDT 2008 =====

```
Running /bin/sh -c echo fqRWiPLlh6c9INw7GkDq5g== >
/var/opt/sun/comms/iwc/config/.ngc_enc
```

==== Wed Apr 09 13:59:38 PDT 2008 =====

```
Running /bin/sh -c /opt/sun/comms/iwc/sbin/config-appsvr deploy *****
```

==== Wed Apr 09 14:01:07 PDT 2008 =====

```
Running /bin/rm -rf
/opt/SUNWappserver/domains/domain1/docroot/iwc_static/c1ln_sample
/opt/SUNWappserver/domains/domain1/docroot/iwc_static/js
/opt/SUNWappserver/domains/domain1/docroot/iwc_static/layout
```

==== Wed Apr 09 14:01:08 PDT 2008 =====

```
Running /usr/bin/unzip -q /opt/sun/comms/iwc/lib/jars/iwc-client.zip -d
/opt/SUNWappserver/domains/domain1/docroot
```

==== Wed Apr 09 14:01:12 PDT 2008 =====

```
Running /bin/sh -c /bin/mkdir -p /opt/sun/comms/iwc/install/Iwc-
config_20080409135740
```

==== Wed Apr 09 14:01:12 PDT 2008 =====

```
Running /bin/sh -c /bin/cp -p
/opt/sun/comms/iwc/lib/config-templates/IwcCfg.
properties /opt/sun/comms/iwc/install/Iwc-config_20080409135740/IwcCfg.
properties
```

Sequence Completed

```
PASSED: /bin/rm -rf /opt/sun/comms/iwc/config /opt/sun/comms/iwc/data
/opt/sun/comms/iwc/log : status = 0
```

```
PASSED: /opt/sun/comms/iwc/lib/devinstall -l
```

```
schema2native:pkgcfg:config:iwc -v
-m -i /opt/sun/comms/iwc/lib/config-templates/config.ins
/opt/sun/comms/iwc/lib/config-templates /opt/sun/comms/iwc/lib : status
= 0
```

```
PASSED: /bin/sh -c echo fqRWiPLlh6c9INw7GkDq5g== >
```

```

/var/opt/sun/comms/iwc/config/.ngc_enc : status = 0

PASSED: /bin/sh -c /opt/sun/comms/iwc/sbin/config-appsvr deploy *****
:
status = 0

PASSED: /bin/rm -rf
/opt/SUNWappserver/domains/domain1/docroot/iwc_static/c11n_sample
/opt/SUNWappserver/domains/domain1/docroot/iwc_static/js
/opt/SUNWappserver/domains/domain1/docroot/iwc_static/layout : status =
0

PASSED: /usr/bin/unzip -q /opt/sun/comms/iwc/lib/jars/iwc-client.zip -d
/opt/SUNWappserver/domains/domain1/docroot : status = 0

PASSED: /bin/sh -c /bin/mkdir -p /opt/sun/comms/iwc/install/Iwc-
config_20080409135740 : status = 0

PASSED: /bin/sh -c /bin/cp -p
/opt/sun/comms/iwc/lib/config-templates/IwcCfg.
properties /opt/sun/comms/iwc/install/Iwc-config_20080409135740/IwcCfg.
properties : status = 0

All Tasks Completed. Please check configuration log
/opt/sun/comms/iwc/install/Iwc-config_20080409135740.log for further
details.

The web container instance configuration was modified successfully.

The application server instance configuration was modified.

For the changes to take effect, you must restart the Application Server
Instance.

    <Press ENTER to continue>

Configuration Details:

    Product          Result          More Information
1.  Sun Convergence Configured Available

2.  Done

    Enter a number corresponding to the desired selection for more
information,
    or enter 2 to continue [2]:

You have successfully configured Sun Convergence. You are now requested
to
follow the post configuration instructions mentioned in Chapter 1 of
the Sun

```

Convergence Administration Guide.

```
mv /opt/sun/comms/iwc/install/saveState20080409135736  
/opt/sun/comms/iwc/install/Iwc-config_20080409135740/saveState  
Copying factory settings to /opt/sun/comms/iwc/data/setup
```

```
# ^D
script done on Wed 09 Apr 2008 02:04:49 PM PDT
```

SharedComponents

Shared Components Bundled With the Communications Suite Installer

The Communications Suite installer, `commpkg`, installs the following shared components. Sun Java System Message Queue is automatically installed with the other shared components.

Shared Component	Version
SECURITY NSS	4.2.6
SECURITY NSPR	4.6.7
SECURITY JSS	4.2.5
SASL	2.19
LDAPCSDK5	5.11
LDAPCSDK6	6.0
ICU	3.2.1
JDK	1.6.0_07
JavaHelp	2.0
Message Queue	4.1p1
Sleepycat Berkeley DB* Calendar Server	4.2.52
Sleepycat Berkeley DB* Messaging Server 7 Update 1	4.7.25

To Run the Communications Suite Installer

To Run the Communications Suite Installer

1. Log on as `root` to become a superuser.
2. Start the text-based installer. Use the `commpkg` usage as described in [commpkg install Usage](#). When `commpkg` is invoked, a log file will record the installation parameters.)

```
# ./commpkg install  
  
-- LOGFILE: /tmp/CommsInstaller_20070501132825.log
```

3. Accept the License Agreement. If you have already read the agreement in its entirety, you have the option of skipping the agreement and accepting the terms. To accept the terms of the agreement without viewing the entire license agreement, hit Enter to continue, then enter `n` to skip reading the agreement, and enter `yes` to accept the terms.
4. Specify Installation Location where server files will be installed (also known as the `INSTALLROOT`) or accept the default location.



Note

The default `INSTALLROOT` has changed from `/opt/SUNWmsgsvr` to `/opt/sun/comms/messaging` (for 32-bit installations) and `/opt/sun/comms/messaging64` (for 64-bit installations)

After specifying the `INSTALLROOT`, notices for Operating System and Shared Components patches may appear if previous versions of patches are installed on the machine.

5. Select Products to Install

The following products are included in this release:

- Messaging Server 7 Update 1
- Messaging Server (64bit) 7 Update 1
- Comms DSsetup 6.4
- Calendar Server 6.3 (with upgrade patch installed by `commpkg`)
- Instant Messaging 8
- Convergence 1 Update 1
- Delegated Administrator 6.4 (with upgrade patch installed by `commpkg`)
- Communications Express 6.3 (with upgrade patch installed by `commpkg`).
- Messaging Server Sun Cluster HA agent 7.0
- Calendar Server Sun Cluster HA agent 6.3

6. Generate List of Items to Install

In this step, the installer lists all the products as well as shared components that will be installed or upgraded. If items need to be upgraded, the installer will give you the choice to upgrade.



Caution

Remember, upgrading shared components is an irreversible process. However, if you do not install the correct version of the shared components, the product may not work as designed. So, proceed carefully when installing and upgrading shared components and products.

Once you determine what you are going to install and upgrade, the installer will create a summary.

7. Ready to Install

Once you specify the components you're installing and upgrading, the installer is ready to install Messaging Server files into `INSTALLROOT`.

If everything installs properly, you will see `All tasks PASSED` in the summary panel.

8. Log Files

Once installation has completed, time-stamped log files are created like in the following example:

- To undo your installation, go to your `undoCommsInstall` script like the following example:
`/var/opt/CommsInstaller/logs/undoCommsInstall_20070501135358`
- To run silent installation for multiple installations, use the silent installation file like in the following example:
`/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358`
- The installer creates a log file of the installation process in the following location. For example:
`/var/opt/CommsInstaller/logs/CommsInstaller_20070501135358.log`

9. Undo Installation

If you want to remove the installation that you just ran, you can undo your installation by running the `undoCommsInstall` script like the following example:

```
/var/opt/CommsInstaller/logs/undoCommsInstall_20070501135358 .
```

Undo reverses the specific steps taken during installation. It will also undo Shared Component installations. If, however, you want to pick and choose specific components to uninstall, use the `commpkg uninstall` command: [commpkg uninstall Usage](#). The uninstaller does not uninstall shared components.

10. Directory Layout

In the `INSTALLROOT` (default: `/opt/sun/comms`), you may see the following directories:

- `CommsInstaller`, where a copy of the Installer resides.



Note

The log files listed in the previous step are located in the `/var/opt/CommsInstaller/log` directory. If you install Messaging Server in an alternate root, the logfiles are located in the alternate root's `INSTALLROOT/var/opt/CommsInstaller/log` directory.

- `messaging`, the 32-bit Messaging Server version
- `messaging64`, the 64-bit Messaging Server version

Uninstalling Communications Suite in Silent Mode

Uninstalling Communications Suite in Silent Mode

If you run the uninstaller in Silent mode, you are running a non-interactive session. The uninstallation inputs are taken from a silent uninstallation file (also known as a state file), from command line arguments, or defaults.

To run a silent uninstallation, follow these steps:

1. Run an interactive uninstallation session.

A state file similar to

`/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358` is automatically created.



Note

The silent installation and uninstallation files have the same file naming convention. You need to scan the contents of the file to determine if it's an installation or uninstallation silent file.

2. Copy the state file to each host machine and edit the file as needed.
3. Run the silent uninstallation on each host. See the silent uninstallation usage.



Note

Command-line arguments override the values and arguments in the state file.

The following is a sample uninstall silent file:

```
# Silent File for CommsInstaller 5.0-1.03}}
# Generated on 20070604120325}}
# verb used to create this silent file
VERB=uninstall
# root directory}}
ROOTDIR=/
# list of components to uninstall (using mnemonics)
COMPONENTS=MS64 MS64_L10N CS CS_L10N
# friendly name for the installroot
INSTALLNAME=
```

Verify Application Server Version

Verify the Version of Application Server

To verify which version of Application Server you have installed, run the following command on the host where you have installed Application Server:

```
# /opt/SUNWappserver/bin/asadmin version
Version = Sun Java System Application Server 9.1_02
```

You can obtain other relevant information by running the following commands:

```
# grep -i admin_profile /opt/SUNWappserver/config/asadminenv.conf
AS_ADMIN_PROFILE=enterprise
```

```
# grep -i hadb /opt/SUNWappserver/config/asenv.conf
AS_HADB="/opt/SUNWappserver/hadb/4.4.3-6"
```

```
# grep -i jdk /opt/SUNWappserver/config/asenv.conf
AS_JAVA="/opt/SUNWappserver/jdk"
```

```
# /opt/SUNWappserver/jdk/bin/java -version
java version "1.5.0_14"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_14-b03)
Java HotSpot(TM) Server VM (build 1.5.0_14-b03, mixed mode)
```

Chapter 20. Communications Suite 6 Update 1 Upgrade Guide

Sun Java Communications Suite 6 Update 1 Upgrade Guide

This document describes the best practices for upgrading earlier versions of Communications Suite products to version 6 Update 1. (For a list of those individual product version numbers see [Communications Suite 6 Update 1 Release Notes](#). In this guide we use the terms products, product components, and shared components. *Products* are things like the Messaging Server, Calendar Server, Delegated Administrator and Instant Messaging Server. *Product components* are functional parts of the products. For example, for Messaging Server there are message stores, relays, messaging multiplexors. Calendar Servers has front-end and back-end servers. *Shared resources* are software that are not part of the Communications Suite or other support products, but are required for Communications Suite products to operate. Examples include NFS, SASL, Java.

Communications Suite 6 Update 1 consists of a number of individual products, product components and shared resources, and there is no single system utility that upgrades all Communications Suite components at once. Upgrading a Communications Suite deployment consists of a upgrading component-by-component and computer-by-computer, using the component-specific upgrade procedures described in this document. Some of these procedures are as simple as adding upgrade patches to the existing software. Other procedures require considerably more planning, preparation and complexity. Proper upgrading starts with knowing what products you want to upgrade and the order in which to upgrade them.

This page contains the following sections:

- [Define Your Target Deployment](#)
- [Determine the Sequence of Product Upgrades](#)
- [Upgrading Messaging Server](#)
 - [Upgrading Messaging Server in an HA \(High Availability\) Environment](#)
- [Upgrading Calendar Server in the Solaris OS](#)
 - [Upgrading the Calendar Server in an HA \(High Availability\) Environment](#)
- [Upgrading Instant Messaging Server](#)
 - [Upgrading the Instant Messaging Server in an HA \(High Availability\) Environment](#)
- [Upgrading Sun Convergence](#)
- [Upgrading Delegated Administrator](#)
- [Upgrading `comm_dssetup.pl`](#)
- [Upgrading Communications Express](#)
- [Upgrading Sync](#)
- [Upgrading Outlook Connector](#)

Define Your Target Deployment

A successful upgrade depends on knowing where you are (your current deployment) and where you are going (your target deployment). By defining your target deployment, you will know what products and components you need to upgrade and which ones can remain as is.

These are the three most common Communications Suite upgrade scenarios:

1. **Upgrade for a Product Feature.** There is a specific feature you want from a specific product and you are only interested in upgrading the products/components necessary to support that feature.

In this scenario, you simply upgrade the desired product. See the upgrade section below describing the product you wish to upgrade.

2. **Upgrade to use Sun Convergence.** You only want to upgrade the products and components necessary to use Sun Convergence.

The minimum product versions that can still run Convergence are listed in [Product Version Compatibility Requirements for Convergence 1 Update 1](#).

3. **You want to upgrade everything to latest release.**

You upgrade each product individually, host-by-host. See [Requirements for Communications Suite 6 Update 1](#).

Once you have chosen the scenario that best fits your situation, you will know what products you will need to upgrade.



Tip

Installing Only Shared Components: To install just the shared components for a component product, launch the Communications Suite installer then prefix your product selection with a tilde (~). For example, to install only the shared components for Messaging Server 32-bit, at the Product Selection prompt, you would type ~1. You can type multiple selections, using a comma to separate your entries.

Determine the Sequence of Product Upgrades

The order in which the Communications Suite product and versions are upgraded may be critical. Use the following guidelines to determine the upgrade sequence for Communications Suite products:

- If you are upgrading Communications Express from a version earlier than 6.3, then you must upgrade to Messaging Server 6.3 or later first.
- For upgrading a pre-6.3 Messaging Server you must upgrade the messages store components to 6.3 or later before upgrading the webmail server (previously called MEM) to 6.3 or later.

The rest of this guide describes how to upgrade each of the Communications Suite products.

Upgrading Messaging Server

See [Messaging Server 7 Update 1 Upgrade](#)

Upgrading Messaging Server in an HA (High Availability) Environment

See [Upgrading to Messaging Server 7 Update 1 in an HA Environment](#)

Upgrading Calendar Server in the Solaris OS

See [Calendar Server 6.3 Upgrade](#)

Upgrading the Calendar Server in an HA (High Availability) Environment

See [Upgrading Calendar Server 6.3 in an HA Environment](#)

Upgrading Instant Messaging Server

See [Instant Messaging 8 Upgrade](#)

Upgrading the Instant Messaging Server in an HA (High Availability) Environment

See [Upgrading to Instant Messaging 8 in an HA Environment](#)

Upgrading Sun Convergence

To upgrade from Sun Convergence 1.0 to Sun Convergence 1 Update 1, see [Upgrading to Convergence 1 Update 1](#).

Upgrading Delegated Administrator

See [Delegated Administrator 6.4 Upgrade](#).

Upgrading `comm_dssetup.pl`

It is important to run the latest version of `comm_dssetup.pl` to prepare the schema, index, and data in your Directory Server to work with Messaging Server, Calendar Server, Instant Messaging, Delegated Admin or any products that depend on the Directory Server.

Run `commpkg upgrade` to upgrade `comm_dssetup.pl` and then run `perl comm_dssetup.pl`. For upgrade details see [commpkg upgrade Usage](#)

Upgrading Communications Express

See [Communications Express 6.3 Upgrade](#).

Upgrading Sync

Using [Sun Java System Communications Sync](#) with Communications Suite 6 Update 1 and Sun Convergence requires the following:

1. Sun Java System Communications Sync Version 3.1. Note that Sync 3.1 is the same as 3.0 with additional fixes.
2. Installation or upgrade to Communications Express 6.3. (See [Communications Express 6.3 Upgrade](#) or the [Sun Java Communications Suite 6 Update 1 Installation Guide](#).)

Upgrading Outlook Connector

See [Connector for Microsoft Outlook 7.3 Update 1 Upgrade Guide](#)

Calendar Server 6.3 Upgrade

Upgrading to Calendar Server 6.3 with Convergence

This section describes how to upgrade Calendar Server to use Sun Convergence. The version required is Calendar Server 6.3 with the latest patches installed. Upgrading consists of choosing an upgrade strategy, then upgrading each of the individual servers using that strategy. The procedure for upgrading individual servers depends on the version of Calendar Server you are currently running.

To upgrade the Calendar Server from Communications Suite Release 5 to Release 6 Update 1, you use the `commpkg upgrade` command. Both versions are 6.3, but `commpkg upgrade` installs the required patches. To upgrade from 6.2, see [To Upgrade From Calendar Server 6.2](#). To upgrade from a version earlier than 6.2, first refer to the [Chapter 5, Upgrading Calendar Server, from the Sun Java Communications Suite 5 Upgrade Guide](#) to upgrade to 6.3, then return here for instructions on how to apply the appropriate patches.

This chapter consists of the following sections:

- [Calendar Server Upgrade Strategies](#)
- [Upgrading Individual Calendar Servers](#)
- [Verifying the Upgrade](#)
- [Upgrading Calendar Server With HA](#)
- [Calendar Server Backoff](#)

Calendar Server Upgrade Strategies

There are two possible Calendar Server upgrade strategies: the *parallel system upgrade* or the *in-place upgrade*.

In an in-place upgrade, the existing software is upgraded to the new version in the same location.

In a parallel system upgrade, the existing software remains operating while the new version is installed in another location. A parallel system upgrade is useful for deployments consisting of multiple servers in a distributed network. The servers interoperate by using adjacent builds (in adjacent directories) so that the network can be upgraded in phases.

Each strategy has its advantages and disadvantages:

- In a parallel system upgrade, users have access to the calendar (though, readonly) throughout the upgrade process. During an in-place upgrade, some downtime is incurred.
- A parallel system upgrade limits the impact on global and distributed services during the upgrades.
- In a parallel system upgrade, a smaller staff is required to administer the upgrades on many distributed machines. Conversely, this approach limits the extended downtime a small staff needs to upgrade many machines together.
- If the upgrade is not successful, parallel system upgrades offer an easier roll-back procedure. Parallel system upgrades reduce the risk of attempting to change all installations at once before being able to verify that the solution is workable. In-place upgrades have a more complex roll-back procedure.
- Parallel system upgrades require additional hardware. In-place upgrades do not require additional hardware.



Upgrade Strategy for Calendar Server Deployments Using the DWP Protocol

For Calendar Server deployments that use the Database Wire Protocol (DWP) protocol, you are *strongly* urged to consider a parallel system upgrade. Here's why:

DWP design constraints require all nodes in a distributed deployment to be upgraded at the same time. With its versionless state, the DWP protocol presumes (requires) the front-end and back-end servers to be the same build/version.

For example, suppose an organization running Calendar Server with DWP has back-end servers in Europe, Asia, and the Americas and front-end servers in a multitude of countries. To perform an in-place upgrade, this deployment would need to shut down the entire Calendar Server network. A parallel system upgrade would enable the existing Calendar Servers to continue running while the network is upgraded in phases.

Parallel System Upgrade Procedures

In a parallel system upgrade, you do the following:

1. Create a separate new Calendar Server environment. Refer to the [Sun Java Communications Suite 5 Deployment Planning Guide](#) for details.

2. Set the existing Calendar server to a read-only mode and inform users that calendar entries cannot be created or modified until the migration is complete.

Set `caldb.berkeleydb.readonly` to `yes` in `ics.conf` and restart the services.

3. Migrate the configuration and calendar data to the new environment. (See the version-specific section.)
4. Switch over to the new system and verify that everything works.

End users, or any applications that depend on this server, will need to connect to this box instead of the old box.

5. Inform users that calendar entries can be created or modified and the migration is complete.
6. Shut down the legacy servers.
7. If the switchover does not work, switch back to the legacy servers.

In-place Upgrade Procedures

In an in-place upgrade, you do the following:

1. Back up your calendar database.

See [csbackup](#)

2. Perform the upgrade procedures as described in the following sections.
3. Verify that the new system works.

For example, check that users can log in and create events and to-do's.

4. If the new system does not work, remove the upgrade patches and then restore the data.

Restore the database save in step 1. See [csrestore](#)



Note

You cannot remove the upgrade patches and restore the data in Linux by using an in-place upgrade.

The rest of this section describes how to upgrade your individual Calendar Servers by using these two strategies.

Upgrading Individual Calendar Servers

Whether you are doing an in-place or parallel upgrade, the process for upgrading individual servers is the same. How those individual Servers are upgraded to use Sun Convergence depends on whether you are using the version 6.3 or an earlier version of Calendar Server. To upgrade from a version earlier than 6.2, refer to the [Chapter 5, Upgrading Calendar Server of the Sun Java Communications Suite 5 Upgrade Guide](#) to upgrade to 6.3, then return here for instructions on how to apply the appropriate patches. To upgrade from 6.3 or 6.2 you'll need to install the latest patches listed in [Release Notes](#) . Detailed instructions are provided in later sections.

The localization patches and packages are no longer required separately, as localization resources are bundled with core packages. Before applying this patch, remove the old I10n packages if installed. For example:

```
pkgrm -n SUNWics-l10n
```

or

```
pkgrm -n SUNWfrics SUNWdeics SUNWesics SUNWjaics SUNWkoics SUNWzhics  
SUNWtwics
```

for Linux:

```
rpm -e sun-calendar-core-l10n
```

or

```
rpm -e sun-calendar-core-fr  
rpm -e sun-calendar-core-de  
rpm -e sun-calendar-core-es  
rpm -e sun-calendar-core-ja  
rpm -e sun-calendar-core-ko  
rpm -e sun-calendar-core-zh  
rpm -e sun-calendar-core-zh_TW
```

Other Calendar Server Upgrade Notes:

- At some sites, Calendar Server 6.3 might not start after patching. If this problem occurs, follow the procedure [described in the Known Issues section of Calendar Server 6.3 Release Notes](#) .
- Calendar Server should be shut down when patches are being applied to the installed image.
- In architectures in which different Calendar Server subcomponents reside on different computers, for example, Calendar Server back-end store on one computer and Calendar Server front-end processes (such as cshttpd) on another, the upgrade must be performed on all such computers.
- The Calendar Server upgrade applies to multiple Calendar Server subcomponents on one computer using the same installed image.
- Data created in the Solaris x86 version of Calendar Server 6.3 patch 121658-19 or earlier is corrupted when you upgrade to patch 121658-20 or later. This issue occurs on Solaris x86 platforms only (CR 6642958). With patch 121658-20 and later, Calendar Server uses the new

Berkeley Database library, which is incompatible with the database created by earlier versions. In order to use the database created by patch 121658-19 (or prior) with this patch, you must update the database. See [Release Notes](#) for details on how to update the database and further details.

- Calendar Server 6.3 requires has the software dependencies listed in the [Release Notes](#) . For a list of all Communications Suite requirements, see the [Requirements for Communications Suite 6 Update 1](#).

If you want to upgrade Calendar Server 6.3 so that it can be used by Sun Convergence, you can simply run the `commpkg upgrade` command

To Upgrade From Calendar Server 6.3

Note that Communications Suite 5 and 6 Update 1 both use Calendar Server 6.3, but Communications Suite 6 Update 1 has the required patches that work with Sun Convergence.

1. Run `commpkg upgrade` command

To Upgrade From Calendar Server 6.2 on Solaris

To upgrade Calendar Server 6.2 to Convergence-enabled Calendar Server 6.3, use the following directions:

1. Obtain the required patch. See [Release Notes](#) .

You can download patches to `/tmp` from: <http://sunsolve.sun.com>.

2. Log in to the machine where you are upgrading Calendar Server (as superuser or root).

```
> su -
```

3. Stop Calendar Server if it is running.

```
cal-svr-base/cal/sbin/stop-cal
```

4. If you have not already done so, upgrade shared components to Communications Suite 6 Update 1.

See [Communications Suite 6 Update 1 Requirements](#).

5. Apply the Calendar Server core patch (see [Release Notes](#)).

```
patchadd <patch_ID>
```

6. Confirm that the patch upgrades were successful:

```
showrev -p | grep ics
```

The output should return the versions of patch IDs applied in Step 5.

7. Reconfigure Calendar Server.

```
cd cal-svr-base/sbin  
./csconfigurator.sh -noconsole -nodisplay -novalidate
```

The `-noconsole -nodisplay -novalidate` arguments pick up the existing Calendar Server 6.x configuration values and perform the necessary reconfiguration for the upgraded software.

If the Calendar Server 6.x installation had been configured in nonhosted domain (legacy) mode, the configurator gives the choice either to stay in that mode or switch to hosted domain mode, the

default for this version of Calendar Server. Switching to hosted domain mode is not reversible.

The `csconfigurator` command is documented in the [Calendar Server Administration Guide](#).

8. Move Calendar Server data files to a temporary location.

```
mkdir /var/cal-svr-base/old_csdb
mv /var/cal-svr-base/csdb/* /var/cal-svr-base/old_csdb
```

The `old_csdb` directory is a temporary location.

9. Change permissions on the temporary location.

```
chown -R icsuser:icsgroup /var/cal-svr-base/oldcsdb
```

10. Migrate the Calendar Server 6.2 (Java Enterprise System 2005Q4) data using the `csmigrate` migration tool.

```
cd cal-svr-base/cal/sbin
./csmigrate -l max /var/cal-svr-base/old_csddb /var/cal-svr-base/csdb
```

The general syntax for `csmigrate` is as follows:

```
csmigrate [-q] [-d] [-l min/max] [-b backup_dir] source_dbdir
target_dbdir
```

Command options and operands are documented in the following table.

TABLE 1. `csmigrate` Command Options and Operands

Option/Operand	Description
<code>-q</code>	Specifies quiet mode, no print statements
<code>-d</code>	Specifies dry run mode, no new db written
<code>-l min or max</code>	Specifies log level. <code>csmigrate</code> creates the following log files: cal-svr-base/logs/csmigrate.log cal-svr-base/logs/csmigrateError.log
<code>-b backup_dir</code>	Specifies directory to which to back up the source database. The program works on the backed-up copy to prevent any damage to the source database. The default location is <code>source_dbdir/backup</code> .
<code>source_dbdir</code>	Directory where pre-migration database files are located.
<code>target_dbdir</code>	Directory where post-migration files will be written

If you choose an arbitrary `target_dbdir` rather than `/var/cal-svr-base/csdb`, then you have to change the value of the `caldb.berkeleydb.homedir.path` property in the Calendar Server configuration file to point to that location.

Note: If the `csmigrate` command fails on the Solaris 10 platform, set the library path to null when running the command:

```
LD_LIBRARY_PATH= ./csmigrate ...
```

11. Restart the Calendar Server that was stopped in the earlier step.

```
cal-svr-base/cal/sbin/start-cal
```

To Upgrade From Calendar Server 6.2 on Linux

The following procedure applies to Calendar Server on the computer where the upgrade is taking place.

1. Obtain the required patches by using the patch numbers and RPM names from [Release Notes](#) . Use this information to obtain the version numbers for the RPM.

Patches can be downloaded to /tmp from: <http://sunsolve.sun.com>

2. Log in as root or become superuser.

```
su -
```

3. Stop Calendar Server if it is running.

```
cal-svr-base/sbin/stop-cal
```

4. If you have not already done so, synchronize all shared components to Release 6.

See Upgrade Calendar Server Dependencies.

5. Remove the 6.2 calendar-api package

```
rpm -e sun-calendar-api-6.2-10.28
```

Note: The version number on the package name might be different, depending on the version of calendar patch installed. Confirm the package name to be deleted by using `rpm -qa | grep sun-calendar`

6. Apply the core and calendar-api in the following order. (The following *rpm files are an example. Use the *rpm files that came with the patch download.)

```
rpm -Fvh sun-calendar-core-6.3-7.03.i386.rpm
```

```
rpm -i sun-calendar-api-6.3-7.03.i386.rpm
```

7. Confirm that the patch upgrades were successful:

```
rpm -qa | grep sun-calendar
```

The new version numbers of the RPMs in Step 5 should be returned.

8. Reconfigure Calendar Server.

```
cd cal-svr-base/sbin
```

```
./csconfigurator.sh
```

If the Calendar Server 6.2 or earlier Calendar Server installation had been configured in non-hosted domain (legacy) mode, the configurator offers the choice of either staying in that mode or switching to hosted domain mode, which is the default for Calendar Server 6.3 with the latest patches. Switching to hosted domain mode is not reversible.

The `csconfigurator` command is documented in the [Calendar Server Administration Guide](#) .

9. Move Calendar Server data files to a temporary location.

```
mkdir /var/cal-svr-base/oldcsdb
```

```
mv /var/cal-svr-base/csdb/* /var/cal-svr-base/oldcsdb
```

where oldcsdb is a temporary location.

10. Change permissions on the temporary location.

```
chown -R icsuser:icsgroup /var/cal-svr-base/oldcsdb
```

11. Migrate the Calendar Server 6.2 or earlier data by using the csmigrate migration tool.

```
cd cal-svr-base/sbin  
./csmigrate -l max /var/cal-svr-base/old_csddb /var/cal-svr-base/csdb
```

The general syntax for csmigrate is as follows:

```
csmigrate [-q] [-d] [-l min|max] [-b backup_dir] source_dbdir  
target_dbdir
```

Command options and operands are documented in Table 1, shown previously.

12. Restart the Calendar Server that was stopped in Step 3.

```
cal-svr-base/sbin/start-cal
```

Verifying the Upgrade

You can verify the upgrade of Calendar Server by running the following commands:

Solaris: `cal-svr-base/cal/sbin/csversion`

Linux: `cal-svr-base/sbin/csversion`

See the [Release Notes](#) for the appropriate version values.

Upgrading Calendar Server With HA

Calendar Server instances running in a cluster environment must share the same configuration. Ensure that the `config` directory is mounted on the node that you are upgrading. Apply Calendar Server upgrade patches to each of the instances as described previously. No reconfiguration is required.

Calendar Server Backoff

To roll back to the previous version of Calendar Server, install a fresh copy of the old version of Calendar Server and perform a `csrestore` on the database you backed up prior to starting the upgrade.

commpkg upgrade Usage

Commpkg Upgrade Usage

The `commpkg upgrade` command enables you to upgrade the Communications Suite products and shared components. It is one of the commands available with the Communications Suite installer, `commpkg`.

This command upgrades the Communications Suite components' installation bits on your machine, but it does not configure these components. To configure the components after installation, see [Initial Configuration](#).

For information about upgrading, see the [Communications Suite 6 Upgrade Guide](#).

For information about the `commpkg` general syntax and options, see:

- [Communications Suite Installer: General Syntax and Commands](#)

For information about the other `commpkg` commands and their options, see:

- [commpkg install Usage](#)
- [commpkg uninstall Usage](#)
- [commpkg info Usage](#)

Commpkg Upgrade Command: Syntax

```
commpkg upgrade [options] [installroot|name]
```

Using the `installroot/name` Command-Line Argument

If you specify `installroot/name` on the command line, it specifies an alternate root to use for the upgrade. That is, it is equivalent to specifying the `--altroot` and `--installroot` options.

If you specify the `name` command-line argument, it must exist in the software list. If it is not, an error is returned. The `name` is looked up in the software list and is used for the corresponding `installroot`.

For details about these options, see [Commpkg Install Command: Options](#).

Commpkg Upgrade Command: Options

The following options are used by the `commpkg upgrade` command:

<code>commpkg upgrade options</code>	Description
<code>--excludeOS</code>	Do not apply Operating System patches during product upgrade
<code>--excludeSC</code>	Do not install, upgrade, or patch any Shared Components
<code>--acceptLicense</code>	Accept the license conditions in the <code>LICENSE.txt</code> file

<p><code>--altroot [name]</code></p>	<p>Specify an alternate root directory during a multi-host installation. The <code>INSTALLROOT</code> (the top level installation directory for all products and shared components) will be the alternate root.</p> <p>If you specify a <i>name</i>, it will be a friendly name associated with the altroot that will be registered in the software list. The <i>name</i> option is supported on Solaris only (not on Linux).</p> <p>You can use this option to install multiple instances of Communications Suite products on the same host or Solaris zone. You use this option to perform a side-by-side upgrade of Communications Suite products.</p>
<p><code>--distro path</code></p>	<p>Specify the <i>path</i> to packages/patches for the products</p> <p>Default: Location of <code>commpkg</code> script</p>
<p><code>--installroot path</code></p>	<p>Specify the <i>path</i> of <code>INSTALLROOT</code>, the top level installation directory for Communications Suite products and shared components.</p> <p>Default <code>INSTALLROOT</code> on Solaris and Linux: <code>opt/sun/comms</code></p> <p>The subdirectories for individual Communications Suite products are installed under the <code>INSTALLROOT</code>. For example, Messaging Server (32-bit) software is installed by default in <code>opt/sun/comms/messaging</code>.</p>
<p><code>--silent INPUTFILE</code></p>	<p>Run silent upgrade, taking the inputs from the <i>INPUTFILE</i> and the command line arguments. The command line arguments override entries in the <i>INPUTFILE</i>. Upgrade proceeds without interactive prompts.</p> <p>Use <code>--dry-run</code> to test silent upgrade without actually installing the software.</p> <p>When running a silent upgrade, you must use the <code>--acceptLicense</code> option in the command line or set <code>ACCEPTLICENSE=YES</code> in the <i>INPUTFILE</i>.</p> <p>Specify <code>NONE</code> for <i>INPUTFILE</i> if you want to run in silent mode without using an input file. When you specify <code>NONE</code>, the upgrade uses default values.</p> <p>For more information about running a silent upgrade, see Upgrading Communications Suite in Silent Mode.</p>
<p><code>--dry-run</code> or <code>-n</code></p>	<p>Does not upgrade Communications Suite components. Performs checks.</p> <p>This option creates a silent upgrade file in the <code>/tmp</code> directory.</p>

<pre>--upgradeSC [y n]</pre>	<p>Indicate whether or not to upgrade shared components as required.</p> <p>Note: If this option is not specified, you will be prompted for each shared component that needs to be upgraded.</p> <p>Default: n</p> <div style="background-color: #ffffcc; padding: 10px; border: 1px solid #ccc;"> <p> Caution Upgrading shared components is irreversible. However, if you do not upgrade required shared components, products might not work as designed.</p> </div> <p>The <code>--excludeSC</code> flag has precedence over this flag.</p>
<pre>--auditDistro</pre>	<p>Audits the distribution to verify that the required patches and packages are present and that the packages have the correct versions. Compares the installed distribution to the product files internal to <code>commpkg</code>.</p>
<pre>--pkgOverwrite</pre>	<p>Overwrite the existing installation package. You might use this option when you are installing a shared component in a global zone where either the shared component does not exist in a global zone, or the shared component exists in the whole root zone. The default is not to override the existing package. In general, shared components should be managed in the global zone.</p>
<pre>--components comp1 comp2 ...</pre>	<p>Specifies the Communications Suite component products to be upgraded. Separate each component product with a space. (Thus, the list is a space-delimited set.)</p> <p>To specify each component product, use the mnemonic associated with that product. For example, Messaging Server (32-bit) uses MS, Messaging Server (64-bit) uses MS64, Calendar Server uses CS, and so on.</p> <p>To display a list of the mnemonics for all the component products, use the <code>commpkg info --listpackages</code> command.</p>
<pre>--usePkgUpgrade</pre>	<p>For Communications Suite products, if the upgrade can be performed by using a patch or an in-place package upgrade, this option uses the in-place package upgrade.</p> <p>The default is to use a patch to upgrade, if possible. Note: patches are only used on Solaris OS.</p>

commpkg upgrade Sample Session

Here is a [sample session of `commpkg upgrade`](#).

commpkg upgrade sample session

commpkg Upgrade Sample Session

This sample session shows an upgrade of the following Communications Suite 6 products:

- Messaging Server, from version 6.3 to version 7.0
- Comms Directory Server Setup Script, from version 6.3-2.03 to version 6.4-2.01

The session uses the `commpkg upgrade` command to perform the upgrade.

This document contains the following topics:

- [Summary of Commands Run](#)
- [Session](#)
- [Upgrade Comments](#)

Summary of Commands Run

```
Lines with 70 tildes are used as delimiters in this file
```

```
~~~~~  
  
Summary of commands run:  
(65 root) ./commpkg info --verbose  
(66 root) ./commpkg upgrade --acceptLicense  
(67 root) cat  
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20080529132350  
(68 root) ./commpkg info --verbose  
(69 root) /opt/SUNWmsg/sbin/imsimta version  
(70 root) cat  
/var/opt/CommsInstaller/logs/CommsInstaller_20080529132350.log  
~~~~~
```

Session

```
Session  
  
(65 root) ./commpkg info --verbose  
-- LOGFILE: /tmp/CommsInstaller_20080529132327.log  
=====
```

```
Detecting Installed Products...  
  NOTICE: CommsInstaller is present with a different VERSION.  
Detecting Installed Patches...  
ALTROOT: /  
  NAME: <none>  
  Product: Messaging Server 6.3  
          Version: 6.3-0.15  
          Basedir: /opt/SUNWmsg
```

```
Product: Comms DSsetup 6.4
Version: 6.3-2.03
Basedir: /opt/SUNWcomds
```

```
(66 root) ./commpkg upgrade --acceptLicense
-- LOGFILE: /tmp/CommsInstaller_20080529132350.log
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone
```

```
CommsInstaller version 6.0-0.05 built on Thu May 22 13:56:43 PDT 2008
```

```
Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.
```

```
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
```

```
=====
Detecting Installed Products...
  NOTICE: CommsInstaller is present with a different VERSION.
Detecting Installed Patches...
=====
Product Selection:
```

```
Communication Services Products:
```

Item	Description
1	Messaging Server 7.0 (7.0-0.04) Installed Version 6.3-0.15 at /opt/SUNWmsg
2	Comms DSsetup 6.4 (6.4-2.01) Installed Version 6.3-2.03 at /opt/SUNWcomds

```
Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2
```

```
Please select the products you wish to upgrade [1, 2]:
=====
Checking for Shared Component Upgrade Requirements...
```

```
CommsInstaller has a different pkg version installed
Description: The CommsInstaller installed as a package so it can be
patched
```

```
Current pkg Version (SUNWcomms): 6.0,REV=2008.05.15
To be installed pkg version (SUNWcomms): 6.0,REV=2008.05.22
Product Version: 6.0
```

```
Note that changing pkg versions is irreversible
```

```
Do you wish to change pkg versions for CommsInstaller [n] : y
=====
NOTICE: CommsInstaller will be upgraded...
        Removing the old version is an irreversible process.
```

```

WILL REMOVE EXISTING: CommsInstaller 6.0,REV=2008.05.15 (6.0-0.05)
WILL INSTALL: CommsInstaller 6.0 (6.0-0.05)
                to /CommsInstaller
NOTICE: Upgrading Messaging Server 6.3-0.15 (to 7.0-0.04 at
/opt/SUNWmsg)
        Upgrade will be done by in-place package replacement
        This is an irreversible process!!!
WILL UNINSTALL: Messaging Server 6.3-0.15 (at /opt/SUNWmsg)
WILL INSTALL: Messaging Server 7.0 (7.0-0.04)
                to /opt/SUNWmsg
NOTICE: Upgrading Comms DSsetup 6.3-2.03 (to 6.4-2.01 at
/opt/SUNWcomds)
        Upgrade will be done by applying a patch
WILL INSTALL: patch 118245-18 for Comms DSsetup
=====
Ready to upgrade

Do you want to continue ? [yes] :

=====
Removing existing CommsInstaller 6.0,REV=2008.05.15 (6.0-0.05)...
----- Executing Task 1 of 15 ...

=====
Installing CommsInstaller 6.0 (6.0-0.05)...
----- Executing Task 2 of 15 ...

=====
Upgrading Messaging Server 6.3-0.15 (at /opt/SUNWmsg)...
  Calling /tmp/20080522/SunOS_sparc/MS/CI/preupgrade 6.3-0.15
/opt/SUNWmsg 1...
----- Executing Task 3 of 15 ...

=====
Uninstalling Messaging Server 6.3-0.15 (at /opt/SUNWmsg)...
----- Executing Task 4 of 15 ...
----- Executing Task 5 of 15 ...
----- Executing Task 6 of 15 ...
----- Executing Task 7 of 15 ...
----- Executing Task 8 of 15 ...
----- Executing Task 9 of 15 ...
----- Executing Task 10 of 15 ...
----- Executing Task 11 of 15 ...
----- Executing Task 12 of 15 ...

=====
Installing Messaging Server 7.0 (7.0-0.04)...
----- Executing Task 13 of 15 ...
  Calling /tmp/20080522/SunOS_sparc/MS/CI/postupgrade 6.3-0.15
/opt/SUNWmsg 1...
----- Executing Task 14 of 15 ...

=====
Done Upgrading Messaging Server (to 7.0-0.04 at /opt/SUNWmsg)...

=====
Upgrading Comms DSsetup 6.3-2.03 (at /opt/SUNWcomds)...

```

```

=====
Installing patch 118245-18 for Comms DSsetup...
----- Executing Task 15 of 15 ...
=====
Done Upgrading Comms DSsetup (to 6.4-2.01 at /opt/SUNWcomds)...
=====
SUMMARY:

All tasks PASSED
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=====

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20080529132350>
NOTICE: LOGFILE created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20080529132350.log
(67 root) cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20080529132350
#
# Silent File for CommsInstaller 6.0-0.05
# Generated on 20080529132350
#
#
# NOTE: You must set ACCEPTLICENSE=yes below or alternatively
#       use --acceptLicense on the command line
#
#
# verb used to create this silent file
VERB=upgrade

#
# alternate distro path if not found where commpkg resides
#   and no --distro switch specified is
#
ALTDISTROPATH=/tmp/20080522

#
# flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEEOS=no

#
# flag to indicate whether to exclude shared components
#

```

```

EXCLUDESC=no

#
# flag to indicate acceptance of the software license
#
ACCEPTLICENSE=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to perform upgrade using pkgrm/pkgadd
#
USEPKGUPGRADE=no

#
# list of components (using mnemonics)
#
COMPONENTS=MS DSSETUP
COMPONENT_VERSIONS= 6.3 6.4
(68 root) ./commpkg info --verbose
-- LOGFILE: /tmp/CommsInstaller_20080529142312.log
=====
Detecting Installed Products...
Detecting Installed Patches...
ALTROOT: /
  NAME: <none>
  Product: Messaging Server 7.0
    Version: 7.0-0.04
    Basedir: /opt/SUNWmsg
  Product: Comms DSsetup 6.4
    Version: 6.4-2.01
    Basedir: /opt/SUNWcomds

(69 root) /opt/SUNWmsg/sbin/imsimta version
Sun Java(tm) System Messaging Server 7.0-0.04 32bit (built May  8 2008)
libimta.so 7.0-0.04 32bit (built 09:59:49, May  8 2008)
Using /opt/SUNWmsg/config/imta.cnf
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
(70 root) cat
/var/opt/CommsInstaller/logs/CommsInstaller_20080529132350.log

===== LOGFILE started Thu May 29 13:23:50 2008 =====
LOGFILE = /tmp/CommsInstaller_20080529132350.log
Running /usr/bin/perl ./commpkg --acceptLicense
-- /usr/bin/perl ./commpkg upgrade --acceptLicense
-- perl version: 5.008004 pid: 6241
-- basetime: 1212092630 Thu May 29 13:23:50 2008

```

```

-- scriptDir: /tmp/20080522
-- LOGFILE: /tmp/CommsInstaller_20080529132350.log
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
-- Exit status: 0
!!! ENV
$VAR1 = {
    'CAPSAVE' => '/home/dl111122/.termcap',
    'PS1' => '# ',
    'LINES' => '55',
    'COLUMNS' => '80',
    'PWD' => '/tmp/20080522',
    'USER' => 'dl111122',
    'VISUAL' => 'gnuclient',
    'LOGNAME' => 'dl111122',
    'EMACS' => 't',
    'REMOTE' => '/home/dl111122/.remote',
    'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc:./home/dl111122/bin:/new/local/bin
'EMACS_TYPE' => 'pc',
    'EMACSPACKAGEPATH' => '/new/local/lib/xemacs/xemacs-packages',
    'MORE' => '-c',
    'TERM' => 'emacs',
    'PAGER' => 'cat',
    'LM_LICENSE_FILE' =>
'/usr/dist/share/devpro_lic,v1.0/license_dir/sunpro.lic.site,1',
    'HOME' => '/home/dl111122',
    'LD_LIBRARY_PATH' => '/usr/dt/lib:/usr/openwin/lib',
    'MANPATH' =>
'/usr/cluster/man:/tools/ns/man:/usr/openwin/man:/usr/man',
    'TERMSAVE' => 'emacs',Hem.koru
    'CDPATH' => '....:/home/dl111122',
    'EDITOR' => 'gnuclient',
    'MAIL' => '/var/mail/dl111122',
    'TZ' => 'US/Pacific',
    'ESHELL' => '/bin/csh',
    'INFOPATH' =>
'/new/local/info:/new/local-generic/share/emacs/19.34/info:/usr/local/info
'MOTIFHOME' => '/usr/dt',
    'CVSROOT' =>
':pserver:dl111122@redcvs.red.iplanet.com:/m/src',
    'OPENWINHOME' => '/usr/openwin',
    'RCSINIT' => '-zLT',
    'SHELL' => '/bin/csh',
    'HZ' => '100',
    'TERMCAP' => '/home/dl111122/.termcap'
};
cat /etc/release 2>&1
                Solaris 10 6/06 s10s_u2wos_08 SPARC
                Copyright 2006 Sun Microsystems, Inc. All Rights Reserved.
                Use is subject to license terms.
                Assembled 01 May 2006

-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro

```

```

$VAR1 = [
    'MS',
    'MS64',
    'DSSETUP',
    'DA',
    'CS',
    'IM',
    'CE',
    'MS_SCHA',
    'CS_SCHA',
    'IM_SCHA',
    'IWC'
];
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=0
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=1
is_path_writable=1
is_running_system=0
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=1
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 0
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
NOTICE: Although it is okay to apply OS patches in a whole root zone
        They really should be applied in the global zone
Reading Product Files...
Reading /tmp/20080522/.install/Product/NSS/NSS.in...
Reading /tmp/20080522/.install/Product/SASL/SASL.in...
Reading /tmp/20080522/.install/Product/LDAPCSDK/LDAPCSDK.in...
Reading /tmp/20080522/.install/Product/LDAPCSDK6/LDAPCSDK6.in...
Reading
/tmp/20080522/.install/Product/LDAPCSDK6_TOOLS/LDAPCSDK6_TOOLS.in...
Reading /tmp/20080522/.install/Product/ICU/ICU.in...
Reading /tmp/20080522/.install/Product/JDK/JDK.in...
Reading /tmp/20080522/.install/Product/JHRT/JHRT.in...
Reading /tmp/20080522/.install/Product/MQ/MQ.in...
Reading /tmp/20080522/.install/Product/MQ_L10N/MQ_L10N.in...
Reading /tmp/20080522/.install/Product/LDAPJDK/LDAPJDK.in...
Reading /tmp/20080522/.install/Product/IMAPI/IMAPI.in...
Reading /tmp/20080522/.install/Product/LIBMTMALLOC/LIBMTMALLOC.in...
Reading /tmp/20080522/.install/Product/LIBCPLUSPLUS/LIBCPLUSPLUS.in...
Reading /tmp/20080522/.install/Product/PKGINSTALL/PKGINSTALL.in...
Reading /tmp/20080522/.install/Product/PATCHUTILS/PATCHUTILS.in...
Reading /tmp/20080522/.install/Product/SNMP/SNMP.in...
Reading /tmp/20080522/.install/Product/BZIP/BZIP.in...
Reading /tmp/20080522/.install/Product/SSH/SSH.in...

```

```

Reading /tmp/20080522/.install/Product/ST/ST.in...
Reading /tmp/20080522/.install/Product/CI/CI.in...
Reading /tmp/20080522/.install/Product/MS/MS.in...
Reading /tmp/20080522/.install/Product/MS64/MS64.in...
Reading /tmp/20080522/.install/Product/DSSETUP/DSSETUP.in...
Reading /tmp/20080522/.install/Product/DA/DA.in...
Reading /tmp/20080522/.install/Product/CS/CS.in...
Reading /tmp/20080522/.install/Product/IM/IM.in...
Reading /tmp/20080522/.install/Product/CE/CE.in...
Reading /tmp/20080522/.install/Product/MS_SCHA/MS_SCHA.in...
Reading /tmp/20080522/.install/Product/CS_SCHA/CS_SCHA.in...
Reading /tmp/20080522/.install/Product/IM_SCHA/IM_SCHA.in...
Reading /tmp/20080522/.install/Product/IWC/IWC.in...
Reading OLD /tmp/20080522/.install/Product/MS/6.3/MS.in...
Reading OLD /tmp/20080522/.install/Product/IM/7.0/IM.in...
Reading OLD /tmp/20080522/.install/Product/MS_SCHA/6.0/MS_SCHA.in...
Reading OLD /tmp/20080522/.install/Product/CS_SCHA/6.0/CS_SCHA.in...
Reading OLD /tmp/20080522/.install/Product/IM_SCHA/7.0/IM_SCHA.in...
Reading OLD /tmp/20080522/.install/Product/MS_L10N/6.2/MS_L10N.in...
Reading OLD /tmp/20080522/.install/Product/MS_L10N/6.3/MS_L10N.in...
Reading OLD /tmp/20080522/.install/Product/MS64_L10N/6.3/MS64_L10N.in...
Reading OLD /tmp/20080522/.install/Product/CS_L10N/6.2/CS_L10N.in...
Reading OLD /tmp/20080522/.install/Product/CS_L10N/6.3/CS_L10N.in...
Reading OLD /tmp/20080522/.install/Product/IM_L10N/7.0/IM_L10N.in...
Reading OLD /tmp/20080522/.install/Product/IM_L10N/7.2/IM_L10N.in...
Reading OLD /tmp/20080522/.install/Product/MQ/3.7/MQ.in...
Reading OLD /tmp/20080522/.install/Product/MQ_L10N/3.7/MQ_L10N.in...
INFO: findgetVersion for MS:
      getVersion = /tmp/20080522/SunOS_sparc/MS/CI/getVersion
      prod_getVers = 7.0-0.04
      prod_builddate = 20080508
INFO: findgetVersion for MS64:
      getVersion = /tmp/20080522/SunOS_sparc/MS64/CI/getVersion
      prod_getVers = 7.0-0.04
      prod_builddate = 20080508
INFO: findgetVersion for DSSETUP:
      getVersion = /tmp/20080522/SunOS_sparc/DSSETUP/CI/getVersion
      prod_getVers = 6.4-2.01
      prod_builddate = 20080506
INFO: findgetVersion for DA:
      getVersion = /tmp/20080522/SunOS_sparc/DA/CI/getVersion
      prod_getVers = 6.4-2.05
      prod_builddate = 20080429
INFO: findgetVersion for CS:
      getVersion = /tmp/20080522/SunOS_sparc/CS/CI/getVersion
      prod_getVers = 6.3-8.01
      prod_builddate = 20080505
INFO: findgetVersion for IM:
      getVersion = /tmp/20080522/SunOS_sparc/IM/CI/getVersion
      prod_getVers = 7.3-03.09
      prod_builddate = 20080504
INFO: findgetVersion for CE:
      getVersion = /tmp/20080522/SunOS_sparc/CE/CI/getVersion
      prod_getVers = 6.3-6.01
      prod_builddate = 20080422
INFO: findgetVersion for MS_SCHA:

```

```

    getVersion = /tmp/20080522/SunOS_sparc/MS_SCHA/CI/getVersion
    prod_getVers = 7.0-0.03
    prod_builddate = 20080519
INFO: findgetVersion for CS_SCHA:
    getVersion = /tmp/20080522/SunOS_sparc/CS_SCHA/CI/getVersion
    prod_getVers = 6.3-1.01
    prod_builddate = 20080331
INFO: findgetVersion for IM_SCHA:
    getVersion = /tmp/20080522/SunOS_sparc/IM_SCHA/CI/getVersion
    prod_getVers = 7.3-01.02
    prod_builddate = 20080403
INFO: findgetVersion for IWC:
    getVersion = /tmp/20080522/SunOS_sparc/IWC/CI/getVersion
    prod_getVers = 1.0-0.43
    prod_builddate = 20080521
INFO: findgetVersion for CI:
    getVersion =
/tmp/20080522/.install/Product/CI/SunOS_sparc/getVersion
    prod_getVers = 6.0-0.05
    prod_builddate = 20080522

```

CommsInstaller version 6.0-0.05 built on Thu May 22 13:56:43 PDT 2008

Welcome to the Communications Services Products Installer
This program will install Communications Services Products
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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```

=====
Detecting Installed Products...
Checking LIBMTMALLOC 11.9.0 ...
    LIBMTMALLOC 11.9.0 is not present.
Checking LIBCPLUSPLUS 5.9 ...
    Checking pkg SUNWlibc... already present.
    LIBCPLUSPLUS 5.9 is already present.
Checking PKGINSTALL Unknown ...
    Checking pkg SUNWcsr... already present.
    PKGINSTALL Unknown is already present.
Checking PATCHUTILS Unknown ...
    Checking pkg SUNWpkgcmds... already present.
    Checking pkg SUNWswmt... already present.
    Checking pkg SUNWinstall-patch-utils-root... already present.
    Checking pkg SUNWcsr... already present.
    Checking pkg SUNWdtrc... already present.
    Checking pkg SUNWzoneu... already present.
    PATCHUTILS Unknown is already present.
Checking SNMP Unknown ...
    SNMP Unknown is not present.
Checking BZIP 11.10 ...
    Checking pkg SUNWbzip... already present.
    BZIP 11.10 is already present.
Checking SSH 11.9.0 ...

```

```

    SSH 11.9.0 is not present.
Checking ST 1.1.2 ...
    Checking pkg SUNWservicetagr... already present.
    Checking pkg SUNWservicetagu... already present.
    Checking pkg SUNWstosreg... already present.
    ST 1.1.2 is already present.
Checking NSS 4.2.6 ...
    Checking pkg SUNWjss... already present.
    Checking pkg SUNWpr... already present.
    Checking pkg SUNWprd... already present.
    Checking pkg SUNWtls... already present.
    Checking pkg SUNWtlsd... already present.
    Checking pkg SUNWtlsu... already present.
    NSS 4.2.6 is already present.
Checking SASL 2.19 ...
    Checking pkg SUNWsas1... already present.
    SASL 2.19 is already present.
Checking LDAPCSDK 5.0 ...
    Checking pkg SUNWldk... not present.
    Checking pkg SUNWldkx... not present.
    LDAPCSDK 5.0 is not present.
Checking LDAPCSDK6 6.0 ...
    Checking pkg SUNWldapcsdk-libs... already present.
    Checking pkg SUNWldapcsdk-dev... already present.
    LDAPCSDK6 6.0 is already present.
Checking LDAPCSDK6_TOOLS 6.0 ...
    Checking pkg SUNWldapcsdk-tools... already present.
    LDAPCSDK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
    Checking pkg SUNWicu... already present.
    ICU ICU2,ICU3 is already present.
Checking JDK 1.5.0 ...
    Checking pkg SUNWj5rt... already present.
    Checking pkg SUNWj5rtx... already present.
    Checking pkg SUNWj5cfg... already present.
    JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
    Checking pkg SUNWjhrt... already present.
    Checking pkg SUNWjhdev... already present.
    Checking pkg SUNWjhdem... already present.
    Checking pkg SUNWjhdoc... already present.
    JHRT 2.0 is already present.
Checking MQ 4.1 ...
    Checking pkg SUNWiqr... already present.
    Checking pkg SUNWiqu... already present.
    Checking pkg SUNWiqdoc... already present.
    Checking pkg SUNWiquc... already present.
    Checking pkg SUNWiqum... already present.
    Checking pkg SUNWiqjx... already present.
    Checking pkg SUNWiqfs... already present.
    Checking pkg SUNWiqcrt... already present.
    Checking pkg SUNWiqcdv... already present.
    MQ 4.1 is already present.
Checking MQ 3.7 ...
    Checking pkg SUNWiqr... present but with a different VERSION.
    checking SUNWiqr 3.7,REV=2006.06.18.22.34

```

```

Checking pkg SUNWiqu... present but with a different VERSION.
  checking SUNWiqu 3.7,REV=2006.06.18.22.34
Checking pkg SUNWiqupl... not present.
Checking pkg SUNWiqudoc... present but with a different VERSION.
  checking SUNWiqudoc 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiquc... present but with a different VERSION.
  checking SUNWiquc 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqum... present but with a different VERSION.
  checking SUNWiqum 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqujx... present but with a different VERSION.
  checking SUNWiqujx 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqufs... present but with a different VERSION.
  checking SUNWiqufs 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqucrt... present but with a different VERSION.
  checking SUNWiqucrt 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqucdv... present but with a different VERSION.
  checking SUNWiqucdv 3.7,REV=2006.06.18.22.35
Checking pkg SUNWiqulen... not present.
NOTICE: Message Queue is present with a different VERSION.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
MQ_L10N 4.1 is not present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
MQ_L10N 3.7 is not present.
Checking LDAPJDK 4.19 ...
  Checking pkg SUNWljdk... already present.
LDAPJDK 4.19 is already present.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... already present.

```

```

    IMAPI 7.3 is already present.
Checking CI 6.0 ...
    Checking pkg SUNWcomms... present but with a different VERSION.
        checking SUNWcomms 6.0,REV=2008.05.22
    NOTICE: CommsInstaller is present with a different VERSION.
Checking MS 7.0 ...
    Checking pkg SUNWmessaging-server... not present.
    MS 7.0 is not present.
Checking MS 6.3 ...
    Checking pkg SUNWmsgin... already present.
    Checking pkg SUNWmsgen... already present.
    Checking pkg SUNWmsglb... already present.
    Checking pkg SUNWmsgco... already present.
    Checking pkg SUNWmsgmt... already present.
    Checking pkg SUNWmsgst... already present.
    Checking pkg SUNWmsgmp... already present.
    Checking pkg SUNWmsgwm... already present.
    Checking pkg SUNWmsgmf... already present.
    MS 6.3 is already present.
Checking MS64 7.0 ...
    Checking pkg SUNWmessaging-server-64... not present.
    MS64 7.0 is not present.
Checking DSSETUP 6.4 ...
    Checking pkg SUNWcomds... already present.
    DSSETUP 6.4 is already present.
Checking DA 6.4 ...
    Checking pkg SUNWcomic... not present.
    Checking pkg SUNWcomis... not present.
    DA 6.4 is not present.
Checking CS 6.3 ...
    Checking pkg SUNWics5... not present.
    Checking pkg SUNWica5... not present.
    CS 6.3 is not present.
Checking IM 7.3 ...
    Checking pkg SUNWiim... not present.
    Checking pkg SUNWiimin... not present.
    Checking pkg SUNWiimm... not present.
    Checking pkg SUNWiimjd... not present.
    Checking pkg SUNWiimid... not present.
    Checking pkg SUNWiimc... not present.
    Checking pkg SUNWiimd... not present.
    IM 7.3 is not present.
Checking IM 7.0 ...
    Checking pkg SUNWiimin... not present.
    Checking pkg SUNWiim... not present.
    Checking pkg SUNWiimm... not present.
    Checking pkg SUNWiimjd... not present.
    Checking pkg SUNWiimid... not present.
    Checking pkg SUNWiimc... not present.
    Checking pkg SUNWiimd... not present.
    Checking pkg SUNWiimd... present but with a different VERSION.
        checking SUNWiimd... 7.0,REV=2004.11.24.05.24.36
    NOTICE: Instant Messaging is present with a different VERSION.
Checking CE 6.3 ...
    Checking pkg SUNWuwc... not present.
    CE 6.3 is not present.

```

```
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha... not present.
  MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.0 is not present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 1.0 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeiimid... not present.
```

```

Checking pkg SUNWfiimc... not present.
Checking pkg SUNWfiimd... not present.
Checking pkg SUNWfiimin... not present.
Checking pkg SUNWfimid... not present.
Checking pkg SUNWjiimc... not present.
Checking pkg SUNWjiimd... not present.
Checking pkg SUNWjiimin... not present.
Checking pkg SUNWjimid... not present.
Checking pkg SUNWkiimc... not present.
Checking pkg SUNWkiimd... not present.
Checking pkg SUNWkiimin... not present.
Checking pkg SUNWkimid... not present.
Checking pkg SUNWciimc... not present.
Checking pkg SUNWciimd... not present.
Checking pkg SUNWciimin... not present.
Checking pkg SUNWcimid... not present.
Checking pkg SUNWhiimc... not present.
Checking pkg SUNWhiimd... not present.
Checking pkg SUNWhiimin... not present.
Checking pkg SUNWhimid... not present.
IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
Checking pkg SUNWiimc-l10n... not present.
Checking pkg SUNWiimd-l10n... not present.
Checking pkg SUNWiimid-l10n... not present.
Checking pkg SUNWiimin-l10n... not present.
IM_L10N 7.2 is not present.
Detecting Installed Patches...
-- chk4patch 119963-03 /tmp/.patchout_20080529132350.6241
-- Running patchadd -p report...
-- Generating /tmp/.patchout_20080529132350.6241
patchadd -p > /tmp/.patchout_20080529132350.6241 2>>
/tmp/CommsInstaller_20080529132350.log 2>&1
-- Exit status: 0
-- Newer version at line 141 found 119963-05
-- Final return status: 1
LIBCPLUSPLUS patch 119963-03 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 85
-- Final return status: 1
PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 88
-- Final return status: 1
PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-45 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 165
-- Final return status: 1
PATCHUTILS patch 119254-45 is already present.
-- chk4patch 126868-01 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 131
-- Final return status: 1
BZIP patch 126868-01 is already present.
-- chk4patch 125358-06 /tmp/.patchout_20080529132350.6241
-- older version at lineno 212 found 125358-03 - not acceptable
-- older version at lineno 213 found 125358-05 - not acceptable

```

```

-- Exact match found at line 214
-- Final return status: 1
  NSS patch 125358-06 is already present.
-- chk4patch 119345-05 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 380
-- Final return status: 1
  SASL patch 119345-05 is already present.
-- chk4patch 136798-01 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 381
-- Final return status: 1
  LDAPCSDK6_TOOLS patch 136798-01 is already present.
-- chk4patch 119810-05 /tmp/.patchout_20080529132350.6241
-- older version at lineno 240 found 119810-04 - not acceptable
-- older version at lineno 241 found 119810-02 - not acceptable
-- Exact match found at line 242
-- Final return status: 1
  ICU patch 119810-05 is already present.
-- chk4patch 118666-12 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 374
-- Final return status: 1
  JDK patch 118666-12 is already present.
-- chk4patch 118667-12 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 388
-- Final return status: 1
  JDK patch 118667-12 is already present.
-- chk4patch 127411-01 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 143
-- Final return status: 1
  MQ patch 127411-01 is already present.
-- chk4patch 127412-01 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 144
-- Final return status: 1
  MQ patch 127412-01 is already present.
-- chk4patch 119725-04 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 384
-- Final return status: 1
  LDAPJDK patch 119725-04 is already present.
-- chk4patch 137238-03 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 382
-- Final return status: 1
  IMAPI patch 137238-03 is already present.
-- chk4patch 118242-03 /tmp/.patchout_20080529132350.6241
-- Exact match found at line 389
-- Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-18 /tmp/.patchout_20080529132350.6241
-- older version at lineno 390 found 118245-05 - not acceptable
-- Final return status: 0
  DSSETUP patch 118245-18 is not present.
-- chk4patch 121581-18 /tmp/.patchout_20080529132350.6241
-- Final return status: 0
  DA patch 121581-18 is not present.
-- chk4patch 121657-28 /tmp/.patchout_20080529132350.6241
-- Final return status: 0
  CS patch 121657-28 is not present.
-- chk4patch 137235-03 /tmp/.patchout_20080529132350.6241

```

```

-- Final return status: 0
  IM patch 137235-03 is not present.
-- chk4patch 137571-01 /tmp/.patchout_20080529132350.6241
-- Final return status: 0
  IM_SCHA patch 137571-01 is not present.
===== QQQ =====
QQQ Dumper
!!! present
$VAR1 = {
    'IWC' => {
        '1.0' => 'NOT_PRESENT'
    },
    'SASL' => {
        '2.19' => 'PRESENT'
    },
    'MS64_L10N' => {
        '6.3' => 'NOT_PRESENT'
    },
    '119963-03' => 'PRESENT',
    'MS' => {
        '7.0' => 'NOT_PRESENT',
        '6.3' => 'PRESENT'
    },
    '137571-01' => 'NOT_PRESENT',
    'DSSETUP' => {
        '6.4' => 'PRESENT'
    },
    'PKGINSTALL' => {
        'Unknown' => 'PRESENT'
    },
    'LIBMTMALLOC' => {
        '11.9.0' => 'NOT_PRESENT'
    },
    '120900-04' => 'PRESENT',
    'MQ_L10N' => {
        '3.7' => 'NOT_PRESENT',
        '4.1' => 'NOT_PRESENT'
    },
    '127411-01' => 'PRESENT',
    '119345-05' => 'PRESENT',
    'ICU' => {
        'ICU2,ICU3' => 'PRESENT'
    },
    'MS64' => {
        '7.0' => 'NOT_PRESENT'
    },
    'LDAPCSDK' => {
        '5.0' => 'NOT_PRESENT'
    },
    'LDAPCSDK6' => {
        '6.0' => 'PRESENT'
    },
    '118245-18' => 'NOT_PRESENT',
    'CE' => {
        '6.3' => 'NOT_PRESENT'
    },
}

```

```

'JDK' => {
    '1.5.0' => 'PRESENT'
},
'126868-01' => 'PRESENT',
'MQ' => {
    '3.7' => 'DIFF_VERSION',
    '4.1' => 'PRESENT'
},
'PATCHUTILS' => {
    'Unknown' => 'PRESENT'
},
'CI' => {
    '6.0' => 'DIFF_VERSION'
},
'IMAPI' => {
    '7.3' => 'PRESENT'
},
'119254-45' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
    '6.0' => 'PRESENT'
},
'NSS' => {
    '4.2.6' => 'PRESENT'
},
'CS_L10N' => {
    '6.2' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'ST' => {
    '1.1.2' => 'PRESENT'
},
'IM' => {
    '7.0' => 'DIFF_VERSION',
    '7.3' => 'NOT_PRESENT'
},
'IM_L10N' => {
    '7.2' => 'NOT_PRESENT',
    '7.0' => 'NOT_PRESENT'
},
'119725-04' => 'PRESENT',
'LDAPJDK' => {
    '4.19' => 'PRESENT'
},
'CS_SCHA' => {
    '6.0' => 'NOT_PRESENT',
    '6.3' => 'NOT_PRESENT'
},
'118666-12' => 'PRESENT',
'BZIP' => {
    '11.10' => 'PRESENT'
},
'IM_SCHA' => {
    '7.0' => 'NOT_PRESENT',
    '7.3' => 'NOT_PRESENT'
},
'MS_L10N' => {

```

```

        '6.2' => 'NOT_PRESENT',
        '6.3' => 'NOT_PRESENT'
    },
    'LIBCPLUSPLUS' => {
        '5.9' => 'PRESENT'
    },
    'SNMP' => {
        'Unknown' => 'NOT_PRESENT'
    },
    '121657-28' => 'NOT_PRESENT',
    '137238-03' => 'PRESENT',
    '121133-02' => 'PRESENT',
    '137235-03' => 'NOT_PRESENT',
    '118242-03' => 'PRESENT',
    'MS_SCHA' => {
        '6.0' => 'NOT_PRESENT',
        '7.0' => 'NOT_PRESENT'
    },
    '125358-06' => 'PRESENT',
    'CS' => {
        '6.3' => 'NOT_PRESENT'
    },
    'JHRT' => {
        '2.0' => 'PRESENT'
    },
    '121581-18' => 'NOT_PRESENT',
    '118667-12' => 'PRESENT',
    'SSH' => {
        '11.9.0' => 'NOT_PRESENT'
    },
    '136798-01' => 'PRESENT',
    '119810-05' => 'PRESENT',
    'DA' => {
        '6.4' => 'NOT_PRESENT'
    },
    '127412-01' => 'PRESENT'
};

!!! pkgparams
$VAR1 = {
    'SUNWica5' => {},
    'SUNWmsgja' => {},
    'SUNWcomic' => {},
    'SUNWservicetagu' => {
        '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagu',
                                                                    '/',
'1.1.4.1'
                                                                    ]
    },
    'SUNWjimid' => {},
    'SUNWdiquc' => {},
    'SUNWmsgko' => {},
    'SUNWmessaging-server-l10n-64' => {},
    'SUNWics5' => {}
};

```

```

'SUNWiq1pl' => {},
'SUNWmsgco' => {
    '6.0,REV=2003.10.29' => [
        'SUNWmsgco',
        '/opt/SUNWmsg',
        '6.3-0.09'
    ]
},
'SUNWfiquc' => {},
'SUNWjhdem' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdem',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWiqfs' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqfs',
        '/',
        '4.1.0.0'
    ]
},
'SUNWfimid' => {},
'SUNWcomds' => {
    '6.3,REV=2004.08.12' => [
        'SUNWcomds',
        '/opt/SUNWcomds',
        '6.3-2.03'
    ]
},
'SUNWjhdev' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhdev',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWiqum' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqum',
        '/',
        '4.1.0.1'
    ]
},
'SUNWhiimin' => {},
'SUNWkiimin' => {},
'SUNWeiimd' => {},
'SUNWj5rt' => {
    '1.5.0,REV=2004.12.07.00.07' => [
        'SUNWj5rt',
        '/usr',
        '1.5.0_12/1.5.0_12-b04'
    ]
},
},

```

```

'SUNWiimc-l10n' => {},
'SUNWhiimc' => {},
'SUNWmsg-l10n' => {},
'SUNWfrics' => {},
'SUNWciqu' => {},
'SUNWkoics' => {},
'SUNWdimid' => {},
'SUNWjiquc' => {},
'SUNWiimd-l10n' => {},
'SUNWhiquc' => {},
'SUNWzhics' => {},
'SUNWkiimd' => {},
'SUNWmsgmp' => {
    '6.0,REV=2003.10.29' => [
        'SUNWmsgmp',
        '/opt/SUNWmsg',
        '6.3-0.09'
    ]
},
'SUNWuwc' => {},
'SUNWscics' => {},
'SUNWiimc' => {},
'SUNWhiimd' => {},
'SUNWmessaging-server-scha' => {},
'SUNWmsglb' => {
    '6.0,REV=2003.10.29' => [
        'SUNWmsglb',
        '/opt/SUNWmsg',
        '6.3-0.15'
    ]
},
'SUNWt1s' => {
    '3.11.4,REV=2006.11.16.20.40' => [
        'SUNWt1s',
        '/',
        '3.11.9'
    ]
},
'SUNWlibc' => {
    '5.10,REV=2004.12.22' => [
        'SUNWlibc',
        '/',
        '5.10'
    ]
},
'SUNWjiimin' => {},
'SUNWscims' => {},
'SUNWiimjd' => {},
'SUNWciimd' => {},
'SUNWldapcsdk-dev' => {
    '6.00,REV=2006.12.11.00.08' => [
        'SUNWldapcsdk-dev',
        '/',
        '6.00'
    ]
}

```

```

    },
    'SUNWiqlen' => {},
    'SUNWiimid-110n' => {},
    'SUNWiqr' => {
        '4.1,REV=2007.07.26.10.58' => [
            'SUNWiqr',
            '/',
            '4.1.0.1'
        ]
    },
    'SUNWdiimc' => {},
    'SUNWmsgwm' => {
        '6.0,REV=2003.10.29' => [
            'SUNWmsgwm',
            '/opt/SUNWmsg',
            '6.3-0.09'
        ]
    },
    'SUNWmessaging-server-64' => {},
    'SUNWeiquc' => {},
    'SUNWj5cfg' => {
        '1.5.0,REV=2004.12.07.00.07' => [
'SUNWj5cfg',
            '/',
'1.5.0_12/1.5.0_12-b04'
        ]
    },
    'SUNWhiqu' => {},
    'SUNWiimd' => {
        '7.3,REV=2008.01.15' => [
            'SUNWiimd',
            '/',
            '7.3-03'
        ]
    },
    'SUNWfiimd' => {},
    'SUNWj5rtx' => {
        '1.5.0,REV=2004.12.06.22.09' => [
'SUNWj5rtx',
            '/usr',
'1.5.0_12/1.5.0_12-b04'
        ]
    },
    'SUNWiquc' => {
        '4.1,REV=2007.07.26.10.59' => [
            'SUNWiquc',
            '/',
            '4.1.0.1'
        ]
    },
    'SUNWiimid' => {},

```

```

'SUNWmsgmt' => {
    '6.0,REV=2003.10.29' => [
        'SUNWmsgmt',
        '/opt/SUNWmsg',
        '6.3-0.09'
    ]
},
'SUNWljdk' => {
    '1.0,REV=2004.10.11.06.02' => [
        'SUNWljdk',
        '/',
        '4.19'
    ]
},
'SUNWldapcsdk-libs' => {
    '6.00,REV=2006.12.11.00.08' => [
'SUNWldapcsdk-libs',
        '/',
'6.00'
    ]
},
'SUNWservicetagr' => {
    '1.1.4,REV=2008.03.21.07.54' => [
'SUNWservicetagr',
        '/',
'1.1.4.1'
    ]
},
'SUNWciimc' => {},
'SUNWjhrt' => {
    '2.0,REV=2006.10.04' => [
        'SUNWjhrt',
        '/usr',
        '2.0/FCS'
    ]
},
'SUNWtlsd' => {
    '3.11.4,REV=2006.11.16.20.40' => [
        'SUNWtlsd',
        '/',
        '3.11.9'
    ]
},
'SUNWdtrc' => {
    '11.10.0,REV=2005.01.21.15.53' => [
'SUNWdtrc',
        '/',
'5.10/Generic'
    ]
},
},

```

```

'SUNWmsgin' => {
    '6.0,REV=2003.10.29' => [
        'SUNWmsgin',
        '/opt/SUNWmsg',
        '6.3-0.09'
    ]
},
'SUNWiqdoc' => {
    '4.1,REV=2007.07.26.10.58' => [
        'SUNWiqdoc',
        '/',
        '4.1.0.0'
    ]
},
'SUNWjiimd' => {},
'SUNWiimd' => {},
'SUNWiqcrt' => {
    '4.1,REV=2007.07.26.10.59' => [
        'SUNWiqcrt',
        '/opt',
        '4.1.0.1'
    ]
},
'SUNWmsgzh' => {},
'SUNWprd' => {
    '4.6.4,REV=2006.11.16.20.40' => [
        'SUNWprd',
        '/',
        '4.7'
    ]
},
'SUNWmsgen' => {
    '6.0,REV=2003.10.29' => [
        'SUNWmsgen',
        '/opt/SUNWmsg',
        '6.3-0.15'
    ]
},
'SUNWldk' => {},
'SUNWiwc' => {},
'SUNWiimin-110n' => {},
'SUNWiimsc' => {},
'SUNWinstall-patch-utils-root' => {
    '11.10,REV=2005.01.09.23.05' => [
        'SUNWinstall-patch-utils-root',
        '/',
        'SNAG Development'
    ]
},
'SUNWiimin' => {},
'SUNWmsgst' => {

```

```

        '6.0,REV=2003.10.29' => [
            'SUNWmsgst',
            '/opt/SUNWmsg',
            '6.3-0.09'
        ]
    },
    'SUNWiqu' => {
        '4.1,REV=2007.07.26.10.58' => [
            'SUNWiqu',
            '/',
            '4.1.0.1'
        ]
    },
    'SUNWkiimc' => {},
    'SUNWiim' => {},
    'SUNWeiimin' => {},
    'SUNWcimid' => {},
    'SUNWiqcdrv' => {
        '4.1,REV=2007.07.26.10.59' => [
            'SUNWiqcdrv',
            '/opt',
            '4.1.0.1'
        ]
    },
    'SUNWldapcsdk-tools' => {
        '6.00,REV=2006.12.11.00.08' => [
            'SUNWldapcsdk-tools',
            '/opt/SUNWdsee',
            '6.00'
        ]
    },
    'SUNWjss' => {
        '4.2.4,REV=2006.11.16.20.40' => [
            'SUNWjss',
            '/',
            '4.2.6'
        ]
    },
    'SUNWdiqu' => {},
    'SUNWhimid' => {},
    'SUNWciquc' => {},
    'SUNWcomms' => {
        '6.0,REV=2008.05.15' => [
            'SUNWcomms',
            '/opt/sun/comms/CommsInstaller',
            '6.0-0.05'
        ]
    },
    'SUNWjiqu' => {},
    'SUNWkiqu' => {},
    'SUNWics-l10n' => {},
    'SUNWeiqu' => {}
}

```

```

'SUNWmessaging-server' => {},
'SUNWmsgtw' => {},
'SUNWeiimc' => {},
'SUNWjaics' => {},
'SUNWpkgcmds' => {
    '11.11,REV=2005.01.09.23.05' => [
'SUNWpkgcmds',
                                                                    '/',
                                                                    'SNAG
Development'
                                                                    ]
    },
'SUNWldkx' => {},
'SUNWjiimc' => {},
'SUNWiqjx' => {
    '4.1,REV=2007.07.26.10.59' => [
                                                                    'SUNWiqjx',
                                                                    '/',
                                                                    '4.1.0.1'
                                                                    ]
    },
'SUNWjhdoc' => {
    '2.0,REV=2006.10.04' => [
                                                                    'SUNWjhdoc',
                                                                    '/usr',
                                                                    '2.0/FCS'
                                                                    ]
    },
'SUNWeimid' => {},
'SUNWmsges' => {},
'SUNWpr' => {
    '4.6.4,REV=2006.11.16.20.40' => [
                                                                    'SUNWpr',
                                                                    '/',
                                                                    '4.7'
                                                                    ]
    },
'SUNWmsgmf' => {
    '6.0,REV=2003.10.29' => [
                                                                    'SUNWmsgmf',
                                                                    '/opt/SUNWmsg',
                                                                    '6.3-0.15'
                                                                    ]
    },
'SUNWkimid' => {},
'SUNWicu' => {
    '1.2,REV=2005.01.06.14.13' => [
                                                                    'SUNWicu',
                                                                    '/usr',
                                                                    '10/Generic'
                                                                    ]
    },
'SUNWfiimin' => {},
'SUNWswmt' => {
    '11.10,REV=2005.01.10.17.19' => [

```

```

        'SUNWswmt',
        '/',
        'SNAG
Development '
    ]
    },
    'SUNWcomis' => {},
    'SUNWdeics' => {},
    'SUNWtwics' => {},
    'SUNWmsgfr' => {},
    'SUNWciimin' => {},
    'SUNWdiimd' => {},
    'SUNWkiquc' => {},
    'SUNWstosreg' => {
        '1.1.4,REV=2008.03.21.07.54' => [
'SUNWstosreg',
        '/',
        '1.1.4.1'
        ]
    },
    'SUNWmsgde' => {},
    'SUNWbzip' => {
        '11.10.0,REV=2005.01.08.05.16' => [
'SUNWbzip',
        '/',
'5.10/SunOS Development '
    ]
    },
    'SUNWtisu' => {
        '3.11.4,REV=2006.11.16.20.40' => [
        'SUNWtisu',
        '/',
        '3.11.9'
        ]
    },
    'SUNWfigu' => {},
    'SUNWsas1' => {
        '2.17,REV=2004.04.06.15.24' => [
        'SUNWsas1',
        '/',
        '2.19'
        ]
    },
    'SUNWzoneu' => {
        '11.10.0,REV=2005.01.21.15.53' => [
'SUNWzoneu',
        '/',
'5.10/Generic '
    ]
    },
    'SUNWcsr' => {

```

```

'11.10.0,REV=2005.01.21.15.53' => [
    'SUNWcsr',
    '/',
'5.10/Generic'
]
},
'SUNWfiimc' => {},
'SUNWesics' => {},
'SUNWiimm' => {}
};
!!! installedprod
$VAR1 = {
  'IM' => undef,
  'SASL' => {
    '2.19' => [
      '/',
      '2.19'
    ]
  },
  'ST' => {
    '1.1.2' => [
      '/',
      '1.1.4.1'
    ]
  },
  'MS' => {
    '6.3' => [
      '/opt/SUNWmsg',
      '6.3-0.15'
    ]
  },
  'DSSETUP' => {
    '6.4' => [
      '/opt/SUNWcomds',
      '6.3-2.03'
    ]
  },
  'PKGINSTALL' => {
    'Unknown' => [
      '/',
      '5.10/Generic'
    ]
  },
  'LDAPJDK' => {
    '4.19' => [
      '/',
      '4.19'
    ]
  },
  'BZIP' => {
    '11.10' => [
      '/',
      '5.10/SunOS Development'
    ]
  },
},

```

```

'ICU' => {
    'ICU2,ICU3' => [
        '/usr',
        '10/Generic'
    ]
},
'LIBCPLUSPLUS' => {
    '5.9' => [
        '/',
        '5.10'
    ]
},
'LDAPCSDK6' => {
    '6.0' => [
        '/',
        '6.00'
    ]
},
'JDK' => {
    '1.5.0' => [
        '/usr',
        '1.5.0_12/1.5.0_12-b04'
    ]
},
'PATCHUTILS' => {
    'Unknown' => [
        '/',
        'SNAG Development'
    ]
},
'MQ' => {
    '4.1' => [
        '/',
        '4.1.0.1'
    ]
},
'JHRT' => {
    '2.0' => [
        '/usr',
        '2.0/FCS'
    ]
},
'IMAPI' => {
    '7.3' => [
        '/',
        '7.3-03'
    ]
},
'CI' => {
    '6.0,REV=2008.05.15' => [
        '/opt/sun/comms/CommsInstaller',
        '6.0-0.05'
    ]
},
'LDAPCSDK6_TOOLS' => {

```

```

        '6.0' => [
                    '/opt/SUNWdsee',
                    '6.00'
                ]
            },
    'NSS' => {
        '4.2.6' => [
                    '/',
                    '4.2.6'
                ]
            }
    };
===== QQQ =====
-----
INFO: isUpgradable MS 6.3: 1
      This version is upgradable to distro version (7.0-0.04)

INFO: isUpgradable DSSETUP 6.4: 1
      This version is upgradable to distro version (6.4-2.01)

===== QQQ =====
QQQ Dumper
!!! isUpgradable
$VAR1 = {
    'MS' => {
        '6.3' => {
            'status' => '1'
        }
    },
    'DSSETUP' => {
        '6.4' => {
            'status' => '1'
        }
    }
};
Product Selection:

Communication Services Products:

Item  Description
----  -
  1   Messaging Server 7.0 (7.0-0.04)
      Installed Version 6.3-0.15 at /opt/SUNWmsg
  2   Comms DSsetup 6.4 (6.4-2.01)
      Installed Version 6.3-2.03 at /opt/SUNWcomds

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1, 2]:
-----
QQQ selections: MS 6.3 DSSETUP 6.4
INFO: sc_dependencies - ICU BZIP PATCHUTILS NSS JDK JHRT MQ LIBCPLUSPLUS
LDAPCSKD6 LDAPCSKD6_TOOLS SASL ST CI
Checking for Shared Component Upgrade Requirements...

```

```

CommsInstaller has a different pkg version installed
Description: The CommsInstaller installed as a package so it can be
patched
  Current pkg Version (SUNWcomms): 6.0,REV=2008.05.15
  To be installed pkg version (SUNWcomms): 6.0,REV=2008.05.22
  Product Version: 6.0
Note that changing pkg versions is irreversible

Do you wish to change pkg versions for CommsInstaller [n] : y
=====
NOTICE: CommsInstaller will be upgraded...
  Removing the old version is an irreversible process.
  WILL REMOVE EXISTING: CommsInstaller 6.0,REV=2008.05.15 (6.0-0.05)
-- QQQ30 removeProductPkgs (product=CI pkg=SUNWcomms 6.0,REV=2008.05.15
i=0: realpkg=SUNWcomms base=/opt/sun/comms/CommsInstaller
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWcomms
  WILL INSTALL: CommsInstaller 6.0 (6.0-0.05)
             to /CommsInstaller
  Task: pkgadd -a /tmp/20080522/.install/Tools/admin.instance -n -d
/tmp/20080522/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20080529132350 SUNWcomms
  NOTICE: Upgrading Messaging Server 6.3-0.15 (to 7.0-0.04 at
/opt/SUNWmsg)
             Upgrade will be done by in-place package replacement
             This is an irreversible process!!!
  WILL UNINSTALL: Messaging Server 6.3-0.15 (at /opt/SUNWmsg)
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgmf
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgwm
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgmp
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgst
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgmt
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgco
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsglb
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgen
  Task: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgin
  WILL INSTALL: Messaging Server 7.0 (7.0-0.04)
             to /opt/SUNWmsg
  Task: pkgadd -a /tmp/20080522/.install/Tools/admin.instance -n -d
/tmp/20080522/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20080529132350 SUNWmessaging-server
  NOTICE: Upgrading Comms DSsetup 6.3-2.03 (to 6.4-2.01 at
/opt/SUNWcomds)
             Upgrade will be done by applying a patch
  WILL INSTALL: patch 118245-18 for Comms DSsetup
  Task: patchadd /tmp/20080522/SunOS_sparc/DSSETUP/Patches/118245-18
=====
Ready to upgrade

Do you want to continue ? [yes] :

=====
Removing existing CommsInstaller 6.0,REV=2008.05.15 (6.0-0.05)...
----- Executing Task 1 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWcomms 2>&1

```

```

Removal of <SUNWcomms> was successful.
-- Exit status: 0

=====
Installing CommsInstaller 6.0 (6.0-0.05)...
----- Executing Task 2 of 15 ...
pkgadd -a /tmp/20080522/.install/Tools/admin.instance -n -d
/tmp/20080522/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20080529132350 SUNWcomms 2>&1
Copyright 2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWcomms> was successful.
-- Exit status: 0

=====
Upgrading Messaging Server 6.3-0.15 (at /opt/SUNWmsg)...
  Calling /tmp/20080522/SunOS_sparc/MS/CI/preupgrade 6.3-0.15
/opt/SUNWmsg 1...
----- Executing Task 3 of 15 ...
/tmp/20080522/SunOS_sparc/MS/CI/preupgrade 6.3-0.15 /opt/SUNWmsg 1 2>&1
-- Stopping Messaging Server...
-- Exit status: 0

=====
Uninstalling Messaging Server 6.3-0.15 (at /opt/SUNWmsg)...
----- Executing Task 4 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgmf 2>&1

Removal of <SUNWmsgmf> was successful.
-- Exit status: 0
----- Executing Task 5 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgwm 2>&1
Connecting to watcher ...
WARNING: Cannot connect to the watcher process
http server is not running
OK SET
OK SET

Removal of <SUNWmsgwm> was successful.
-- Exit status: 0
----- Executing Task 6 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgmp 2>&1
WARNING: mmp is disabled
OK SET

Removal of <SUNWmsgmp> was successful.
-- Exit status: 0
----- Executing Task 7 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgst 2>&1
Connecting to watcher ...
WARNING: Cannot connect to the watcher process
pop server is not running
imap server is not running
OK SET
OK SET

```

```

OK SET
OK SET

Removal of <SUNWmsgst> was successful.
-- Exit status: 0
----- Executing Task 8 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgmt 2>&1
Connecting to watcher ...
WARNING: Cannot connect to the watcher process
job_controller server is not running
dispatcher server is not running
OK SET

Removal of <SUNWmsgmt> was successful.
-- Exit status: 0
----- Executing Task 9 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgco 2>&1
Connecting to watcher ...
WARNING: Cannot connect to the watcher process
sched server is not running
store server is not running
ens server is not running
OK SET
OK SET
OK SET
OK SET
OK SET
-- Executing: /opt/SUNWmsg/./SUNWmfwk/bin/mfwksetup -u
/opt/SUNWmsg/config/com.sun.cmm.ms.xml
Error : Calling [//usr/sbin/cacaoadm undeploy com.sun.cmm.ms]
Msg: [Daemon must be running in order to perform this operation. ]
error=3
-- returned nonzero status: 1

Removal of <SUNWmsgco> was successful.
-- Exit status: 0
----- Executing Task 10 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsglb 2>&1

Removal of <SUNWmsglb> was successful.
-- Exit status: 0
----- Executing Task 11 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgen 2>&1

Removal of <SUNWmsgen> was successful.
-- Exit status: 0
----- Executing Task 12 of 15 ...
pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet SUNWmsgin 2>&1

Removal of <SUNWmsgin> was successful.
-- Exit status: 0

=====
Installing Messaging Server 7.0 (7.0-0.04)...
----- Executing Task 13 of 15 ...
pkgadd -a /tmp/20080522/.install/Tools/admin.instance -n -d

```

```

/tmp/20080522/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20080529132350 SUNWmessaging-server 2>&1
Copyright 2003-2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.

Installation of <SUNWmessaging-server> was successful.
-- Exit status: 0
   Calling /tmp/20080522/SunOS_sparc/MS/CI/postupgrade 6.3-0.15
/opt/SUNWmsg 1...
----- Executing Task 14 of 15 ...
/tmp/20080522/SunOS_sparc/MS/CI/postupgrade 6.3-0.15 /opt/SUNWmsg 1 2>&1
-- Running restore_uninstall
-- /opt/SUNWmsg/bin/configutil -o local.imta.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.mmp.enable -v 0
OK SET
-- /opt/SUNWmsg/bin/configutil -o service.http.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o service.http.enablesslport -v no
OK SET
-- /opt/SUNWmsg/bin/configutil -o service.imap.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o service.imap.enablesslport -v no
OK SET
-- /opt/SUNWmsg/bin/configutil -o service.pop.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o service.pop.enablesslport -v no
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.imta.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.ens.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.snmp.enable -v 0
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.smsgateway.enable -v 0
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.sched.enable -v 1
OK SET
-- /opt/SUNWmsg/bin/configutil -o local.watcher.enable -v yes
OK SET
-- /opt/SUNWmsg/bin/patch-config /opt/SUNWmsg/install/upgrade/6.3-0.15
-- LOGFILE:
/opt/SUNWmsg/install/upgrade/6.3-0.15/patch-config_20080529132522.log
-- Getting hosted domains...
--   hosted_domains found:
-- Checking default domain
-- New: /opt/SUNWmsg/config/msg.conf.defaults
-- New: /opt/SUNWmsg/config/imta_tailor
-- New: /opt/SUNWmsg/config/job_controller.cnf
-- New: /opt/SUNWmsg/config/mappings.locale
-- New: /opt/SUNWmsg/config/internet.rules
-- New: /opt/SUNWmsg/config/locale/ja/disposition_deleted.txt
-- New: /opt/SUNWmsg/config/locale/ja/disposition_denied.txt
-- New: /opt/SUNWmsg/config/locale/ja/disposition_dispatched.txt
-- New: /opt/SUNWmsg/config/locale/ja/disposition_displayed.txt
-- New: /opt/SUNWmsg/config/locale/ja/disposition_failed.txt

```

```

-- New: /opt/SUNWmsg/config/locale/ja/disposition_prefix.txt
-- New: /opt/SUNWmsg/config/locale/ja/disposition_processed.txt
-- New: /opt/SUNWmsg/config/imta.cnf
--
-- Number of new config files: 13
-- Number of config files to delete: 0
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/SUNWmsg/install/upgrade/6.3-0.15/newconfig.list
-- The list of config files to be deleted are in:
    /opt/SUNWmsg/install/upgrade/6.3-0.15/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/SUNWmsg/bin/install-newconfig -f
/opt/SUNWmsg/install/upgrade/6.3-0.15

-- /opt/SUNWmsg/bin/install-newconfig -f
/opt/SUNWmsg/install/upgrade/6.3-0.15
-- LOGFILE:
/opt/SUNWmsg/install/upgrade/6.3-0.15/install-newconfig_20080529132631.log
Getting hosted domains...
--  hosted_domains found:
-- Stopping services: /opt/SUNWmsg/bin/stop-msg
/opt/SUNWmsg/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to the watcher process
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
store server is not running
ens server is not running
-- Checking default domain
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/msg.conf.defaults.new
/opt/SUNWmsg/config/msg.conf.defaults
copy /opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/imta_tailor.new
/opt/SUNWmsg/config/imta_tailor
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/job_controller.cnf.new
/opt/SUNWmsg/config/job_controller.cnf
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/mappings.locale.new
/opt/SUNWmsg/config/mappings.locale
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/internet.rules.new
/opt/SUNWmsg/config/internet.rules
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_de
/opt/SUNWmsg/config/locale/ja/disposition_deleted.txt

```

```

copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_der
/opt/SUNWmsg/config/locale/ja/disposition_denied.txt
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_dis
/opt/SUNWmsg/config/locale/ja/disposition_dispatched.txt
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_dis
/opt/SUNWmsg/config/locale/ja/disposition_displayed.txt
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_fa
/opt/SUNWmsg/config/locale/ja/disposition_failed.txt
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_pre
/opt/SUNWmsg/config/locale/ja/disposition_prefix.txt
copy
/opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/locale/ja/disposition_pro
/opt/SUNWmsg/config/locale/ja/disposition_processed.txt
copy /opt/SUNWmsg/install/upgrade/6.3-0.15/save/config/imta.cnf.new
/opt/SUNWmsg/config/imta.cnf
-- Number of different files: 13
-- Number of deleted files: 0
-- Original files are backed up under
/opt/SUNWmsg/install/upgrade/6.3-0.15/config_20080529132631
-- Running imsimta clbuild, chbuild, cnbuild, version...
/opt/SUNWmsg/bin/imsimta clbuild -image_file=IMTA_COMMAND_DATA
IMTA_BIN:pmdf.cld
/opt/SUNWmsg/bin/imsimta chbuild
/opt/SUNWmsg/bin/imsimta cnbuild
/opt/SUNWmsg/bin/imsimta version
SunOS worfin-1 5.10 Generic_118833-36 sun4u sparc SUNW,Sun-Fire-V210
Sun Java(tm) System Messaging Server 7.0-0.04 32bit (built May  8 2008)
libimta.so 7.0-0.04 32bit (built 09:59:49, May  8 2008)
Using /opt/SUNWmsg/config/imta.cnf
-- Running imsimta test -rewrite postmaster (output to logfile only)...
-- The final step is to apply the ldif file
-- /opt/SUNWmsg/lib/patch/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- Exit status: 0
=====
Done Upgrading Messaging Server (to 7.0-0.04 at /opt/SUNWmsg)...

=====
Upgrading Comms DSsetup 6.3-2.03 (at /opt/SUNWcomds)...

=====
Installing patch 118245-18 for Comms DSsetup...
----- Executing Task 15 of 15 ...
patchadd /tmp/20080522/SunOS_sparc/DSSETUP/Patches/118245-18 2>&1
Validating patches...

Loading patches installed on the system...

Done!

```

```

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!

Approved patches will be installed in this order:

118245-18

Checking installed patches...
Executing prepatch script...
Verifying sufficient filesystem capacity (dry run method)...
Installing patch packages...
/var/sadm/pkg

Patch 118245-18 has been successfully installed.
See /var/sadm/patch/118245-18/log for details
Executing postpatch script...

Patch packages installed:
  SUNWcomds

-- Exit status: 0
=====
Done Upgrading Comms DSsetup (to 6.4-2.01 at /opt/SUNWcomds)...
=====
SUMMARY:

PASSED: Task 1: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWcomms
PASSED: Task 2: pkgadd -a /tmp/20080522/.install/Tools/admin.instance -n
-d /tmp/20080522/SunOS_sparc/CI/Packages -r
/tmp/.response_CI_20080529132350 SUNWcomms
PASSED: Task 3: preupgrade /tmp/20080522/SunOS_sparc/MS/CI/preupgrade
6.3-0.15 /opt/SUNWmsg 1
PASSED: Task 4: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgmf
PASSED: Task 5: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgwm
PASSED: Task 6: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgmp
PASSED: Task 7: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgst
PASSED: Task 8: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgmt
PASSED: Task 9: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgco
PASSED: Task 10: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsglb
PASSED: Task 11: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgen

```

```
PASSED: Task 12: pkgrm -n -a /tmp/20080522/.install/Tools/admin.quiet
SUNWmsgin
PASSED: Task 13: pkgadd -a /tmp/20080522/.install/Tools/admin.instance
-n -d /tmp/20080522/SunOS_sparc/MS/Packages -r
/tmp/.response_MS_20080529132350 SUNWmessaging-server
PASSED: Task 14: postupgrade /tmp/20080522/SunOS_sparc/MS/CI/postupgrade
6.3-0.15 /opt/SUNWmsg 1
PASSED: Task 15: patchadd
/tmp/20080522/SunOS_sparc/DSSETUP/Patches/118245-18
```

All tasks PASSED

INFO: no update to /etc/softlist.xml required

Hit Return to Continue:

```
=====
-- unlink /tmp/.response_CI_20080529132350
-- unlink /tmp/.response_MS_20080529132350
-- unlink /tmp/.patchout_20080529132350.6241
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0
```

NOTICE: silent file created in:

```
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20080529132350
-- Closing the log at Thu May 29 14:22:53 2008
```

~~~~~

## Upgrade Comments

### Upgrade comments

- Only products that are upgradable are listed. E.g. if MS was already at version 7.0-0.04, then it would not be displayed as a selection for upgrade.
- Different products may require additional steps after upgrade. Dssetup in particular requires that you run the new version to update the DS. For MS, there are no additional steps required unless you are in a cluster.
- Shared components will be upgraded as required. In this session all shared components are up to date. The CI version is not up to date and is offered for upgrade.
- Note that upgrade will either do a pkgrm/pkgadd or a patchadd for the upgrade depending on what is installed. In the case of MS for this session, MS 7.0 are new pkgs compared to MS 6.3, so the pkgrm/pkgadd is done. For Dssetup, the new version is a patch, so patchadd is used. Note that you can backout a patch with patchrm, but there is no easy way to backout an upgrade that uses pkgrm/pkgadd. In either case, it is always advisable to have a backup of your system.

# Communications Express 6.3 Upgrade

## Communications Express 6.3 Upgrade

This document provides information on upgrading to Communications Express 6.3, and rolling back to the previous version of Communications Express.

This document includes the following sections:

[Upgrading to Communications Express 6.3](#)

[Upgrading Shared Components](#)

[Migrating Configuration Data](#)

[Adopting the Best Upgrade Strategy to Minimize Downtime, Cost, and Complexity](#)

[Rolling Back to the Legacy Communications Express Version](#)

### ***Upgrading to Communications Express 6.3***

The upgrade procedure is same as upgrading from an earlier version of Communications Express to Communications Express 6.3.

If you are upgrading from 6.2 or earlier to 6.3, refer to [Chapter 6, Upgrading Communications Express of the Sun Java Communications Suite 5 Upgrade Guide](#) .

You can directly upgrade to Communications Express 6.3 from earlier versions of Communications Express by applying patch 24 on top of the existing version. You can upgrade from Communications Express 6.2 to Communications Express 6.3 (Communications Suite 5/Communications Suite 6) or Communications Suite 5 (any Communications Express 6.3) to Communications Express 6.3 patch 24.

### ***Upgrading Shared Components***

It is generally recommended that all Communications Suite components on a computer system (and in a computing environment) be upgraded to Communications Suite 6. However, Communications Express has hard upgrade dependencies only on the following shared components:

- Messaging Server 7u1 (7.0-3.01)
- Calendar Server 6.3 (6.3-11.01)
- Directory Server Setup (Comms DSSetup) 6.4 (6.4-3.01)

Upgrading other Communications Suite 5 product components, on which Communications Express depends, is therefore optional.

Communications Express 6.3 supports Application Server 9.1.

For information about upgrading shared components, see:

- [Messaging Server 7 Update 1 Upgrade](#)
- [Calendar Server 6.3 Upgrade](#)

For more information about Communications Suite 6 Update 1 software dependencies, see [Requirements for Communications Suite 6 Update 1](#)

### ***Migrating Configuration Data***

Migrating the configuration data from Communications Suite 5 to Communications Suite 6 Update 1 is same as migrating from previous versions to Communications Suite 5. For more information, refer to step7 under Upgrade Procedure (Solaris) in [Upgrading Communications Express](#) .

### ***Adopting the Best Upgrade Strategy to Minimize Downtime, Cost, and Complexity***

You can adopt the following strategies to minimize cost, downtime, and complexity:

### In-place upgrade

The binaries of the old version are replaced with the binaries of the new version.

This is the normal upgrade procedure as explained in [Chapter 6, Upgrading Communications Express of the Sun Java Communications Suite 5 Upgrade Guide](#) .

### Side-by-side same host upgrade

The new software version is installed on the same machine as the old version with both operating simultaneously. After the new version is configured and tested, you can switch over to the new version.

#### For side-by-side same host upgrade:

1. Install fresh version of Communications Express on the same machine, which hosts the older version, using `commpkg install --altroot`.
2. Run the product specific utility (or use manual steps) to move `config/data`

```
patch-config/install-newconfig
```

3. Stop the old server and start the new one.

### Co-existent upgrade

Existing services remain online while a new environment on separate hardware is constructed and users are carefully migrated to the new system after testing.

#### For co-existent upgrade:

1. Check if the hardware is ready.
2. Install latest version of Communications Express and all dependent products on a new machine using `commpkg install`.
3. Configure Communications Express manually on the machine. It is same as cloning the configuration of legacy machine on the new machine.
4. Run the product specific utility (or use manual steps) to move `config/data`

```
patch-config/install-newconfig
```

All the above upgrade strategies may be performed. But Co-existent Upgrade Strategy is the safest and most secure. It minimizes or even eliminates user downtime.

### ***Rolling Back to the Legacy Communications Express Version***

To roll back from Communications Express 6.3 to the older configuration, refer to [Rolling Back the Upgrade](#) .

# Connector for Microsoft Outlook 7.3 Update 1 Upgrade Guide

## Upgrading to Sun Java System Connector for Microsoft Outlook 7.3 Update 1

This document describes how to upgrade from Connector for Microsoft Outlook 7.1, 7.2, 7.2 U1, and 7.3 to Connector for Microsoft Outlook 7.3 Update 1.

This document includes the following sections:

- [Upgrading to Sun Java System Connector For Microsoft Outlook 7.3 Update 1](#)
- [Upgrading Shared Components](#)
- [Rolling Back to Previous Version](#)

### Upgrading to Connector for Microsoft Outlook 7.3 Update 1

This section explains how you can upgrade from Connector for Microsoft Outlook 7.1 and subsequent versions to Connector for Microsoft Outlook 7.3 Update 1.

Before you upgrade, as a prerequisite, set the Default Mail Client as Microsoft Outlook. For information on setting the default mail client, see [Designating Outlook as Default Mail Client](#).

Upgrading to Connector for Microsoft Outlook 7.3 Update 1 is a two step process.

#### Step1: Upgrading Sun Java System Connector for Microsoft Outlook Deployment Configuration Program

1. Double-click `setup.exe` from the Sun Java System Connector for Microsoft Outlook 7.3 Update 1 package.
2. Choose the preferred language from the drop-down list in the Install/Upgrade wizard.  
The system checks if you wish to upgrade the Sun Java System Connector for Microsoft Outlook Deployment Configuration Program.
3. Click Yes to confirm or No to exit.  
The wizard starts the installation.
4. Click OK.

#### Step2: Upgrading User Profiles

1. Invoke Sun Java System Connector for Microsoft Outlook Deployment Configuration Program from the desktop.
2. Clear the Create/convert/upgrade user profile option in the Processes tab.
3. Select the Install or upgrade Sun Java System Connector for Microsoft Outlook option.
4. Click File and save it as `filename.ini`.  
The Connector for Microsoft Outlook Deployment Configuration Program creates an executable with the configuration file(.ini) you created.
5. Run the executable to start the upgrade:

```
C:\Program Files\Sun\Deployment Configuration  
Program\Packages\filename.exe
```

The Sun Java System Connector for Microsoft Outlook Setup Wizard is displayed.

6. Click Next to start upgrading the user profiles.
7. Click Exit to close the window.  
The user profiles are now upgraded.

## Upgrade Scenarios

- If you are using Communications Express address book server and Outlook Connector for Mail Filters and Out of Office Messages, then you may follow the upgrade procedure as mentioned in Step 2.
- If you are using Convergence's address book server and Communications Express for Mail Filters and Out of Office Messages, perform the following steps after creating the configuration file:

1. Open the configuration (.ini) file that you created.
2. Enter the value for Use\_UWC\_Url as 1.
3. Enter the value for UWC\_Url key in the following format:

```
servername:portnumber/relativepath
```

For example, the value of the key may be:

```
UWC_Url=florizel.com:80/uwc
```

4. Invoke Outlook Connector Deployment Configuration Program.
5. Open the configuration (.ini) file that you modified and click File -> Save to create a new package.
6. Click Yes when prompted to overwrite the existing package.
7. Run the newly created package.

## Upgrading Shared Components

The following table lists the possible combinations of current versions of components that are either required or optional for Sun Java System Connector for Microsoft Outlook 7.3 Update 1.

### Communications Suite Component Requirements for Sun Java System Connector for Microsoft Outlook 7.3 Update 1

| Product                | Version         | Communications Suite Release               | Comment                                                                                                                                                           |
|------------------------|-----------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Messaging Server       | 6.3             | 5                                          | Required to provide mail service                                                                                                                                  |
| Messaging Server       | 7.0, 7 Update 1 | 6                                          | Required to provide mail service                                                                                                                                  |
| Calendar Server        | 6.3, 6.3.1      | 5                                          | Required to provide calendar service                                                                                                                              |
| Convergence            | 1.0, 1 Update 1 | 6                                          | Optional (Recommended). Either Communications Express or Convergence can be used to provide address book service, mail filters and out of office message features |
| Communications Express | 6.3             | 6                                          | Optional                                                                                                                                                          |
| Directory Server       | 5.2             | 4                                          | Required for GAL – corporate address book service                                                                                                                 |
| Directory Server       | at least 6.0    | 5 (for 6.0 or higher) or 6 (6.3 or higher) | Required for GAL – corporate address book service                                                                                                                 |

**Note**

Calendar Server customers who have deployed previous versions of Sun Java System Calendar Server need to engage with Sun Professional Services to enable their data to be converted and migrated to the new format. A Sun Professional Services offering is available. This migration is required for the use of Outlook, and is necessary because of the underlying changes in the storage and management of recurring events. No migration service is required for new customers of Calendar Server 6 2004Q2 minimum.

Communications Suite 6 Update 1 is compatible with Sun Java System Connector for Microsoft Outlook 7.3 Update 1.

For more information on upgrading the Communications Suite 6 Update 1 Components, see [Communications Suite 6 Update 1 Upgrade Guide](#)

**Rolling Back to Previous Version**

You cannot roll back to the previous version of Sun Java System Connector for Microsoft Outlook. You can uninstall the current version by using Add/Remove Programs from the Control Panel, and then install the required version.

For information about installing Sun Java System Connector for Microsoft Outlook 7.3 Update 1, see the [Connector For Outlook Installation Guide](#) .

# Delegated Administrator 6.4 Upgrade

## Upgrading to Delegated Administrator 6.4

Communications Suite Release 6 Update 1 includes the same release of Delegated Administrator as Communications Suite Release 5 (6.4), but it incorporates a newer patch version.

If you have the original Communications Suite Release 5 version of Delegated Administrator, you must patch or upgrade to patch -18 or later to operate with the other Communications Suite 6 Update 1 products.

If you are upgrading with the Communication Suite Update 1 download, the included version is patch -19. See [Communications Suite Component Patches](#) for the most recent patch numbers.

If you are running Delegated Administrator 6.2 or later, run the `commpkg upgrade` command to upgrade to the latest version of Delegated Administrator.

For upgrading versions earlier than 6.2, refer to the [Sun Java Communications Suite 5 Upgrade Guide, Upgrading Delegated Administrator](#).

After upgrading (with either patch or `commpkg upgrade`) Delegated Administrator needs to be re-configured by running `config-commda`.

### Delegated Administrator Client and Server compatibility when upgrading.

The clients (`commdadmin` and DA Console) and server (DA Server) should always be using the same version and patch number. When you upgrade, you should make plans to upgrade all components in one pass. The client-server transactions do not enforce DA-version checking, if you have mismatched versions, you may encounter unexpected failures.

### Preserving Customized Data When You Upgrade Delegated Administrator

If you are upgrading to this release of Delegated Administrator from an earlier release, you might have to perform the following tasks before you configure Delegated Administrator with the `config-commda` program:

- [Preserving an Existing Customized Configuration](#)
- [Upgrading Customized Service Packages in Delegated Administrator 6.4](#), (if you are upgrading from Delegated Administrator 6.3)

#### Preserve an Existing Customized Configuration

This section concerns you only if you previously have installed and configured Delegated Administrator and have customized the Delegated Administrator configuration.

If you have a customized configuration and you rerun the Delegated Administrator configuration program, `config-commda`, the properties in the configuration files are reset to their default values. These files are listed below, in [Delegated Administrator Properties Files](#).

For information about how you can customize Delegated Administrator, see [Customizing Delegated Administrator](#) in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.

You should preserve your customized configuration **before** you run Delegated Administrator configuration (`config-commda`) for any reason, including:

- Upgrade Delegated Administrator
- Patch upgrade of Delegated Administrator
- Rerun the Delegated Administrator configuration program for any other reason.

### Delegated Administrator Properties Files

Delegated Administrator installs the following properties files:

- Delegated Administrator utility
  - `cli-usrprefs.properties`  
Location: `da-base/data/config`
- Delegated Administrator console
  - `daconfig.properties`
  - `logger.properties`
  - `Resources.properties`
  - `Security.properties`  
For the default location of the Delegated Administrator console files, see [Delegated Administrator Files and Directories](#) in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.
- Delegated Administrator server
  - `resource.properties`

For the default location of the `resource.properties` file, see [Delegated Administrator Files and Directories](#) in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.

### To Preserve an Existing Customized Configuration

1. Back up the properties files you have customized.  
For a list of the properties files, see [Delegated Administrator Properties Files](#).
2. Run the `config-commda` program, as described in the following sections.  
The remaining steps use the `resource.properties` file as an example. Repeat these steps for each file you have customized.
3. Edit the new `resource.properties` file created by the `config-commda` program, as follows:
  - a. Open the new `resource.properties` file.
  - b. Open your back-up copy of the `resource.properties` file.
  - c. Locate the properties that were customized in the back-up copy. Apply the customized values to the corresponding properties in the new `resource.properties` file.  
Do not simply overwrite the new `resource.properties` file with the entire back-up copy. The new file may contain new properties created to support this release of Delegated Administrator.
4. Redeploy the edited `resource.properties` file to the Web container used by the Delegated Administrator server.

Before the change can take effect, you must run the script that deploys the customized `resource.properties` file to your Web container.

For instructions on how to deploy a customized properties file to a particular Web container, see [To Deploy a Customized Configuration File](#) in the *Sun Java System 6.4 Administration Guide*.

## Upgrading Customized Service Packages in Delegated Administrator 6.4

### Upgrading Customized Service Packages in Delegated Administrator 6.4

This page concerns you only if you are upgrading from Communications Services 6 2005Q4 Delegated Administrator to Delegated Administrator 6.4, and you created customized service packages in the previous release (6 2005Q4).

In Delegated Administrator 6.4, service package templates are located in a different node in the directory than they were in the previous (6 2005Q4) release.

For more information about preserving customized configurations during upgrades, see

- [Upgrading Delegated Administrator](#)

#### Sample Class-of-Service Templates

When you run the Delegated Administrator configuration program, the previously installed sample Class-of-Service templates installed by the Delegated Administrator configuration program are upgraded automatically. (In the configuration program, you should select **Load sample service packages** in the **Service Package and Organization Samples** panel.)

If you use only the sample templates to assign service packages to users and groups, no action is required.

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#### Customized Service Packages

The configuration program does not upgrade customized service packages created in the 6 2005Q4 release. You must upgrade your customized service packages manually.

For information on how customized service packages are created, see [Creating Your Own Service Packages](#).

##### *To Upgrade Customized Service Packages*

Perform the following operations on the LDAP directory:

1. Copy your service package templates from this directory node:

```
o=cosTemplates,o=rootsuffix
```

to this directory node:

```
o=service_target,o=cosTemplates,o=rootsuffix
```

where *service\_target* is one of the following:

```
mailuser
calendaruser
mailcalendaruser
mailgroup
calendargroup
mailcalendargroup
```

For example, if a service package template is called `myservicepackage`, and it provides mail service to users, the service package template's new `dn` would be:

```
o=myservicepackage,o=mailuser,o=cosTemplates,o=rootsuffix
```

2. Remove the entries for your service package templates from the original directory node:

```
o=cosTemplates,o=rootsuffix
```

3. Edit each customized service package by adding the following line to the `ldif` file defining the service package:

```
daServiceType: service type target
```



**Note**

If your `ldif` file already contains the `daServiceType` attribute, you can skip this step.

The `daServiceType` attribute defines the type of service provided by the service package and the target for the service package.

The *service* can be `mail` or `calendar`.

The *target* can be `users` or `groups`.

For example:

```
daServiceType: mail user
```

The following example shows what the edited `ldif` file might look like:

```
dn: cn=myservicepackage,o=mailuser,o=cosTemplates,o=mycompanysuffi
changetype: modify
replace: daServiceType
daServiceType: mail user
```

**Note**

The following step assumes that you are familiar with using LDAP directory tools such as `ldapmodify`.

Use the LDAP directory tool `ldapmodify` to update the service package in the directory. For example, you could run the following command:

```
ldapmodify -D <directory manager> -w <password> -f  
myservicepackagemodldif  
where
```

`<directory manager>` is the name of the Directory Server administrator.

`<password>` is the password of the Directory Service administrator.

`myservicepackagemodldif` is the name of the ldif file containing the modifications described in the preceding steps.

# Instant Messaging 8 Upgrade

## Upgrading to Instant Messaging 8

This section describes how to upgrade Instant Messaging version 7.3 to version 8.

- For information on how to upgrade from the 7.1 or earlier versions of Instant Messaging to Instant Messaging version 7.2, refer to [Chapter 7, Upgrading Instant Messaging of the Sun Java Communications Suite 5 Upgrade Guide](#).
- For information on how to upgrade from Instant Messaging version 7.2 to Instant Messaging version 7.3, refer to [Upgrading to Instant Messaging 7.3](#).



### Note

You can upgrade to the Instant Messaging version 8 only by using the Communication Suite installer.

This section contains the following topics:

- [Upgrading Instant Messaging Servers](#)
- [Rolling Back to the Legacy Instant Messaging Version](#)

## Upgrading Instant Messaging Servers

The process for upgrading the Instant Messaging server and multiplexor is the same and should only take a few minutes. The upgrade procedure automatically copies the 7.3 configuration and data such as notifications, alerts, and conversations to version 8. If Instant Messaging is configured to provide email notifications, Calendar alerts or Access Manager policy features such as authenticating or single-sign on, the configuration data of these features are migrated to version 8.

To upgrade the Instant Messaging version, perform the following steps on an existing installation of Instant Messaging:

1. Stop the Instant Messaging server.  
`im_svr_base/sbin/imadmin stop`
2. Use the communication installer to upgrade Instant Messaging.  
`./commpkg upgrade`
3. Select the components you wish to upgrade.
4. Restart the Instant Messaging server.  
`im_svr_base/sbin/imadmin start`
5. Redeploy the Instant Messaging server by typing  
`/opt/SUNWiim/sbin/iwadmin redeploy all` or  
`/opt/SUNWiim/html/redeploy`  
This step completes the upgrade process and redeploys all client-side components.
6. Optional. Invoke the `configure` utility.  
`./configure`  
Perform step 6 only if you want to configure the server-side components such as SMS, MSN, and AIM gateways.



### Note

When you configure the server, all previous configuration is overwritten.

The old configuration files are backed up in the `config` directory with the string `-pre8.0` suffixed to the

filename. For example, the old `iim.conf` is backed up as `iim.conf-pre8.0`. This file can be used to roll back to the previous working version in case of a upgrade failure.

## Rolling Back to the Legacy Instant Messaging Version

If the upgrade fails or if you need to go back to the previously working version of Instant Messaging, you can roll back to the upgrade process.

To roll back the upgrade process, perform the following steps:

1. Stop all services.
2. Remove the 8.0 packages by using the `pkgrm` command.
3. Install the old version of Instant Messaging, for example, version 7.2 or 7.3, by using the Communication Suite installer for that version.



### Note

The pre-8.0 configuration files are backed up in the `config` directory with the string `-pre8.0` suffixed to the filename. For example, the old `iim.conf` is backed up as `iim.conf-pre8.0`.

4. Rename the old configuration files with their correct names. That is, rename `iim.conf-pre8.0` to `iim.conf`.
5. Restart the services.

# Messaging Server 7 Update 1 Upgrade

## Upgrading Messaging Server to Messaging Server 7 Update 1

**Note:** If you are upgrading from Messaging Server 5.2, refer to [Coexistent Upgrades From iPlanet Messaging Server 5.2](#) for additional information. You may want to read this article as it also provides good general information for any upgrade.

This document describes the three Messaging Server upgrade strategies used to upgrade individual hosts within a deployment. This document assumes you have chosen a [target deployment](#), and have developed an architectural design and deployment plan for your target deployment.

This document focuses on upgrading single hosts and contains the following sections:

- [Overview](#)
- [Messaging Server Upgrade Strategies](#)
- [Using the Coexistence Strategy to Upgrade Messaging Server](#)
- [Using the Side-by-Side Strategy to Upgrade Messaging Server](#)
- [Using the In-Place Upgrade on Messaging Server](#)

### Overview

Messaging Server may have multiple back-end message stores, multiple webmail servers, front-end MMPs and MTA relays. Like all upgrades, you simply upgrade host by host. The major steps for upgrading a Messaging Server deployment are as follows:

- Define your [upgrade target](#) and the required products and components for that target.
- Design and Plan Your Messaging Server Architecture and Topology. Refer to [Convergence Deployment Planning](#) and [Communications Suite 6 Update 1 Installation Guide](#) for details on deploying Sun Convergence into your current deployment. In addition, although you may be satisfied with your current Messaging Server Architecture and Topology, upgrading can provide the opportunity to redesign your deployment for more optimal performance. Refer to the [Sun Java Communications Suite 5 Deployment Planning Guide](#) for details.
- Select the sequence of upgrading Individual Messaging Server Hosts. This includes upgrading things like message store servers, proxies, webmail servers, front-end relays.
- [Choose a Messaging Server Upgrade Strategy for Each Host](#). Three Messaging Server upgrade strategies offer choices that strike a balance between system downtime, cost, simplicity and risk. Strategies are chosen for each host, and different strategies can be used on different hosts within a Messaging Server deployment.

### Technical Features Supporting Messaging Server Upgrade

The following features support Messaging Server Upgrade:

- Mailbox migration is done using `imsbackup/imsrestore`. See [Migrating User Mailboxes to a New System](#). These commands support moving mailboxes from old message store versions to new ones (including when the message store database system format changes, for example, from Messaging Server 32bit to Messaging Server 64bit). They also support moving mailboxes from new message store versions to old ones for back out purposes.
- In-place Upgrade (see below) supports changing the old mailbox format to the new format, but it does not support going from the new format back to the old. You **cannot** back out from new data format to old data format using the In-place Upgrade Strategy. The conversion is done "on-the-fly"

- as mailboxes are accessed.
- Migrating the Messaging Server configuration from the old system to the new system is done using the utility `[migrate-config`
- Alternative Root install is supported. See [Performing Multiple Installations with an Alternate Root](#)
- In-place server upgrade is done using `commpkg upgrade`.

## Messaging Server Upgrade Strategies

Messaging Server supports three upgrade strategies for individual hosts that provide a balance between downtime, risk of extended downtime, complexity, and potential hardware costs. The three upgrade strategies are:

- *In-place Upgrade*. The binaries of the old version are replaced with the binaries of the new version on the same host.
- *Side-by-side Upgrade on the same host*. The new software version is installed on the same machine as the old version in a different directory. After the software configuration is migrated to the new version, you switch the deployment over to the new version.
- *Coexistent Upgrade*. Existing services remain online while a new host on separate hardware is constructed.

The strategy chosen for any particular host may differ. For example, you may wish to use an in-place or side-by-side upgrade on your front-end servers--relays, MMPs, webmail servers, but you may wish to do a coexistent upgrade on your message stores.

**Warning:** There is a data format change in the message store starting with Messaging Server 7. Coexistent Upgrade is recommended to facilitate backout.

The strategy you chose will also depend upon the version you currently have installed and whether you are using 32 or 64-bit Messaging Server product. The issues and compatibilities are described below.

Table 1. Upgrading to Messaging Server 7 Upgrade 1 32-bit

| From                                       | Online/Coexistence                      | Side-by-Side Migration                                                                                         | In-place Upgrade via Pkgadd/Pkgrm or Patch?                         |
|--------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 5.2                                        | Yes (recommended for all MS components) | Yes (alternative for all MS components) (note 5.2 did not use svr4 packaging, so this is just a fresh install) | No                                                                  |
| 6.0, 6.1, 6.2, 6.3 (32bit) (R1 through R5) | Yes (recommended for store)             | Yes (alternative for store) NOTE: no backout to old data format)                                               | Yes - Pkgadd/Pkgrm (recommended for MTA relay, MMP, webmail server) |
| 6.3 (64bit)                                | Yes (recommended for store)             | Yes (alternative for store) NOTE: no backout to old data format)                                               | No                                                                  |

Table 2. Upgrading to Messaging Server 7 Upgrade 1 Upgrade 64-bit

| From             | Online/Coexistence          | Side-by-Side Migration      | In-place Upgrade via Pkgadd/Pkgrm or Patch?                          |
|------------------|-----------------------------|-----------------------------|----------------------------------------------------------------------|
| 6.3 (32bit) (R5) | Yes (recommended for store) | Yes (alternative for store) | No.                                                                  |
| 6.3 (64bit) (R5) | Yes (recommended for store) | Yes (alternative for store) | Yes - Pkgadd/Pkgrm ( recommended for MTA relay, MMP, webmail server) |

## Using the Coexistence Strategy to Upgrade Messaging Server

The Coexistence Migration Strategy is the safest and most secure method of upgrading. It also has the lowest downtime of the three upgrade strategies. In the coexistence model, existing services remain online while you construct a new target host (or entire Messaging Server environment) on new hardware or in a Solaris whole root zone on the existing hardware. After the new host/environment is established, you can migrate a small number of friendly users to the new system to verify operations and administrative procedures. For a certain period both systems are accessible to user traffic. This is called a coexistence phase. Messaging access is not disrupted and proceeds invisibly to users. When all users are migrated to the new environment, you can decommission your legacy deployment. This phased approach ensures that the new system is fully prepared to handle production users before making the full migration.

**NOTE:** Read [Coexistent Upgrades From iPlanet Messaging Server 5.2](#) for very useful information on coexistent upgrades.

### Advantages and Disadvantages of Coexistence Migration:

- Service downtimes are usually rare and short. There is less danger that they will be longer than the off-line windows imposed by service level agreements.
- Allows a gradual adoption of the new software so that you can gain confidence by trying it out with a small group of sympathetic users before migrating production users.
- The risk of upgrade failure is mitigated by the fact that your legacy system remains fully functioning throughout the upgrade process.
- Since the new system is built alongside a functional old one, there is no need to install or modify anything on the working legacy machines. This is an advantage as there is always a natural reluctance to modify or reconfigure a working legacy system in significant ways.
- Coexistence is the safest upgrade model and has the least amount of user downtime.
- Simpler back off procedure. Anytime you upgrade software, you need to make provisions for backing off from the new system to the old system in case of failure. Other upgrade models may require that you backup and turn off the old system, install, configure and migrate to the new system. Only when you switch on the new system do you know if the upgrade succeeded. If it turns out, that it did not, then you may have to use your back off plan to put everything back into place. A coexistence migration is much simpler as a working legacy system is already in place.
- User data, such as mailboxes, must be moved from one host to another.
- May require extra hardware to set up a parallel system. (This may be mitigated by upgrading legacy machines after they are no longer used.)

### Specific Steps for Upgrading Messaging Server Using the Coexistence Model

- 1) Make sure your hardware is installed as per the deployment plan created from the [Convergence](#)

Deployment Planning and Sun Java Communications Suite 5 Deployment Planning Guide . See also the Requirements for Communications Suite 6 Update 1.

2) Install new version of Messaging Server in the [proper sequence](#) on new machine, using `compkg install`.

3) Configure the Messaging Server. This must be done manually. Basically you must clone the legacy machine's configuration to this new machine.

4) If you are doing a coexistent migration on a message store, migrate user mailboxes (a few at a time) to the new machine. See [Migrating or Moving Mailboxes to a New System](#). Details on message store internals can be found in [Upgrading the Message Store](#).

## Using the Side-by-Side Strategy to Upgrade Messaging Server

In this model, the new software version is installed on the same machine as the old version. After the configuration is migrated to the new version, you can switch over to the new version. This upgrade strategy is new with Communications Suite 6. The basic steps are as follows:

- Install Messaging Server 7 Update 1 side-by-side on the same machine with your earlier version of Messaging Server using the `compkg install` command.
- Back up configuration and mailbox data just in case a back out is required. For the configuration data, simply back up the configuration directory. For mailbox data you can do a snapshot or an `imsbackup`.
- Migrate the configuration from Messaging Server to 7 Update 1 using the `migrate-config` utility.
- Startup Messaging Server 7 Update 1

## Advantages and Disadvantages of Side-by-Side Messaging Server Migration

- Second best minimal downtime.
- Second best in backout.
- Doesn't require extra machine
- Does require different directory location for fresh install. (Don't want to be working the old version.)
- Typically does not involve moving the mailboxes. New version just "points" to the mailboxes and mailbox conversion to the new version is automatic and transparent.
- Backout is problematic because mailbox format changes. Simply stopping the new version and starting the old version will not work.
- The only advantage of side-by-side over in-place is that the binaries of the old version remain intact on the system so you don't have to reinstall and reconfigure in the case of a back out.

## Specific Steps for Upgrading Messaging Server Using the Side-by-side Migration Model

1. Backup the message store. This can be done using volume snapshot of the file system, or doing an `imsbackup` and `imsrestore`.
2. Install the new version of Messaging Server on the same system as your previous version of Messaging Server, but in a different directory (for example, in this procedure, `/opt/sun/comms/messaging7.0/`).
3. To migrate the configuration and message store data from the previous version of Messaging Server, run the `migrate-config` (migration configuration) utility:

```
/opt/sun/comms/messaging7.0/sbin/migrate-config old-msg-svr-root
```

For example:

```
/opt/sun/comms/messaging7.0/sbin/migrate-config /opt/SUNWmsgsr
```

4. Run `/opt/sun/comms/messaging7.0/sbin/patch-config`.
5. Run `/opt/sun/comms/messaging7.0/sbin/install-newconfig`.
6. To back out the migration, run `/opt/sun/comms/messaging7.0/sbin/migrate-config -u /opt/SUNWmsgsr`, where `-u` is the undo flag.

## Next Steps

- Once you complete the migration, stop using the old server-root directory:
  - Update their `PATH` and any scripts referencing the old server-root location.
  - If you are using Legato Networker, be sure to update the server-root location in the configuration.
  - Replace the server-root location with the server-root binary location.
- Start the new server with the following command:  
`/opt/sun/comms/messaging64/sbin/start-msg`
- If you need to back out the migration, use the `---u` (undo) flag:  
`/opt/sun/comms/messaging64/sbin/migrate-config ---u old-base-dir` (where `old-base-dir` is the old server-root) directory.
- To restart the old Messaging Server, use: `old-base-dir/sbin/start-msg`
- Uninstall the old version Of Messaging Server when you are satisfied with the performance of the new one. `commpkg uninstall`

## Backing Out of a Side-by-side Messaging Server Upgrade

Ideally you could just stop the new version and start the old version up and your back out recovery would be complete. However, because there is a mailbox database format change between pre-version 7 and version 7 Messaging Server, this won't work. To back out, you need to restore of the message store. This can be done by reinstalling the volume snapshot of the file system, or doing an `imsrestore` on the backed up message store.

In either case, there is a potential of losing data as mail comes in during the recovery period. For the most part, back out is considered a disaster recovery operation. Back outs are done immediately after major unacceptable problems are found in the upgrade. Thus volume snapshots are quite acceptable as a back out plan.

The basic procedure is as follows:

- Stop new version.
- Restore mailbox data
- Start old version.

## Using the In-Place Upgrade on Messaging Server

In this method you simply replace the old server binaries with the new server binaries on the same machine using the `commpkg upgrade` command. This command removes the old packages and installs the new ones. For details about this command, see [commpkg upgrade Usage](#).

## Advantages and Disadvantages of In-place Messaging Server Upgrade

- Simplest. One command installs the old packages and removes the new packages. This command migrates and upgrades configuration.
- Requires least amount of extra disk space.
- Messaging Server stays in the same disk location
- Has the most downtime
- Back out is complicated. Requires old product version be available. Note that if you do a mailbox

- data restore, then new messages that arrived since that backup may be lost.
- This method is probably best for evaluators/testers/developers.
- Useful for upgrading Messaging Servers configured without the message store. For example, front-end relays and webmail servers.

### **Specific Steps for Using In-Place Upgrade on Messaging Server**

- run `commpkg upgrade` and select Messaging Server
  - it stops the servers
  - removes the old version
  - installs the new version
  - performs migration of configuration and mailbox data

For information about using the `commpkg upgrade` command, see [commpkg upgrade Usage](#). Here's is a [commpkg upgrade sample session](#).

# Coexistent Upgrades From iPlanet Messaging Server 5.2

## Coexistent Upgrades From iPlanet Messaging Server 5.2

Wojtek Chemijewski and Greg Kimura, December 2007

*(Wojtek Chemijewski is a member of the Sun Professional Services team and has performed a number of Messaging Server 5.2 upgrade/migrations. He can be reached at [Wojtek.Chemijewski@sun.com](mailto:Wojtek.Chemijewski@sun.com). Greg Kimura is a Technical Writer at Sun.)*

**Note** Please add your comments and feedback. Our intention is to continue developing this document so that it can be useful in more and more cases.

### Introduction

This document provides technical and business guidelines for upgrading and migrating from iPlanet Messaging Server 5.2 to Sun Java System Messaging Server 6.3 (Sun Java Communications Suite R5) or Sun Java System Messaging Server 7 Update 1 (Sun Java Communications Suite 6 Update 1). In addition to upgrading the Messaging Server software, the process described here also modifies and migrates the user data (directory entries and mailboxes). After reading this document, you should be able to create a customized migration and upgrade plan for your system.

The audience for this technical article is email architects, system designers, and IT managers with a strong background in mail protocols and Sun's Messaging Server. Although the information in this document is more complete, further upgrade information can be found in [Upgrading from Messaging Server 5.2 to Sun Java System Messaging Server](#). This document may also be interesting to people who prepare migrations from other vendors' messaging systems to Sun Java System Messaging Server, as some of the information is generic.

**Note** - Each messaging system is different and organizations may have different goals, so each upgrade scenario will have subtle differences in the upgrade procedures. The complexity of an upgrade depends on the size and complexity of the deployment. While this article describes the methodology and tools for performing an upgrade, upgrading can be a time-consuming and complex process. If, after reading this, you feel this process contains more complexity or risk than you wish to attempt alone, Sun Professional Services can provide expert assistance.

### Why Upgrade?

While Messaging Server 5.2 might, in the short-term, remain an inexpensive email option, a number of advantages can be gained by upgrading. Some of these advantages include the following:

- Due to its age, Messaging Server 5.2 is no longer supported by Sun. That is, Sun Microsystems no longer provides bug fixes or support for this product.
- Availability of rich anti-spam and anti-virus support for Brightmail, Milter, SpamAssassin, and other mail filtering technologies.
- A new and more powerful front-end client is available with Communications Suite 6
- Support for new technologies, for example, Solaris 10 with zones, ZFS, and Access Manager.
- LMTP as well as other performance enhancements.
- Hundreds of bug fixes, enhancements, and new features. The following links describe a few of the features added with each release:
  - [Sun ONE Message Server 6.0](#)
  - [Sun Java Message Server 6 2004Q2](#)
  - [Sun Java Message Server 6 2005Q1](#)
  - [Sun Java Message Server 6 2005Q4](#)
  - [Sun Java Message Server 6.3](#)
  - [Sun Java Systems Messaging Server 7](#)
  - [Sun Java Systems Messaging Server 7 Update 1](#)

## Technical Overview

This article focuses on migrating while messaging services remain active and online as opposed to offline. It also focuses on upgrading and migrating Messaging Server 5.2 on existing hardware to different hardware. While it is possible to upgrade on the same hardware, this is a complex process with increased risk and longer downtime. For this reason, we recommend the *coexistence* migration model described here.

### **Coexistence Model**

In the coexistence model, existing services remain online while you construct a new and separate target environment. Existing user access remains the same while the new co-existent system is created. Once tested, users are incrementally migrated to the new system, and for a certain period of time both systems are accessible for user traffic (this is called the coexistence phase). During this phase some users are on the legacy system and some are on the new system. This migration process proceeds seamlessly and invisibly to users. When all users are migrated to the new environment, you can decommission your legacy deployment.

Additional machines are required to set up a new environment alongside the old one. If you do not want to purchase new machines, temporary machines are needed to run the legacy applications during the reinstallation of the old machines and the coexistence period.

The coexistence approach offers these advantages:

- Service downtimes are reduced.

Downtimes are usually rare and short. It is unlikely that these downtimes will be longer than the offline windows that are imposed by service-level agreements.

- The risk of upgrade failure is mitigated by parallel systems. A complete backoff procedure is not required.

Changes to an environment require a backoff plan in case the new environment fails. With an offline upgrade, you back up and turn off the old system, then install, configure, and migrate to the new system. You only know if the upgrade succeeded when you switch on the new system. If the upgrade did not succeed, you use your backoff plan to put everything back into place.

With the coexistence model, you establish working coexistent systems. You then migrate a small number of targeted users to the new system to thoroughly verify operations and administrative procedures. This phased approach ensures that the new system is fully prepared to handle the production users before you complete the migration.

Of course, even with coexistent migrations, you need to have a backoff plan whenever you do any reconfiguration that affects the production system, but the scope of reconfigurations performed during coexistent migrations is usually limited. Backoff plans are simpler and need to cover only the change that has just been performed.

- The migration schedule is flexible: You can define when users are migrated with arbitrarily long pauses in between. For instance, you might decide to migrate users only at night. Or you do not want to migrate all users at once
- Because the new system is built alongside the old one, you should not need to install anything on the legacy machines. Modifications required on the legacy machines are limited.

This is an advantage, as you may be reluctant to modify or reconfigure legacy servers in significant ways.

**Note** - You should add the most recent patches to the Messaging Server 5.2 installation as fixes to

version 5.2 can ease the migration. Keeping up-to-date with patches is a good idea and usually a common administrative practice. However, if you do not add the latest patches to the legacy messaging server, it should still be possible to migrate.

### ***Maintaining Service Access***

One principle of migration is that user access should not be disrupted. To achieve this goal, you need to consider several issues:

- **Two-tier architecture.** Messaging Server deployments should use a two-tier architecture (see [Chapter 10, Understanding the Two-tiered Messaging Architecture in the Deployment Planning Guide](#)). In this model, client access and transport protocols are directed to front-end components which are able to direct service requests to the appropriate back-end services running behind them. The protocols are directed to these front-end components:
  - Mail Transfer Agent (MTA) for the SMTP relaying
  - Messenger Express Multiplexor (MEM) for accessing mailboxes with a web browser by using the Messenger Express application
  - Mail Multiplexor (MMP) for accessing mailboxes through POP and IMAP protocols

It is not possible to develop a coexistent environment with more than one message store server without a front-end layer. If the site is not using a two-tier architecture and you want to use a coexistent scenario, a front-end layer needs to be introduced, and the user traffic should be routed through the front-end server before coexistence is established.

- **End-user experience.** End users should not have to reconfigure their client software during the course of the migration. For example, they should not have to reset the IMAP or POP host in their mail client. The success of the project should not depend on whether or not users will comply. If reconfiguration is unavoidable, these changes must be clearly communicated to users weeks in advance and requested multiple times up to the final cut-over. Even then, you can expect a number of calls to the help desk. Migration should be as invisible to users as possible.

This issue is best handled when users can continue using the same host names to access the system. However, the migration might involve changing IP address of particular names in the externally accessible DNS. This change might be necessary because, for instance, user traffic needs to be moved from a single machine to front-end servers. If you need to change an IP address, ensure that you do so well in advance. Also make sure that both old and new IP addresses will work for a period of a few days.

If load balancers are used in the system, it is best to change load-balancing configurations, which usually become effective immediately. But network services are normally managed by different teams than software applications, so such changes might need to be planned well in advance, too.

- **Applications accessing services with their IP addresses.** Often applications access services that belong to the messaging environment without resolving them through a company-wide name service. Instead, they resolve by using an IP address or names defined in `/etc/hosts` or equivalent files. One reason the applications resolve this way might be because these services are not accessed by using a front-end service. For example, LDAP services are sometimes accessed in this way.

During migration, changes to application or operating system configurations might be required as service IP addresses change. Avoid sudden disabling of old IP addresses. Applications are often managed by different teams, and those applications might be subject to service-level agreements that disallow restarts at arbitrary times, or other similar issues.

If you plan to replace a legacy server with a new server accessed by a different IP address, maintain the old IP address on the new server until you have reconfigured all applications to the new IP address. Decommission the old IP address only when you are certain that no application uses it anymore.

- **Applications using the message store.** Other non-messaging applications might also access message stores directly. Examples include Event Notification Service (ENS) clients and applications that access mailboxes through IMAP by using the proxy authentication mechanism. During the course of a coexistent migration, the number of message stores will change as you deploy new mail stores alongside the legacy mail stores. The two types of stores will work together during the coexistence period, and you will decommission the legacy stores only after all users are migrated to the new stores. Applications that use the legacy store must be prepared to access new message stores. This type of access might require additional work by application developers or operation teams.

Consider, for example, an environment with one message store and a custom application which accesses the mail store directly, proxy-authenticates as different users, and reads mailboxes to perform some action. Now, in case of the coexistence, the application has to know which store the user is hosted on based on the LDAP content, and to connect to either of the stores depending on which user's mailbox it needs to read. In this example, additional development is needed for the application to support this.

### **Directory Schema and Provisioning**

One important decision to make before migrating is which directory schema to use on the new system. Messaging Server 5.2 supported a certain way of provisioning domain information into the user or group directory called Sun Schema 1. Subsequent releases of Messaging Server provided the option of using Sun Java System Access Manager for single sign-on functionality to other applications. Support of Access Manager required a different directory schema called Sun Schema 2.

Detailed information about schema background, choices, and migration can be found in [Chapter 8, Understanding Schema and Provisioning Option](#) in the Sun Java Communications Suite R5 Deployment Planning Guide and [Comparison of Sun Java System LDAP Schema Modes for Communications Suite Products](#) and [Sun Java System Communications Services 6 2005Q4 Schema Migration Guide](#).

The decision to require features provided by Access Manager can influence the migration from Messaging Server 5.2, as the introduction of Access Manager means using Schema 2. However, as Messaging Server 5.2 did not support Schema 2 or the Access Manager single sign-on (SSO) model, you must first upgrade your entire Messaging Server environment to the new version and then convert to Schema 2 and introduce Access Manager. Thus, during the migration project, you continue to use Schema 1 and you have to configure all the new components accordingly.

This also means that all provisioning tools which are used to provision domains, users, and groups in the legacy environment can still be used while the transaction is being conducted, and can continue to provision users to the new environment as long as it supports Schema 1. However, at some point during the course of the migration, new message stores will be installed, and after the migration, legacy stores will be removed. This means that at some point the environment will be ready for Schema 2 introduction, and if Schema 2 is introduced, Schema 1 provisioning tools will no longer work.

Although conversion to Schema 2 is not mandatory, if you do decide to convert to Schema 2, you need to consider how the schema changes will affect your provisioning tools. Either one or both of the following situations might apply:

- The iPlanet Delegated Administrator, which was used to provision for Schema 1, does not work with Schema 2. The new component, called the *Communications Services Delegated Administrator*, does not support Schema 1 and requires Access Manager for its operation.
- Custom provisioning programs need to be rewritten to comply with Schema 2. The Communications Services Delegated Administrator uses the Access Manager interfaces to provision domains, groups, and users in a way that is compliant with the Messaging Server. You can use the command-line tools that the Delegated Administrator provides for management of that information in Schema 2 environments.

There is no generic answer to the question of what changes to the provisioning system are involved with the schema change. It depends on how the provisioning is organized on the 5.2 system and which

requirements of the provisioning system are set for the new system. For more information, see the previously mentioned documents.

### ***Load Balancers***

If you are using load balancers for service access, and the machine that users access (for example, a messaging multiplexor) needs to be changed from a legacy machine to the new machine, retain the same virtual IP address and change the load-balancer configuration so that this virtual IP address maps to the real IP address of the new machine at some point. This method is better than changing the definition of a host name in a DNS so that it maps to a new virtual IP address, which maps to a new real IP address. The reason that it is better is that changes to the DNS do not need to be immediately detected by clients.

The effectiveness of this method depends on a couple of issues:

1. Whether this virtual IP address is used solely by the service being moved. If other services are accessed by this IP address, you might not have freedom to just do this.
2. Cooperation with the folks who manage the network infrastructure. Cooperation is essential in that network administrators might impose that changes to the network infrastructure are defined well in advance. This is usually true of the DNS changes, too.

### ***Introduction of the Newer Web Clients***

Messaging Server 5.2 provides a way of accessing mailbox content through a web browser. The application used for that purpose is called Messenger Express. This application is being deprecated in favor of newer applications. Sun Java Communications Suite R5 provides Communications Express, which is a common front end to the mail, calendar, and address book service. Further ahead, Sun Java Communications Suite 6 provides a new, AJAX-based web client called Convergence. Support for a Messenger Express deployment in a mixed environment is still maintained in newer versions of the product to provide a migration path.

As described later in this article, during a coexistent migration, the 5.2 Messenger Express front end must run in the front during the entire migration. It is not possible to deploy newer web clients in front of the Messaging Server 5.2 back end.

### **Gathering Site Planning Data**

The first phase of an upgrade consists of data gathering and analysis. During this phase you analyze the system in its entirety--including all the applications that interact with the system--and gather this data into a report. In addition to gathering system data that you have access to, you will also want to brainstorm with any others who may have managed and extended the system to find out more. The list of data items below can help you start the data gathering process. While we try to be comprehensive, this document might not address all the issues for your deployment, so you may need to do additional research.

After analysis, you will develop an upgrade plan. The upgrade can be successful only if the analysis is thorough, accurate, and accepted by all stakeholders. Before performing your analysis, you need to collect the following data about the legacy system and document it in your report:

#### **Stakeholders**

- Get to know what groups and individuals are involved with the system, what their roles and responsibilities are, and what the processes of system management and evolution are. This should include groups who deal with the customers as well as the systems groups. This would include marketing people, product management, operation teams, and development teams.

#### **System Information:**

- Describe all the machines and important network devices (like load balancers) in the system. Describe their roles in the environment and flow traces, organized and annotated with the

- protocols (for example, LDAP replication, SMTP, POP, IMAP, and HTTP).
- Diagram the system architecture and collect information about the DNS records that apply.

### **Directory Server Information:**

- List and describe all the applications that use the directory. Messaging Server requires the provisioning of new users and domains, but very often other applications require this user-related data for their own operation. This data could have a bearing on the upgrade tasks.
- Document the configuration data from all the directory servers that apply. Document the content of the configuration directories of all the instances, in particular, `dse.ldif` files and schema files.
- Document the data stored in the directories. Ideally, obtain LDIF dumps of the directories that apply.
- Diagram the directory trees if any data that applications use is different than the Messaging Server. Document information about object classes and attributes that do not belong to schemas distributed by Sun.

### **Legacy Messaging Server Information**

- Collect information about all the non-Messaging Server entities engaged in message processing or message access. This could include anti-virus servers, anti-spam servers, and load balancers. In particular, document how these entities interact with messaging servers by using trace or access flows as well as configuration details.
- Collect configuration details of all the messaging servers, including output of the `configutil` command, MTA configurations, MMP configurations, Messenger Express customizations, and SSL-related information. An enumeration of all changes to the default configuration is useful.
- Document how users log on and use the system. If different categories of users exist, document users who belong to all the categories. The analysis should detail, for example, accessing the system through all the protocols, and sending and receiving mails to or from different destinations.
- Gather information about any applications that use the messaging system in any way whatsoever. This information might be specific to applications that just send mail, but also to, for example, ENS subscribers, program deliveries, conversion scripts, and log analyzers.

### **Machine Information**

- Collect operational information about each machine, for example, IP configuration, `crontabs`, and port assignments.
- List any programs and scripts that are running on the systems machines.

After gathering all of this data, you should have a complete report describing the current system and requirements.

### **Analyzing and Planning**

The next step is to analyze the data and design the target architecture of the system. The design might be very similar or very different than the legacy architecture. In any case, migrating allows you to create the optimal design for your needs.

Once you have an architecture, you create a migration plan describing the steps for migrating and upgrading the current system to the new system. This plan should contain the following:

- Description of the current system, which is the result of the analysis.
- Identification of the differences between the legacy system and out-of-the box configurations, and ways to address the differences.
- Responsibility for technical domains. For example:
  - Custom scripts are handled by internal developers.
  - Third-party anti-virus machines might be out of the scope of the project or might need to be reconfigured by the operations team to allow for specific traffic.
  - New virtual addresses might need to be defined on load balancers by the operation teams.

- DNS servers might need to be changed by their administrators.

After you have these plans ready, you must ask all stakeholders to verify and agree to these documents.

A thorough analysis and planning phase is a long, painstaking, important, and unavoidable exercise. Any negligence during this phase can result in future problems. The following subsections describe migration issues for specific technology areas.

## Upgrading the Directory Server

Migration of the Messaging Server 5.2 environment usually involves an upgrade of the Directory Server as well. Techniques of upgrading the Directory Server vary depending on the source and target versions and architectures, and are beyond the scope of this document. For details, see the [Directory Server documentation](#) for the details.

## Achieving Coexistence

Successful upgrade and migration depends on both the legacy and the newly deployed system working in production alongside each other. Two factors influence how this coexistence is designed:

- During coexistence, some users will have mailboxes on the legacy system, and some users will have mailboxes on the new system. The server components that enable coexistence need to be able to recognize both types of mailboxes and route or proxy mail messages and access traffic accordingly. This phenomenon is hereafter referred to as *static coexistence*.
- During the actual mailbox migration procedure, owners of the mailboxes must be prevented from accessing those mailboxes. Users should be without access for only a very short time, but access must be blocked, and this period of non-operation should be communicated to users. For information about migrating mailboxes, refer to [Migrating Mailboxes to a New System](#). The coexistence that applies to individual users while their mailboxes are being migrated is called *dynamic coexistence* hereafter.

Static coexistence needs to be achieved before the new message stores are put into production and the first users are migrated. All relevant components of the environment need to be aware that both legacy and new message stores are in place and these components need to be able to access both stores seamlessly, as appropriate.

The remainder of this section describes steps that need to be performed on various components of the environment to migrate them to the newest version of the Messaging Server in a coexistent way. Subsequent sections describe steps that need to be performed before the migration of the users' mailboxes, as well as those steps that need to be performed afterward.

Note that achieving static coexistence might be required on non-Messaging Server components that are part of the current environment (often they are built in-house). This applies to any components that access message stores directly, such as ENS subscribers or applications which use the proxy authentication method directly on the message stores to access mailboxes on behalf of users. Configuration changes or development and deployment requirements are specific to particular components, and need to be part of the site analysis performed before the migration begins. The migration of users cannot start until these tasks have been performed.

### **POP and IMAP**

In the case of the POP and IMAP services, static coexistence is achieved by the Messaging Multiplexor (MMP) component of the Messaging Server. The MMP is a POP or IMAP proxy that intercepts the authentication attempt, verifies the existence of the user, and, optionally, authorizes the user, and proxies the connection to the message store that actually hosts the user's mailbox.

The decision about which store is used for access or delivery is based on the value of the `mailHost` attribute in the user's entry in the directory. To change a user's message store, all that is required is to

set the value of `mailHost` to the name of the new mail store. Connections are then proxied to that new store. To support dynamic coexistence, the LDAP lookup cache needs to be disabled on the MMP so that it detects changes to the value of the `mailHost` attribute immediately. This means that the `default:LdapCacheTTL` needs to be set to 0 both in the `PopProxyAService.cfg` and `ImapProxyAService.cfg` configuration file before the migration starts, and reset to the appropriate non-zero values afterward.

You can either use the 5.2 version or the new version of MMP to access the message store of either version during coexistence. That is, you can deploy new MMPs either before or after the message store migration. The process of deploying the new MMPs can be phased so that one MMP server is reinstalled at a time, and over time more and more new MMP servers are put into production. The servers do not need to be upgraded all at once. However, if the new version of the MMP is used as a front end, the `default:Capability` needs to be set in the `ImapProxyAService.cfg` configuration file, announcing only those capabilities that are supported by the 5.2 message store. The value of `default:Capability` on new MMPs needs to be set to the default value of the 5.2 MMPs. This means that the new capabilities which are offered by the IMAP server of the new message store cannot be used by migrated users until all users are migrated and legacy message stores are decommissioned. This constraint applies even if MMP servers are upgraded first.

### ***Messenger Express***

The Messaging Server provides a web-based application used to access the message store called Messenger Express. The Messenger Express content is provided by a daemon called `mshttpd`, and consists of a mixture of static pages and dynamic data. The dynamic data is generated based on the content of mailboxes, LDAP user, and personal address book entries.

In the case of the two-tier Messenger Express deployment, the architecture details vary from version to version. These details are important from the perspective of which version of the application can coexist with which. In the case of Messaging Server 5.2, 6.0, 6.1, and 6.2, the static content is provided by a front end server and the dynamic content is proxied to the back end message store for processing. The front end makes the decision about which message store the dynamic requests should be proxied to, based on the value of the `mailHost` attribute of each user. The requests for dynamic content transmitted by the client conform to a private, web-based protocol called *Webmail Access Protocol*, or *WMAPI*. The requests are proxied further to the back end unchanged. The front end component is called the *Messenger Express Multiplexor (MEM)*.

In Messaging Server Version 6.3, the Messenger Express architecture has changed. The front end no longer proxies the WMAPI requests to the back ends. Instead, the front end itself generates responses to the requests that previously had to be proxied to the back end. The front end uses the IMAP, LDAP, and SMTP protocols to support these requests. In particular the mailboxes on the back end are accessed with IMAP. Arbitrary IMAP servers are not supported, the front end uses private IMAP extensions to obtain the required information, and these extensions are supported by the Messaging Server Version 6.3, or later IMAP daemon. The consequence is that in a pure 6.3 deployment, the `mshttpd` daemon does not even need to be started on the back end, as the daemon is no longer used. However, the `mshttpd` daemon is still part of the product and it can be used in mixed scenarios.

In a coexistent scenario, the only working architecture requirements are as follows:

- The MEM of Messaging Server Version 5.2 is used on the front end.
- The static content on the front end is converted to UTF-8, and the `mshttpd` daemon on the front end is reconfigured to use UTF-8 for communication with the back end.
- The `mshttpd` daemon is enabled on the 6.3 (or 7 Update 1) version Message Stores.

Particular configuration changes need to be made on the front end 5.2 MEMs to achieve this architecture. Assuming that the coexistent environment consists of Messaging Server 5.2 front ends, 5.2 legacy back ends, and 6.3 new back ends, these changes include the following:

- Disabling LDAP caches by setting the `configutil` variable `service.authcachettl` to 0 to support the dynamic coexistence.

- Modifying the `i18n.js` files for all languages to `i18n['client charset'] = 'utf-8'` and `i18n['http charset'] = 'utf-8'`.
- Converting all Messenger Express static files that contain international characters so that these characters are encoded in UTF-8.
- Editing the `server-root/bin/msg/bundles/enbylang.properties` file so that it reads, for example, `http|en=utf-8, http|zh-TW=utf-8`. Adding a line for each language that the site uses. The language codes correspond to all values of the `preferredLanguage` attribute in all users' entries in LDAP. This process is repeated for the back end Messaging Server 5.2 servers.

You can use either Messaging Server Version 5.2 MEM, or the Messaging Server Version 6.3 Messenger Express server to access the same Messaging Server 6.3 back end. The former proxies WMAP requests, while the latter uses IMAP to access the message store. This means that after all the Messaging Server 5.2 back ends disappear, you can upgrade the Messenger Express front ends one after another, one at a time.

### **SMTP**

In the case of the SMTP services, coexistence is based on the Mail Transfer Agent (MTA) component of the Messaging Server. The MTA is deployed on the front-end servers, and relays mail from its source (possibly Internet MTAs, or users submitting mail) to the appropriate back end by using the SMTP protocol.

As is the case with other components, the decision where the mail should be relayed is based on the value of the `mailHost` attribute. The MTA should be configured so that all `mailHost` values are configured as internal names and rewritten to a channel that is different from `tcp_local` (which relays mail to the Internet). Usually, internal-bound mail is rewritten to the `tcp_intranet` channel based on the rewrite rule, which rewrites all domains that are subdomains of the default site domain to that channel. This rule is created by default during the MTA installation. In case the site rewrites the local mail stores in a different way, the new message store names need to be configured to be rewritten in the appropriate way as well. Otherwise, the MTA might recognize the new mail store names as remote and prevent messages from the Internet being accepted by the migrated users based on the default anti-relay configuration.

MTA servers have no mixed-version constraints. The front-end MTA can be either Messaging Server Version 5.2 or 6.3, and they can both relay mail to either version of the back-end Messaging Server by using SMTP. No special configuration is required for either version to support a different version of the Message Store's MTA. The consequence is that the MTA front-end servers can be upgraded in a phased way. To support additional features, you can deploy the new version in the MTA before the migration. In fact, upgrading the front-end MTAs before the migration is preferred because it provides additional flexibility when the mailboxes are migrated. For more information, see the [Mail User Status During the Migration](#) section.

In a coexistent scenario, you might assume that you can deploy the 6.3 MTA so that it supports mixed message stores in the back end, for example, delivering mail to the 6.3 stores that use LMTP and to the 5.2 stores that use SMTP. This is possible, however, to keep the entries of unmigrated users in LDAP unchanged, and to avoid having to change the provisioning systems before the migration, you must retain SMTP delivery to all message stores during the migration. You may only reconfigure the MTAs to deliver mail with LMTP when all Messaging Server 5.2 back ends are decommissioned.

If your 5.2 MTA is configured in the `dirsync` mode (as opposed to the direct LDAP mode), which was the default mode on the Messaging Server 5.2 installation, and that MTA is to be used during the migration, you need to reconfigure it for direct LDAP before the migration starts. `dirsync` is run periodically. You cannot force it to detect changes to the directory immediately. If you upgrade, we highly recommend configuring the system to run in the direct LDAP mode.

To support dynamic coexistence, you need to disable the LDAP cache for the MTA before the migration. To do so, set the MTA option `ALIAS_ENTRY_CACHE_TIMEOUT` to 0. After the migration of the mailboxes, enable the cache again.

## Message Stores

As you enable coexistence, consider these key points about the message stores.

- **Mail delivery from one message store to another.** Although mail is not typically relayed through message stores, the message stores sometimes need to send mail message notifications. This can happen, for instance, if a message cannot be delivered to a user because their mailbox is over quota. In this case, if a message store is to deliver a notification mail to other message stores, it needs to immediately detect if the recipient of the notification mail has been migrated.

Changes required to support this "migration awareness" are similar to those changes that need to be made on the front-end MTA: `ALIAS_ENTRY_CACHE_TIMEOUT` option needs to be set to 0, also, as per your system requirements, mail from one store to another may need to be relayed in a specific way. If so, custom rewrite rules and/or channels may need to be created on message stores to handle that mail appropriately. It is a good idea, that mail between the new message stores is not relayed directly, but instead is relayed through the front end servers. Although it adds an additional SMTP hop, future introduction of LMTP will not require any reconfigurations on the message stores, as far as such mail is concerned.

If the Message Store is configured for the `dirsync` mode, it should be reconfigured for direct LDAP.

In the case of the new back-end systems, consider having mail to other new message stores relayed to the front-end MTAs, rather than to these stores directly. This is good preparation for introducing LMTP after the migration.

- **Quota grace period.** The quota grace period feature of the message store enables retaining the mail of users who exceeded their quota for some time after the quota has been reached, rather than immediately issuing bounced mail. Mail to users is retained by the MTA in the local queue of the `ims_ms` channel, and is bounced back if the mailbox is over quota for a specific number of hours.

If the quota grace period is enabled on the old message stores, it has negative consequences for the migration. The MTA does not requeue messages in its `ims_ms` queue. This means that if a message queued to `ims_ms` is waiting for the mailbox to be emptied, it will not be delivered to the other message store if the user has been migrated, and the mail host on which the user's mailbox is hosted has been changed. Instead, if the mailbox is migrated and the old mailbox is deleted, that mailbox is immediately re-created on the old message store mail from the `ims_ms` channel that is delivered to that mailbox. As the user is using the new message store, that mail is not accessible and effectively is lost.

Therefore, it is a good idea to reconsider whether the grace period should really be set. If it is set, disable it a couple of days before the migration. If you do not want to disable the grace period, every time a user is migrated, the `ims_ms` channel queue should be checked if no messages are waiting for delivery. You should either bounce the messages manually, or temporarily suspend migration of that user until there are no messages waiting to be delivered.

- **Orphaned mailboxes.** Before you migrate a mailbox, verify whether or not it is an orphaned mailbox (mailboxes that do not have corresponding entries in LDAP). Users cannot access such mailboxes, nor do they receive mail, so there is no point in migrating them. The size of these mailboxes might be significant and some time can be saved if they are skipped. You can use `reconstruct -o` to deal with orphans on 5.2 systems (for 6.3 and 7 Update 1 it is `mboxutil -o`).
- **Storage expansion.** If the same message is delivered to multiple recipients on the same mail partition, only one copy of that message is stored on disk. This is called *single-copy store*, and it reduces disk space when storing multiple copies of the same message. If two users who have the same message in their mailboxes are migrated separately, that message is migrated as two separate copies and is stored as two copies after the migration. This separate migration leads to a storage expansion, which in some cases can be significant. To avoid this problem a relinker tool is

provided by the message store. That tool is capable of rejoining identical messages, at a performance cost of computing a hash for each message as it is appended to the store. The relinker tool should be enabled during the migration of mailboxes. See the Administration Guide for instructions.

## Migrating Users' Mailboxes

### *Mailbox Migration Process*

After the coexistence has been prepared, you can start migrating mailboxes.

To migrate a single mailbox:

1. Change the entry of the corresponding user in LDAP so that all front-end services know that the user is being migrated. This change is called the *initial LDAP change* hereafter. This change prevents new connections from being proxied to the mail store, and mail from being delivered. The number of changes needs to be minimal at this point. Only changes that are required for the migration need to be performed. The reason is that if the backoff needs to be run, the number of changes which need to be performed will be minimal as well. The changes that you need to make are the following:
  - Save the original value of the `mailUserStatus` attribute for later use. You can save `mailUserStatus` in a custom attribute or elsewhere.
  - Change the `mailUserStatus` attribute to `inactive`, `held`, or `defer`. See the discussion in the [Mail User Status During the Migration](#) section for a discussion of the status values.
  - Change the `mailHost` attribute to the name of the new message store. If multiple mail partitions reside on the target message store, change the `mailMessageStore` to the name of the partition to which the user is being migrated.
2. If the time needed to deliver messages to mailboxes is a concern, wait a couple of seconds to make sure that two types of mail has been delivered:
  - Mail that might be queued to the user in the `ims_ms` queue
  - Mail that is being submitted to the user
3. If the grace period is not disabled, check that no emails are in the `ims_ms` queue for the migrated user. If emails are in the queue, that mail should be bounced manually or the migration should be suspended and attempted when that mail is delivered.
4. Back up the mailbox with the `imsbackup` command on the source message store.
5. Restore the mailbox by using the `imsrestore` tool on the target message store. Because the `mailHost` and `mailMessageStore` have already been changed, the mailbox will be restored on the appropriate partition. If the migration is automated, and the automation script is running on the legacy message store, transfer the backup file to the new message store and run the `imsrestore` command remotely.
6. Update the user LDAP entry again. Generally, the `mailUserStatus` should be changed back to the original value. If any site-dependent changes need to be made to the LDAP entries, perform them at this stage. This step is called a *final LDAP change* hereafter.
7. (Optional) Back up the original mailbox and delete it from the source message store.

In the next section, some migration considerations are elaborated on.

### *Considerations*

Another way to migrate is by user bundle. This section addresses user bundles, as well as error handling, a test migration, and the attribute to use for mail user status during migration.

### Single Mailboxes or Bundles?

The previous algorithm describes migration of a single mailbox. However, you can perform a migration in user bundles. A user bundle consists of a number of users who are migrated together. The previous steps are performed on an entire bundle. For example, you might perform the following operations on a bundle:

- Making LDAP changes
- Running the backup process
- Connecting to the new message store
- Running the restore process

These operations are performed once per entire bundle only, which in certain cases makes the migration more efficient .

The disadvantage of bundling is that an entire bundle of users cannot access their mailboxes while their mailboxes are being migrated. This is due to the fact that the initial LDAP change, which disables mailbox access, is performed for all users. The final LDAP change that enables it back is performed only after the entire bundle is migrated. So, from the perspective of an individual user, the period of time during which that user is prevented from accessing the system is longer, compared with a situation when the same user is migrated individually. Still, the period of inactivity might be short enough to justify bundling of users. A good trade-off might be to create bundles based on the mailbox size so that bigger mailboxes are migrated in smaller groups or even individually, while smaller mailboxes are bundled in larger groups. Also, it is a good idea to combine mailboxes that are inactive or accessed rarely into larger bundles, as the members of such bundles are less likely to attempt to access their mailboxes during the migration.

Another disadvantage of creating larger bundles is that the backoff procedure must be on a per-bundle basis. If an error occurs during the migration, changes to all users in the bundle need to be backed off. This is not a severe problem, though, as the backoff procedure is essentially reverting the initial LDAP entries.

### Error Handling

You need to be prepared to handle errors that can occur during the mailbox migrations. In the case of the previous procedure, the backoff is straightforward, as the source data is not altered until it is certain that the migration was successful. So if an error occurs during steps 1 - 5, the backoff procedure is to revert all changes that are performed during the initial LDAP change.

If the error occurs in step 6, the backoff procedure depends on whether only one user is being migrated, or a bundle migration is being performed. In the case of a single user being migrated, the initial LDAP change can be reverted. In the case of a multiuser bundle, a reversion might not be possible because as soon as the final LDAP change is performed on a user, that user can access the mailbox again. So it might not be possible to perform the final LDAP change on a user under the following conditions:

- That change has already been performed on other users in the same bundle.
- These users are already using the system, or new mail has already been delivered to these users.

The proper action is to skip the final LDAP change on the erroneous user and perform that change on all users possible. The erroneous user will not be able to use the system until the problem is fixed manually by an administrator.

### Friendly User Test

One of the advantages of the coexistent migration is the ability to flexibly schedule the migration of particular mailboxes. Mailboxes that are already migrated do not affect users who are not yet migrated. This allows you to test migration on a group of ?friendly? users before the actual production migration occurs. You should always perform this friendly user test. After these users are migrated, verify the following:

- The data is migrated correctly.
- The configuration of the new message stores is correct.
- The coexistence is working correctly in each and every aspect.

Also, you can measure the speed of the migration to determine the optimal bundle size.

Choose friendly users who are representative of the entire user set. Perform the previously mentioned verification diligently, as this step is crucial to the success of the migration of the entire user set.

#### **Mail User Status During the Migration**

You can choose from several possible values for the `mailUserStatus` LDAP attribute when migrating. Your choice depends on the required MTA behavior and the version of the front-end MTA that you use during the migration.

If the MTA is not upgraded before the mailbox migration and it is still version 5.2, the best option is to set `mailUserStatus` to `inactive`. The reason is that mail to the users being migrated is rejected by the MTA with a temporary error, and the remote MTAs that attempt to send mail will retry later when the migration is likely to be finished. The result is that if other users try to send the mail to such a migrated user with their mail user agents, those users will see an error message. This error might not be a problem for users, but if it is, you can set `mailUserStatus` to `held` instead. In such a case, mail to users being migrated is accepted and held in the MTA queue of the new message store. The disadvantage of this setting is that a manual administrative action is required to release such messages after the migration. If a migration is automated, the need for manual action should be avoided.

A workaround to the problem of users receiving errors on submission is to use the `acceptalladdresses` channel keyword. This keyword is supported on version 6.1 and later MTAs and, if placed on a source channel, it delays the recipient existence and status check to the point after the message is accepted. So messages to inactive users are accepted, and then placed in the queue for delivery when the status changes. The disadvantage is that messages to nonexistent users are also accepted, and then delivery service notifications are generated. Such a consequence should be avoided, so the `acceptalladdresses` keyword should be used only on specific channels through which users submit mail. Do not use the keyword on channels through which mail from the Internet arrives. To be able to use this option fully, upgrade the front-end MTAs before the migration.

A better option to use if the MTA is upgraded to version 6.3 or 7 Update 1 before the migration is to set `mailUserStatus` to `defer`. This forces the MTA to accept mail and put it into the reprocessing queue, waiting for the status to change. Mail is delivered immediately without the need for human intervention. The Messaging Server 5.2 back-end MTA does not know the `defer` `mailUserStatus` value, and all unknown values are treated as `inactive`, which is appropriate, as no users should submit mail directly to the back end with their mail user agents.

# Upgrading to Messaging Server 7 Update 1 in an HA Environment

## Upgrading to Messaging Server 7 Update 1 in an HA (High Availability) Environment

Upgrading Messaging Server in an HA environment consists of upgrading the Messaging Server software followed by the Messaging Server Sun Cluster Agent.

This document contains the following sections:

- [Upgrading to Messaging Server 7 Upgrade 1 in an HA Environment](#)
  - [To Do a Side-by-side Upgrade to Messaging Server 7 Upgrade 1 in an HA Environment](#)
  - [To Do an In-place Upgrade to Messaging Server 7 Upgrade 1 in an HA Environment](#)
- [Upgrading to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\)](#)
  - [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\)](#)
  - [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\) If Cluster Nodes include Non-Global Zones](#)
  - [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\) in a Two-node Symmetric Sun Cluster HA Environment](#)

## Upgrading to Messaging Server 7 Upgrade 1 in an HA Environment

Each upgrade strategy requires different procedures for upgrading in an HA environment. A coexistent environment would be like a new HA installation (see [Configuring Messaging Server for High Availability](#)). Side-by-side and In-place HA upgrades are described below.

### To Do a Side-by-side Upgrade to Messaging Server 7 Upgrade 1 in an HA Environment

1. Go to the resource group online node.
  - a. Disable Messaging server resource,  

```
# scswitch -n -j msg_svr_resource
```
  - b. Upgrade Messaging Server using the side-by-side strategy (see [discussion here](#)). This must be performed only on the Messaging Server resource group online node. Do not start Messaging Server yet.
  - c. Run `hp_ip_config` command on the Messaging Server resource group online node.  

```
# msg_svr_base/sbin/ha_ip_config
```

Note : This command is needed only if the current installed Messaging Server version is older than 7.0.
2. Switchover to other node:  

```
# scswitch -z -g msg_svr_resource_group -h node-name
```
3. Run `useconfig` command. This is needed if Messaging Server upgrade is from 32-bit to 64-bit, to update library path `/bin/crle-64'`  

```
# msg_svr_base/sbin/useconfig configdir
```
4. Change `IMS_serverroot` path for Messaging Server resource if new Messaging Server base directory is different from old installation.  

```
#scrgadm -cj msg_svr_resource -x IMS_serverroot=new_msg_svr_base
```
5. If Messaging Server Sun Cluster agent (`MS_SCHA`) is old (not from Communications Suite 6 or later), then it will not work with upgraded Messaging Server. So perform `MS_SCHA` upgrade procedure.
6. Enable Messaging Server resource.  

```
# scswitch -e -j msg_svr_resource
```

## To Do an In-place Upgrade to Messaging Server 7 Upgrade 1 in an HA Environment

An in-place upgrade is done by using the `commpkg upgrade` command. This command is not available for upgrading from Messaging Server 32-bit to Messaging Server 64-bit. Side-by-side upgrade supports upgrading from Messaging Server 32-bit to Messaging Server 64-bit.

1. Disable Messaging Server resource:  

```
# scswitch -n -j msg_svr_resource
```
2. Run the `commpkg upgrade` command on all nodes of the cluster.
3. Run the `ha_ip_config` command on the Messaging Server resource group online node.  

```
# msg_svr_base/sbin/ha_ip_config
```

Note : This command is needed only if the current installed Messaging Server version is older than 7.0.
4. Enable Messaging Server resource:  

```
# scswitch -e -j msg_svr_resource
```

## Upgrading to the Messaging Server 7 Upgrade 1 Sun Cluster Agent (MS\_SCHA)

This section provides instructions for the Sun Cluster Agent upgrade. It consists of the following sections:

- [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\)](#)
- [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\) If Cluster Nodes include Non-Global Zones](#)
- [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \( MS\\_SCHA\) in a Two-node Symmetric Sun Cluster HA Environment](#)

### To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent (MS\_SCHA)

1. Run `commpkg upgrade` on all nodes on the cluster. Messaging Server should be upgraded to 7 Upgrade 1 before upgrading Messaging Server Sun Cluster Agent.
2. Enable Messaging Server resource:  

```
# scswitch -e -j ms-server-resource
```

### To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent (MS\_SCHA) If Cluster Nodes include Non-Global Zones

Sun Cluster recently introduced support for Solaris 10 Zones. If a machine that has non-global zones participates in a cluster, all zones on that machine must be in the cluster. The Sun Cluster software and HA agents should be installed in all zones, and MS\_SCHA should be installed in the global zone and automatically propagated into all non-global zones (that is, don't use the `-G` switch to `pkgadd`). The Communications Suite Installer treats HA agents like MS\_SCHA as a product that should be propagated to all non-global zones when it is installed in the global zone. In the rare case where you have managed to install the older pre-version 7 MS\_SCHA agent in the non-global zones, then an upgrade consists of first uninstalling the older agent from all non-global zones, followed by installing the new 7 Upgrade 1 agent in the global zone.

To check if the older pre-version 7 agent was installed in the global zone and automatically propagated to all non-global zones, verify that `SUNWscims` is listed in `/var/sadm/install/gz-only-packages`. If it is, then run `commpkg upgrade` in the global zone. If it isn't listed, then `SUNWscims` is either not installed, or is installed so that it is propagated to non-global zones. If this is this case, use the following procedure:

1. Run `commpkg uninstall` and uninstall MS\_SCHA in every non-global zone (don't uninstall it in the global zone)
2. In the global zone, run `commpkg upgrade` and upgrade MS\_SCHA

### To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent (MS\_SCHA) in a Two-node Symmetric

## Sun Cluster HA Environment

1. Upgrade Messaging Server to Version 7 Upgrade 1 before upgrading the Messaging Server Sun Cluster Agent.
2. Make sure that the Messaging Server installation location is accessible from both nodes.

This is required because a resource type upgrade command validates accessibility. For the first instance in a Symmetric Cluster setup, Messaging Server installation will be done on first node only (on a shared storage mount point). For the second instance, Messaging Server installation will be done on second node only.

3. Follow the steps mentioned in section [To Upgrade to the Messaging Server 7 Upgrade 1 Sun Cluster Agent \(MS\\_SCHA\)](#)

Note: If user prefers to upgrade Sun Cluster Agent (MS\_SCHA) for only one instance, then follow above steps and correct the resource type version using Sun Cluster commands.

# Upgrading Calendar Server 6.3 in an HA Environment

## Upgrading to Calendar Server 6.3 in an HA (High Availability) Environment

Upgrading Calendar Server in an HA environment consists of upgrading the Calendar Server software followed by the Calendar Server Sun Cluster Agent.

This document contains the following sections:

- [To Upgrade Calendar Server 6.3 in an HA Environment](#)
- [To Upgrade the Calendar Server Cluster Agent \( CS\\_SCHA\) If Cluster Nodes include Non-Global Zones](#)

### To Upgrade Calendar Server 6.3 in an HA Environment

The following instructions describe how to upgrade Calendar Server in an HA environment.



#### Note

To upgrade a Solaris x86 deployment, make sure that you are running at least Calendar Server 6.3 patch -20. See [Upgrading to Calendar Server 6.3 Patch 12165820 or Later on Solaris x86 Platforms](#) for more information.

1. Disable Calendar server resource.  

```
# scswitch -n -j cal-server-resource
```
2. Run `commpkg upgrade` on all nodes of the cluster.
3. Update with logical host names for following properties in the `ics.conf` file  

```
local.hostname = "logical-host-name"  
local.servername = "logical-host-name"
```
4. For each resource group non-online or non-active node
  - a. Mount the `config` directory by making the file system a global file system, or switch the resource group to non-online or non-active node.
  - b. Run `cconfigurator.sh -nodisplay -noconsole -novalidate`
5. Enable Calendar server resource:  

```
# scswitch -e -j cal-server-resource
```

### To Upgrade the Calendar Server Cluster Agent (CS\_SCHA) If Cluster Nodes include Non-Global Zones

Sun Cluster recently introduced support for Solaris 10 Zones. If a machine that has non-global zones participates in a cluster, all zones on that machine must be in the cluster. Thus the Sun Cluster software and HA agents should be installed in all zones. Thus it follows that CS\_SCHA should be installed in the global zone and automatically propagated into all non-global zones (i.e. don't use the `-G` switch to `pkgadd`). The `CommsInstaller` treats the HA agents like CS\_SCHA as a product that should be propagated to all non-global zones when it is installed in the global zone. In the rare case where you have managed to install the older CS\_SCHA agent in the non-global zones, then an upgrade consists of first uninstalling the older agent from all non-global zones, followed by installing the new agent in the global zone.

To verify that the older agent was installed in the global zone and automatically propagated to all non-global zones, check if `SUNWscics` is listed in `/var/sadm/install/gz-only-packages`. If `SUNWscics` is listed in `/var/sadm/install/gz-only-packages`, then simply run `commpkg`

upgrade in the global zone. If it isn't listed, then `SUNWscics` is either not installed, or installed so that it is propagated to non-global zones. If this is the case, then use the following procedure:

1. Run `commpkg uninstall` and uninstall the `CS_SCHA` in every non-global zone (don't uninstall it in the global zone)
2. In the global zone, run `commpkg upgrade` and `upgrade CS_SCHA`

# Upgrading Communications Suite in Silent Mode

## Upgrading Communications Suite in Silent Mode

If you run the Communications Suite installer to upgrade the products in Silent mode, you are running a non-interactive session. This is useful for upgrading multiple instances of the same software component/configuration without have to manually run an interactive upgrade on each instance. The upgrade inputs are taken from a silent upgrade file (also known as a state file), from command line arguments, or defaults.

To run a silent upgrade, follow these steps:

1. Run an interactive upgrade session. A state file similar to `/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358` is automatically created for every run of the upgrade. You can create a silent state file without actually upgrading the software during the interactive session by using the `--dry-run` option, then modifying the state file. For example:

```
# commpkg upgrade --acceptLicense --dry-run
```

2. Copy the state file to each host machine and edit the file as needed. See [Silent Mode File Format](#).
3. Run the silent upgrade on each host. For example:

```
# commpkg upgrade --acceptLicense --silent <Input File>
```

where *Input File* is the path and name of the silent state file. For example:  
`/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358`.

For details about the `--silent` option, see the silent upgrade usage in [commpkg upgrade Usage](#).



### Note

Command-line arguments override the values and arguments in the state file.

### About Upgrading Shared Components

By default, shared components are not upgraded when you run a silent upgrade. The option to upgrade shared components in the silent state file is automatically disabled. That is, the option is set to `UPGRADESC=No`. This is true *even* if you explicitly asked to upgrade shared components when you ran the interactive upgrade that generated the silent state file. That is, you ran `commpkg upgrade --upgradeSC y`.

The reason to disable upgrading shared components in the silent state file is this: the other hosts on which you are propagating the upgrade may have different shared components installed, or different versions of the shared components. These versions may be required for other applications running on the different hosts. Therefore, it is safer not to upgrade the shared components by default.

You can upgrade shared components when you run a silent upgrade by taking either of these actions:

- Use the `--upgradeSC y` option when you run the silent upgrade. (The command-line argument overrides the argument in the state file.)
- Edit the `UPGRADESC=No` option in the silent state file to: `UPGRADESC=Yes`.

### Silent Mode File Format

The silent mode file (also known as a state file) is formatted like a property file: blank lines begin with a number sign (#) and properties are key/value pairs separated by an equals (=) sign. You can change the following parameters:

- `VERB`— indicate which function to perform. For example `VERB=install`

You can add CLI arguments described in [commpkg upgrade Usage](#), however the `-dry-run` argument cannot be added to the `upgrade` function in the state file.

- `ALTDISTROPATH`— indicate an alternate distro path if `-distro` is not specified. For example, `ALTDISTROPATH=SunOS5.10_i86pc_DBG.OBJ/release`
- `PKGOVERWRITE`— set this flag if you want to overwrite the existing installation packages. For example, `PKGOVERWRITE=YES`
- `INSTALLROOT`— specify installation root. For example, `INSTALLROOT=/opt/sun/comms`
- `ALTROOT`— set this flag if you want to use an alternate root. For example, `ALTROOT=yes`
- `EXCLUDEEOS`— set this flag if you don't want to upgrade Operating System patches. For example, `EXCLUDEEOS=YES`
- `COMPONENTS`— list the components you want to upgrade.\* For example:
  - `COMPONENTS=MS64` for 64-bit Messaging Server.
  - `COMPONENTS=MS64_L10N` for localized 64-bit Messaging Server.
  - `COMPONENTS=MS` for 32-bit Messaging Server.
  - `COMPONENTS=MS_L10N` for localized 32-bit Messaging Server.
  - `COMPONENTS=CS` for Calendar Server.
- `ACCEPTLICENSE`— indicate whether or not to accept license. For example, `ACCEPTLICENSE=yes`.

This property must be specified either in the state file or as a command line argument.

- `UPGRADESC`— indicate whether all shared components should or should not be upgraded without prompting. For example, `UPGRADESC=no`

\* To display a complete list of the product names (such as MS, MS64, CS) to use with the `COMPONENTS` property, run the `commpkg info --listPackages` command. This command displays the mnemonics for each product.



# Upgrading to Instant Messaging 8 in an HA Environment

## Upgrading to Instant Messaging Server 8 in an HA (High Availability) Environment

Upgrading Instant Messaging Server in an HA environment consists of upgrading the Instant Messaging Server software followed by the Instant Messaging Server Sun Cluster Agent.

This document contains the following sections:

- [To Upgrade to Instant Messaging Server 8 in an HA Environment](#)
- [To Upgrade to Instant Messaging Server 8 Sun Cluster Agent \( IM\\_SCHA\)](#)

### To Upgrade to Instant Messaging Server 8 in an HA Environment

1. Disable the Instant Messaging server resource.  
`# scswitch -n -j im-server-resource`
2. Invoke the `commpkg upgrade` command on all nodes of the cluster.
3. Enable the Instant Messaging server resource.  
`# scswitch -e -j im-server-resource`

### To Upgrade to Instant Messaging Server 8 Sun Cluster Agent (IM\_SCHA)

Invoke the `commpkg upgrade` command on all nodes on the cluster. If cluster node is a non-global zone, invoke `commpkg upgrade` in global zone as well as in non-global zones.

# Upgrading to Convergence 1 Update 1

Communications Suite

Work in Progress

This information is currently being worked on and has not yet been reviewed for technical accuracy

## Upgrading Sun Convergence 1.0 to Convergence 1 Update 1

This section describes how to upgrade Convergence 1.0 to Convergence 1 Update 1. You can upgrade to Sun Convergence 1 Update 1 only by using the Communication Suite installer. To upgrade the Sun Convergence from Communications Suite Release 6 to Release 6 Update 1, you use the `commpkg upgrade` command.

The following table provides the file names for the various supported operating systems and platforms:

| Operating System and Platform | Filename                    |
|-------------------------------|-----------------------------|
| Solaris Sparc                 | ci-6.1-0.01-SunOS_sparc.zip |
| Solaris x86                   | ci-6.1-0.01-SunOS_i386.zip  |
| Linux                         | ci-6.1-0.01-Linux_x86.zip   |

For details of operating system and platform support, see this list of [operating system and platform requirements](#).

## Upgrading Sun Convergence

### Before you begin:

Be sure that the following software is running:

- Application Server domain to which Convergence is deployed
- All services configured for Convergence. This must include Directory Server and may include Messaging Server, Calendar Server, and Instant Messaging.

If this software is not running, the upgrade will fail to complete the installation and deployment of the upgrade patch. (The `commpkg upgrade` command invokes a `patchadd` command to upgrade Convergence 1.0 to Convergence 1 Update 1.)

### To upgrade to Sun Convergence 1 Update 1, perform the following steps:

1. Log in to the machine where you have installed Convergence.
2. Unzip the Communications Suite installer zip file.
3. Use the communication installer to upgrade Sun Convergence.

```
./commpkg upgrade
```

At the command prompt, you will see a welcome message followed by the copyright information and license.

4. Type `yes` to accept the license agreement.  
The communications suite installer will detect the installed components on the server and lists all the components that can be upgraded.

```
. . . . .
. . . . .
Item  Description
----  -
  1   Convergence 1 ul (1.0-4.01)
      Installed Version 1 (1.0-0.44) at /opt/sun/comms/iwc

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1]:
```

5. Select the number corresponding to Convergence and press Enter.

The Communications Suite installer will upgrade Convergence 1.0 to Convergence 1 Update 1 by installing the required patches. After upgrading, you must restart the Application Server.

**i** If you ran the Convergence initial configuration program, `init-config`, when you installed Convergence 1, you do not have to run the `init-config` again after you upgrade from Convergence 1.0 to Convergence 1 Update 1.

# Chapter 21. Communications Suite 6 Update 1

## What's New

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### What's New in This Release of Communications Suite 6 Update 1

This document summarizes all features in Sun Java Communications Suite 6 Update 1 and Sun Java Communications Suite 6 that are new or have been enhanced since Sun Java Communications Suite was originally distributed in March 2007, for the following components:

- Sun Java System Calendar Server 6.3
- Sun Convergence 1 Update 1
- Sun Java System Messaging Server 7 Update 1
- Sun Java System Instant Messaging 8
- Sun Java System Delegated Administrator 6.4
- Sun Java System Communications Express 6.3
- Sun Java System Connector for Microsoft Outlook 7.3 Update 1

This document contains the following sections:

- [What's New in Communications Suite 6 Update 1](#)
- [What's New in Convergence 1 Update 1](#)
- [What's New in Messaging Server 7 Update 1](#)
- [What's New in Instant Messaging 8](#)
- [What's New in Connector for Outlook 7.3 Update 1](#)
- [What's New in Communications Suite 6](#)
- [What's New in Convergence 1.0](#)
- [What's New in Calendar Server 6.3](#)
- [What's New in Messaging Server 7.0](#)
- [What's New in Instant Messaging 7.3](#)
- [What's New in Delegated Administrator 6.4](#)
- [What's New in Communications Express 6.3](#)
- [What's New in Connector for Outlook 7.3](#)

### What's New in Communications Suite 6 Update 1

Communications Suite 6 Update 1 includes the following changes and new features:

- [Upgrading to Communications Suite 6 Update 1](#)
- [System Virtualization Support](#)

#### Upgrading to Communications Suite 6 Update 1

If you choose to upgrade to Communications 6, see the [Communications Suite 6 Update 1 Upgrade Guide](#).

#### System Virtualization Support

System virtualization is a technology that enables multiple operating system (OS) instances to execute independently on shared hardware. Functionally, software deployed to an OS hosted in a virtualized environment is generally unaware that the underlying platform has been virtualized. Sun performs testing of its Sun Java System products on select system virtualization and OS combinations to help validate

that the Sun Java System products continue to function on properly sized and configured virtualized environments as they do on non-virtualized systems.

Communications Suite supports the VMware container (VMware ESX Server 3). As support for other virtualization platforms (LDOMs, xVM Server, and so on) becomes available we will update this document.

For information about Sun support for Sun Java System products in virtualized environments, see <http://docs.sun.com/doc/820-4651>.

## What's New in Convergence 1 Update 1

Convergence 1 Update 1 includes the following changes and new features:

- [Support for Domain-Based Client Templates](#)
- [Corporate Directory](#)

### Support for Domain-Based Client Templates

Convergence 1 Update 1 supports domain based client templates. If your Convergence deployment includes multiple domains, users can log in to a specific domain without specifying the domain information in the user ID. The Convergence server identifies the correct domain-specific pages from the URL and presents it to the client. For more information, see [Deployment Specific Customizable Client Options for Convergence](#).

### Corporate Directory

The following enhancements have been made to the Corporate Directory functionality of Sun Convergence 1 Update 1.

#### VLV Index Support

Convergence 1 Update 1 now supports VLV (Virtual List View) indexing. Directory Server provides a mechanism to create indexes. These indexes improve the turnaround time for searching entries in the Directory Server instance. To know more about how to work with VLV indexing, see [How do I configure VLV \(Virtual List View\) browsing indexes for Directory Server?](#).

## What's New in Messaging Server 7 Update 1

Messaging Server 7 Update 1 includes the following changes and new features:

- [Berkeley Database Upgrade](#)
- [Password Obfuscation in S/MIME](#)
- [MMP Logging](#)
- [Changes to the Job Controller and Dispatcher](#)

### Berkeley Database Upgrade

In Messaging Server 7 Update 1, the Berkeley database has been updated from version 4.4.20 to 4.7.25. In order to upgrade the database, `stored -r` needs to be run before the new libraries and binaries are replaced because the transaction log file format has changed, and the new libraries will not be able to read them, and thus the database cannot be opened. `stored -r` runs automatically during the upgrade process.

For more information about upgrading and downgrading the Berkeley Database, see [Upgrading and Downgrading the Berkeley Database \(BDB\)](#).

## Password Obfuscation in S/MIME

It is possible to obfuscate passwords with base64 by modifying the `curlurlloginpw` and `loginpw` configuration parameters in the `smime.conf` file.

For more information about this feature, see [Messaging Server smime.conf Parameters](#).

## MMP Logging

In previous versions of Messaging Server, the logging subsystem for the MMP was different from the logging subsystem used by IMAP, POP and other components of the message store. This meant that some facilities and options available for controlling logging for the IMAP and POP servers were not available for the MMP.

In Messaging Server 7 Update 1, MMP logging has changed. By default, it uses the same logging subsystem as other message store components. Logging can therefore be controlled in the same way.

For the new MMP logging subsystem, there are a number of new configuration options available for the MMP. The following table shows the new MMP options and their description:

| Option                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>expiretime</code>     | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>flushinterval</code>  | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>logtype</code>        | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>maxlogfilesize</code> | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>maxlogsize</code>     | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>rollovertime</code>   | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>syslogfacility</code> | Same meaning and default as other IMAP and POP logs                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>usenslog</code>       | Defines whether to use the new or old logging system. Setting this to <code>true</code> causes the MMP to use the same logging subsystem as the message store POP, IMAP and SMTP components. Setting this to <code>false</code> causes the MMP to use the same behavior as in previous releases. If <code>usenslog</code> is set to <code>true</code> , the MMP log files are <code>mmp</code> , <code>ImapProxy</code> , <code>PopProxy</code> , and <code>SmtProxy</code> .<br>Default: <code>true</code> |

The following table shows the configuration files for which the new options are available:

| File                  | Description                                                                                                                                                                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AService.cfg          | Configuration file specifying which services to start and a few options shared by POP, IMAP, and SMTP services. If a log-related setting is made in AService.cfg, then all three services will inherit that setting by default unless their configuration explicitly overrides it. |
| PopProxyAService.cfg  | Configuration file specifying configuration variables used for POP services.                                                                                                                                                                                                       |
| ImapProxyAService.cfg | Configuration file specifying configuration variables used for IMAP services.                                                                                                                                                                                                      |
| SmtproxyAService.cfg  | Optional configuration file specifying configuration variables used for SMTP proxy services. Required if you enable POP before SMTP; useful for maximizing support for SSL hardware even if POP before SMTP is not enabled.                                                        |

You can return to the previous behavior by adding `default:useNslog 0` to the AService.cfg file. Or you can control the new behavior by setting values such as `default:maxlogfilesize NNN`.

### Changes to the Job Controller and Dispatcher

The job controller and dispatcher are now part of the compiled configuration. In order for changes made to the dispatcher.cnf and job\_controller.cnf files to take effect, you must recompile the configuration and restart the component by issuing the following commands:

```
imsimta cnbuild
imsimta restart dispatcher
imsimta restart job_controller
```

## What's New in Instant Messaging 8

Instant Messaging 8 includes the following changes and new features:

- [SMS Gateway for Instant Messaging](#)
- [Multi-User Chat Support for IMPS](#)
- [Support for AIM and MSN Gateways](#)
- [User Initiated Archiving](#)

### SMS Gateway for Instant Messaging

The SMS (Short Message Service) gateway feature enables the Instant Messaging server to deliver chat messages and alerts in the form of SMS to the Instant Messaging users who are offline. This feature provides streamlined instant messaging experience to users by forwarding messages to the users' mobile phones when they are offline. The SMS gateway uses the SMPP (short message peer-to-peer) protocol and XMPP (Extensible Messaging and Presence Protocol) for messaging services.

For more information, see [SMS Gateway for Instant Messaging](#).

### Multi-User Chat Support for IMPS

Instant Messaging provides a multiuser chat feature for mobile devices that support IMPS. To enable the multiuser chat feature, Instant Messaging uses Extensible Messaging and Presence Protocol (XMPP). Multiple XMPP users can exchange messages in the context of a conference room or channel. In

In addition to the chat room features such as room topics and invitations, the XMPP protocol enables the ability to kick and ban users from a conference, name room moderators and administrators, and provide different types of membership.

For more information, see [Multiuser Chat Support for IMPS](#).

## Support for AIM and MSN Gateways

Instant Messaging co-packages the gateways for AIM (AOL Instant Messaging) and MSN messaging clients. The gateways enable Sun Java System Instant Messaging users to communicate with their contacts on AIM and MSN. Co-packaging the gateways enables easy installation and configuration of the gateways with Sun Java System Instant Messaging. You can configure the gateway by using the configure utility.



### Note

Updates to gateways will be provided if and when the open-source community develops them.

For more information, see the [Gateways for AIM, MSN, and Yahoo](#).

## User Initiated Archiving

Instant Messaging provides the users of the Instant Messaging client the ability to archive chat messages. Messages exchanged between two or more users and those exchanged in a conference chat are archived. Messages are archived in the form of emails.

For more information, refer to the Instant Messaging version 8 online help.

## What's New in Connector for Outlook 7.3 Update 1

Connector for Outlook 7.3 Update 1 includes the following changes and new features:

- [Mail Filters and Out of Office Messages](#)
- [Contact Picture Support](#)

### Mail Filters and Out of Office Messages

Outlook Connector now provides you with a new User Interface to configure mail filters and vacation messages.

You can use Mail filters feature to organize your incoming mails such that they move into different logical folders in your mailbox based on custom conditions. You can also configure Outlook Connector to copy, forward, or discard the incoming mails.

You can now set an out of office message whenever you are on vacation. This auto-reply system enables you to send a message to the senders (internal and external) of email in your absence.

### Contact Picture Support

You can now upload pictures of any format and size to a contact in Outlook Connector. The contact picture is stored on the address book server and can be viewed from the Convergence client. Alternatively, a contact photo added to Convergence can be viewed or modified from the Outlook Connector client.

These features are new to Connector for Outlook 7.3 Update 1, and were not in the initial Connector for

Outlook 7.3 release.

## What's New in Communications Suite 6

Communications Suite 6 includes the following changes and new features:

- [New Installer for Communication Suite](#)
- [Upgrading to Communications Suite 6](#)
- [System Virtualization Support](#)

### New Installer for Communication Suite

Beginning with this release of Communications Suite 6, Communications product components are installed through a new Communications Suite installer. Communications product components continue to interoperate with Java Enterprise System components. Use the Java Enterprise System installer to install Java ES components, such as Sun Java System Directory Server and Sun Java System Access Manager.

You use the Communications Suite installer, `commpkg`, to install, uninstall, upgrade, and backout Communications product components. The `commpkg` installer exists only in CLI form, but also has a silent mode of installation. No GUI form is available.

For more information on installing Communications Suite 6, see the [Sun Java Communications Suite 6 Installation Guide](#).

### Upgrading to Communications Suite 6

If you choose to upgrade to Communications 6, see the [Communications Suite 6 Update 1 Upgrade Guide](#).

### System Virtualization Support

System virtualization is a technology that enables multiple operating system (OS) instances to execute independently on shared hardware. Functionally, software deployed to an OS hosted in a virtualized environment is generally unaware that the underlying platform has been virtualized. Sun performs testing of its Sun Java System products on select system virtualization and OS combinations to help validate that the Sun Java System products continue to function on properly sized and configured virtualized environments as they do on non-virtualized systems.

Communications Suite supports the VMware container (VMware ESX Server 3). As support for other virtualization platforms (LDOMs, xVM Server, etc.) becomes available we will update this document.

For information about Sun support for Sun Java System products in virtualized environments, see <http://docs.sun.com/doc/820-4651>.

## What's New in Convergence 1.0

Convergence is Sun's next-generation web client for email, calendar, address book, and instant messaging. It provides a rich and highly interactive user experience through compelling integration of the different communication services.

The following sections list new features available in the Convergence 1.0 initial release. Additional features are planned for release in upcoming versions.

### General

- Highly customizable user interface
- Drag-n-drop of items, for example, dragging and dropping messages between folders
- Drag and resize user interface panels
- Quick/advanced search in mail
- Localized user interface in Spanish, French, and Japanese
- Context-sensitive actions (for some components; these will become available for additional components in future releases)

## Mail

- Typical email functionality
- Auto-completion of email addresses
- Rich text editing
- Server-based mail filters
- Vacation/out of office messages

## Calendar

- Typical calendar functionality
- Event and task management
- Multiple calendars and calendar overlay
- Calendar views: day, week, month

## Address Book

- Common address book
- Create and manage contacts
- Import or export contacts

## Instant Messaging

- Presence management
- Buddy list

## What's New in Calendar Server 6.3

Calendar Server 6.3 includes the following changes and new features:

- [Passwords Removed From Calendar Server Configuration Files and Obfuscated](#)
- [Support in Calendar Server for Service Management Framework](#)

### Passwords Removed From Calendar Server Configuration Files and Obfuscated

In the past, the Calendar Server configuration file stored some passwords in clear text. Though the `ics.conf` file has read permission restrictions, the passwords could be visible to someone else when the administrator edits the configuration file. In Calendar Server 6.3, the passwords have been moved to another file and obfuscated by base 64 encoding them. The base 64 encoding prevents someone from accidentally seeing the passwords. You must still protect the file with read permission restrictions, and keep the file secure so that no unauthorized user can get to it, to keep the passwords secure.

If you are installing Calendar Server for the first time, the configuration program encodes the passwords that you create during the configuration process, and stores them in a separate password configuration file.

If you are upgrading your existing Calendar Server software to the Calendar Server 6.3 version, the

configuration program encodes the existing passwords found in the `ics.conf` file, and moves them to the password configuration file.

In both cases, the configuration program also adds a new `ics.conf` parameter to indicate the location of the password file, as shown in the following example:

```
local.passwordfile="/etc/opt/SUNWics5/config/icspassword.conf"
```

Do not change this configuration parameter.

Due to this change, the following configuration parameters have been moved out of the `ics.conf` file:

- `local.authldapbindcred`
- `local.enduseradmincred`
- `local.lookupldapbindcred`
- `service.siteadmin.cred`



#### Note

The LDAP bind passwords that are generated by the configurator are re-generated each time you run the configurator, once they are moved out of the `ics.conf` file.

## Support in Calendar Server for Service Management Framework

Calendar Server 6.3 supports the Service Management Framework (SMF), for stopping and starting Calendar Server. For more information, see [Using Service Management Framework with Calendar Server](#).

## What's New in Messaging Server 7.0

Messaging Server 7.0 includes the following changes and new features:

- Messenger Express Interface Removed
- `moveuser` Support for Mail Servers That Do Not Support the `NAMESPACE` command.
- Messaging Server Message Store Supports Very Large Mailboxes
- Message Store Maintenance Queue
- Support for Lemonade Profile 1 and Future Release
- Support for BURL
- IMAP URLAUTH Support
- IMAP CATENATE Support
- IMAP ANNOTATE Support
- Message Store Database Rolling Backup
- Messaging Server and Service Tags
- Additional Support for Java Enterprise System Monitoring Framework
- Support in Messaging Server for Service Management Framework
- Remote Administration
- Message Store Load Throttling
- Moving Messaging Server Users From One Mailhost to Another
- Message Store reconstruct Command Revised
- `imcheck` Enhancements
- Delivering Bulk Mail to All Users
- Restoring Mailboxes to a Specific Partition
- Compact WMAP
- Changes to the `configutil` Command
- Sieve Filter Implementation
- Vacation Replies Can Be Sent to Forwarded Messages

- [Changes to the `nameservers` channel keyword](#)

## Messenger Express Interface Removed

The Messenger Express GUI has been deprecated and is being removed from the Messaging Server 7.0 release. For an in-place upgrade to Messaging Server 7.0, the installation process removes the existing, pre-Messaging Server 7.0 Messaging Express files, and saves the files in a backup directory. If you upgrade to Messaging Server 7.0 and then downgrade to a previous release, the downgrade process does not automatically restore the Messaging Express files. You would need to manually restore the Messenger Express files from the backup directory.

The default port for the `mshttpd` daemon (used by Messenger Express) has been changed to a well-known IANA-registered port, 8990. You also need to make a corresponding port change to your Communications Express configuration. The Messaging Server 6 release's default for the `mshttpd` port is 80, which is commonly used for web servers. Moving `mshttpd` to a different port signifies the removal of the web-page serving function of `mshttpd` (that is, Messenger Express).

Browsers will no longer connect to the `mshttpd` daemon as an HTTP web server, as `mshttpd` will no longer serve HTTP directed to end users, but instead will serve mail services to Convergence and Communications Express.

## `moveuser` Support for Mail Servers That Do Not Support the `NAMESPACE` command.

Additional flags for the `moveuser` command provide support for moving user when the source mail server does not support the IMAP `NAMESPACE` command. See [moveuser](#).

## Messaging Server Message Store Supports Very Large Mailboxes

In Messaging Server 5 and 6, the `store.idx` files, which contain the message index and cache records, were limited to 2 Gbytes in size. Because of this limit on the `store.idx` file, the size of an actual mailbox was limited to about 1 million messages on average, depending on the header size and the complexity of the messages. Messaging Server 7.0 increases the number of messages a mailbox can contain to 4,294,967,295, creating in Messaging Server terms, a "very large" mailbox.

New `configutil` parameters have been added to Messaging Server to manage very large mailboxes. For more information, see [Administering Very Large Mailboxes](#).

## Message Store Maintenance Queue

In addition to support for large mailboxes, the way in which the message store purges mailboxes has changed, making the process more efficient when dealing with a large mailbox. In Messaging Server 7.0, only the index file is purged when a mailbox is expunged. The purging of cache records is deferred until the amount of expunged data has exceeded a configurable limit. In addition, the message store uses a maintenance queue to schedule mailbox purge and repair tasks. Mailbox corruptions detected by the message store are also queued for repair automatically. You use the `impurge` command to purge unused cache records and message files in mailboxes.

For more information, see [Message Store Maintenance Queue](#).

## Support for Lemonade Profile 1 and Future Release

Messaging Server 7.0 supports Lemonade Profile 1, defined by <http://www.ietf.org/rfc/rfc4550.txt>. Among other features, this includes an extension to the SMTP submission protocol for a client to indicate a future time for the message to be released for delivery. This extension permits a client to use server-based storage for a message that should be held in queue until an appointed time in the future. Clients that do not have local storage or are otherwise unable to release a message for delivery at an appointed time

can leverage this functionality. In addition, you can use this functionality to send announcements to be read at the beginning of a work day, to send birthday greetings a day or so ahead, or to create a lightweight personal reminder service.

For more information, see <http://www.ietf.org/rfc/rfc4865.txt>. For more information on using Lemonade with Messaging Server, see [Messaging Server Lemonade Profile 1 Support](#).

### **Support for BURL**

Messaging Server 7.0 supports the BURL command, which extends the SMTP submission profile by adding a new command to fetch submission data from an IMAP server. This permits a mail client to inject content from an IMAP server into the SMTP infrastructure without downloading it to the client and uploading it back to the server. Thus, you could forward an email message without first downloading it to the client.

For more information, see <http://www.ietf.org/rfc/rfc4468.txt>.

### **IMAP URLAUTH Support**

Messaging Server 7.0 supports the URLAUTH extension to IMAP and the IMAP URL Scheme (IMAPURL). This extension provides a means by which an IMAP client can use URLs carrying authorization to access limited message data on the IMAP server. An IMAP server that supports this extension indicates this with a capability name of "URLAUTH."

For more information, see <http://www.ietf.org/rfc/rfc4467.txt>.

### **IMAP CATENATE Support**

Messaging Server 7.0 supports the CATENATE extension to IMAP, which extends the APPEND command to allow clients to create messages on the IMAP server that may contain a combination of new data along with parts of (or entire) messages already on the server. Using this extension, the client can concatenate parts of an already existing message onto a new message without having to first download the data and then upload it back to the server.

For more information, see <http://www.ietf.org/rfc/rfc4469.txt>.

### **IMAP ANNOTATE Support**

Messaging Server 7.0 supports the ANNOTATE extension to IMAP, which permits clients and servers to maintain "meta data" for messages, or individual message parts, stored in a mailbox on the server. For example, you could use IMAP ANNOTATE to attach comments and other useful information to a message, or to attach annotations to specific parts of a message, marking them as seen or important, or a comment added.

For more information, see <http://www.ietf.org/rfc/rfc5257.txt>.

### **Message Store Database Rolling Backup**

The message store has been enhanced to continuously recover archived log files into an up-to-date backup copy of the message store database. If the actual database becomes unusable, then the message store will automatically use this backup database. Having an up-to-date database backup provides the next level of recovery and stability for the message store.

### **Messaging Server and Service Tags**

[Sun Service Tags](#) are used solely to identify Sun products to Sun. Sun uses service tag information to better support you. Registration data is only collected when your system administrator requests gear discovery. Messaging Server 7.0 enables you to use the Service Tag Facility on Solaris OS 10.

## Additional Support for Java Enterprise System Monitoring Framework

Additional integration of Messaging Server and Java Enterprise System Monitoring Framework (JESMF) has been added to this release. JESMF provides information on the length of time for authentication, message delivery, the number of instant messages sent through the service, and other statistics.

For information on the Sun Java Enterprise System Monitoring Framework, see: [Sun Java Enterprise System 5 Monitoring Guide](#).

## Support in Messaging Server for Service Management Framework

Messaging Server 7.0 supports the Service Management Framework (SMF), for stopping and starting Messaging Server. For more information, see [Using Service Management Framework with Messaging Server](#).

## Remote Administration

The self-contained remote administration shell (via the `msgadm` command) in Messaging Server 7.0 is intended to make management more appliance-like. For more information, see [Administering Messaging Server Remotely](#).

## Message Store Load Throttling

Occasionally, the message store DB experiences contention related performance issues when under very heavy activity. To ensure a graceful degradation of store performance under increased load, Messaging Server 7.0 throttles DB load based on a new contention metric. This metric is used to throttle (shrink pool) or accelerate (grow pool) DB operations to an optional DB load metric value. Note that storage I/O bandwidth is another contended resource that might require throttling. Messaging Server 6.3 already throttles, based on storage capacity.

## Moving Messaging Server Users From One Mailhost to Another

The `rehostuser` utility enables you to move a Messaging Server user's mail from one mailhost or partition to another.

## Message Store reconstruct Command Revised

The message store `reconstruct` command has been modified to handle new file formats in Messaging Server 7.0. In addition, changes have been made to `reconstruct` to address multiple CRs and RFEs, as well as how to perform to repair and recovery.

The `reconstruct` command was originally designed to address folders and users in a breadth first manner, one database at a time. (This approach got the message store running, but each user was not completely repaired.) Today, the store's self-repair techniques can already get the store running. Thus, it is now more appropriate for `reconstruct` to also have the capability to address a single user completely. This approach also moves towards automatic and complete repair of individual users.

## imcheck Enhancements

The following options have been added to the `imcheck` command:

- Print database statistics:

```
imcheck -s subsystem...
```

where subsystem is: mpool, lock, log, or txn

If subsystem is not specified, all available information is printed.

- Print mailbox data:

```
imcheck -x dir
```

-x *dir* prints metadata for the mailbox under the specified directory.

- Print maintenance queue:

```
imcheck -q
```

## Delivering Bulk Mail to All Users

The `deliver` command has been enhanced to include a `-p` option to specify a user ID pattern. For example, to deliver a message to all users in the message store, use this command:

```
deliver -p "*" < msg_file
```

For more information on the `deliver` command, see [Sun Java System Messaging Server 6.3 Administration Reference](#).

## Restoring Mailboxes to a Specific Partition

The following `-P partition` option has been added to the `imsrestore` command, to specify the restored partition.

|                           |                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------|
| <code>-P partition</code> | Restores all mailboxes to the specified partition (ignore <code>-p</code> and <code>mailMessageStore</code> ) |
|---------------------------|---------------------------------------------------------------------------------------------------------------|

## Compact WMAP

Messaging Server JavaScript client code has been improved and optimized. This results in bandwidth savings, simpler code, and better client responsiveness.

## Changes to the `configutil` Command

The initial configuration utility no longer generates initial settings for most `configutil` options. Running the `configutil` command with no arguments lists all options with settings (initial or otherwise). Due to the reduced number of initial settings, `configutil` with no arguments now lists far fewer options than in the past. The `configutil -H` command lists all documented `configutil` options along with their default and current values. The `configutil -o` command now returns either the current value, or if no value is currently set, the default value.

The following `configutil` parameter defaults have changed from Messaging Server 6.3. For more information, see [configutil Parameters](#).

|                                                      |                                                                  |
|------------------------------------------------------|------------------------------------------------------------------|
| <code>local.mfagent.connection_stats_interval</code> | Set how often, in seconds, to refresh the connection statistics. |
| <code>local.mfagent.debug</code>                     | Set a bit mask for various types of debugging in the mfagent.    |
| <code>local.mfagent.host_stats_interval</code>       | Set how often, in seconds, to refresh the hosts statistics.      |

|                                           |                                                                                                                                                                                           |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| local.mfagent.listenaddr                  | Sets the bind address for the mfagent.                                                                                                                                                    |
| local.mfagent.max_report_hosts            | Sets the maximum number of hosts to be reported on for channel queues. Do not set higher than 12.                                                                                         |
| local.mfagent.monitor_level               | Sets the level of transaction monitoring. The range is 0 (least) to 7 (most).                                                                                                             |
| local.mfagent.oldest_message_update       | Sets the frequency of updating the oldest message info. the oldest message info is updated every nth time the connection stats are updated, n being this parameter.                       |
| local.mfagent.port                        | Sets the port on which the mfagent listens.                                                                                                                                               |
| local.mfagent.secret                      | The shared secret used to authenticate connections to the mfagent.                                                                                                                        |
| local.mfagent.timeout                     | Timeout for how long components will try to connect to the mfagent.                                                                                                                       |
| local.purge.enable                        | Enable purge server on start-msg startup.                                                                                                                                                 |
| local.schedule.snapshot                   | imdbverify snapshot and verify, enabled with local.schedule.snapshot.enable. imdbverify will take a snapshot backup copy of the database and verify it for use during automatic recovery. |
| local.schedule.snapshot.enable            | Whether the snapshot / verify task should be scheduled.                                                                                                                                   |
| local.store.deadlockaggressive            | A non zero integer N indicates aggressive deadlock resolution, combined by delaying transaction retries by N seconds.                                                                     |
| local.store.rollingdbbackup               | Controls whether rolling store database backups are made. (yes/no).                                                                                                                       |
| logfile.tcp_lmtp_service.buffersize       | Size of LMTP log buffers in bytes.                                                                                                                                                        |
| logfile.tcp_lmtp_service.expirytime       | Maximum time an LMTP log file is kept (in seconds).                                                                                                                                       |
| logfile.tcp_lmtp_service.flushinterval    | Time interval for flushing buffers to LMTP log files (in seconds).                                                                                                                        |
| logfile.tcp_lmtp_service.logdir           | Directory path for LMTP log files.                                                                                                                                                        |
| logfile.tcp_lmtp_service.loglevel         | Specify an LMTP log level. One of Nolog, Emergency, Alert, Critical, Error, Warning, Notice, Information, or Debug.                                                                       |
| logfile.tcp_lmtp_service.logtype          | Ignored. Set to either NscpLog or syslog.                                                                                                                                                 |
| logfile.tcp_lmtp_service.maxlogfiles      | Maximum number of LMTP log files.                                                                                                                                                         |
| logfile.tcp_lmtp_service.maxlogfilesize   | Maximum size (bytes) of each LMTP log file.                                                                                                                                               |
| logfile.tcp_lmtp_service.maxlogsize       | Maximum size of all LMTP log files.                                                                                                                                                       |
| logfile.tcp_lmtp_service.minfreediskspace | Minimum amount of free disk space (bytes) that must be available for LMTP logging.                                                                                                        |
| logfile.tcp_lmtp_service.rollovertime     | The frequency in which to rotate the LMTP log file (in seconds).                                                                                                                          |

|                                           |                                                                                                                                                                                                                                                                           |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| logfile.tcp_lmtp_service.syslogfacility   | Specifies whether or not LMTP logging goes to syslog. The values can be user, mail, daemon, local0 to local7, or none. If the value is set, messages are logged to the syslog facility corresponding to the set value and all other log file service options are ignored. |
| service.http.smtptls                      | Whether to use TLS for SMTP connections.                                                                                                                                                                                                                                  |
| service.imap.ensidle                      | If set, use ENS for imkill without idle, if unset, use JMQ.                                                                                                                                                                                                               |
| service.imap.idle                         | Sets values for local.store.notifyplugin and local.store.notifyplugin...enable for IMAP IDLE to work.                                                                                                                                                                     |
| service.imap.submituser                   | Store userid used by the MTA when resolving submit IMAP URLs in BURL commands.                                                                                                                                                                                            |
| service.imap.withinresolution             | Interval (in minutes) between recalculations of Contexts involving the search options YOUNGER or OLDER. The value 0 means 30 seconds.                                                                                                                                     |
| service.imap.capability.acl               | Advertise the ACL imap extension.                                                                                                                                                                                                                                         |
| service.imap.capability.annotate          | Advertise the ANNOTATE-EXPERIMENT-1 imap extension.                                                                                                                                                                                                                       |
| service.imap.capability.binary            | Advertise the BINARY imap extension.                                                                                                                                                                                                                                      |
| service.imap.capability.catenate          | Advertise the CATENATE imap extension.                                                                                                                                                                                                                                    |
| service.imap.capability.children          | Advertise the CHILDREN imap extension.                                                                                                                                                                                                                                    |
| service.imap.capability.context           | Advertise the CONTEXT imap extension.                                                                                                                                                                                                                                     |
| service.imap.capability.esearch           | Advertise the ESEARCH imap extension.                                                                                                                                                                                                                                     |
| service.imap.capability.idle              | Advertise the IDLE imap extension.                                                                                                                                                                                                                                        |
| service.imap.capability.imap4             | When set to yes, advertise the IMAP4 capability. The default is yes if local.obsoleteimap is set.                                                                                                                                                                         |
| service.imap.capability.imap4rev1         | When set to yes, advertise the IMAP4rev1 capability. The default is yes if local.obsoleteimap is set.                                                                                                                                                                     |
| service.imap.capability.language          | Advertise the LANGUAGE imap extension.                                                                                                                                                                                                                                    |
| service.imap.capability.literal_plus      | Advertise the LITERAL+ imap extension.                                                                                                                                                                                                                                    |
| service.imap.capability.namespace         | Advertise the NAMESPACE imap extension.                                                                                                                                                                                                                                   |
| service.imap.capability.qresync           | Advertise the QRESYNC imap extension.                                                                                                                                                                                                                                     |
| service.imap.capability.quota             | Advertise the QUOTA imap extension.                                                                                                                                                                                                                                       |
| service.imap.capability.sort              | Advertise the SORT imap extension.                                                                                                                                                                                                                                        |
| service.imap.capability.starttls          | Advertise the STARTTLS imap extension.                                                                                                                                                                                                                                    |
| service.imap.capability.thread_references | Advertise the THREAD=REFERENCES imap extension.                                                                                                                                                                                                                           |
| service.imap.capability.thread_subject    | Advertise the THREAD=ORDEREDSUBJECT imap extension.                                                                                                                                                                                                                       |
| service.imap.capability.uidplus           | Advertise the UIDPLUS imap extension.                                                                                                                                                                                                                                     |
| service.imap.capability.unselect          | Advertise the UNSELECT imap extension.                                                                                                                                                                                                                                    |

|                                          |                                                                                                                                                     |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| service.imap.capability.urlauth          | Advertise the URLAUTH imap extension.                                                                                                               |
| service.imap.capability.within           | Advertise the WITHIN imap extension.                                                                                                                |
| service.imap.capability.x_annotatemore   | Advertise the X-ANNOTATEMORE imap extension.                                                                                                        |
| service.imap.capability.x_netscape       | Advertise the X-NETSCAPE imap extension.                                                                                                            |
| service.imap.capability.x_sun_imap       | Advertise the X-SUN-IMAP imap extension.                                                                                                            |
| service.imap.capability.x_sun_sort       | Advertise the X-SUN-SORT imap extension.                                                                                                            |
| service.imap.capability.x_unauthenticate | Advertise the X-UNAUTHENTICATE imap extension.                                                                                                      |
| service.imap.capability.xrefresh         | Advertise the XREFRESH imap extension.                                                                                                              |
| service.imap.capability.xsender          | Advertise the XSENDER imap extension.                                                                                                               |
| service.imap.capability.xserverinfo      | Advertise the XSERVERINFO imap extension.                                                                                                           |
| service.imap.capability.xum1             | Advertise the XUM1 imap extension.                                                                                                                  |
| service.imap.idle.jmqhost                | The name or address of the host where the JMQ broker is to be found.                                                                                |
| service.imap.idle.jmqpassword            | The JMQ password used to subscribe to messaging events.                                                                                             |
| service.imap.idle.jmqport                | The port number the JMQ broker is listening on.                                                                                                     |
| service.imap.idle.jmqtopic               | The JMQ topic to which mail events are published.                                                                                                   |
| service.imap.idle.jmquserid              | The JMQ userid used to subscribe to messaging events.                                                                                               |
| store.autorepair                         | Repair damaged mailboxes automatically.                                                                                                             |
| store.mailboxexpungesize                 | Size (in bytes) of expired or expunged message before purge will permanently remove it. Minimum value is 1048576.                                   |
| store.maxcachefilesize                   | Maximum cache file size (in bytes). A new cache file is created when the current cache file size has exceeded this limit. Minimum value is 1048576. |
| store.purge.loglevel                     | Specify a log level: 0: no log. 1: basic log. 2: verbose log.                                                                                       |
| store.purge.maxthreads                   | Maximum number of threads.                                                                                                                          |

| Parameter               | 6.3 Default | 7.0 Default             |
|-------------------------|-------------|-------------------------|
| local.autorestart       | no          | yes                     |
| local.ens.enable        | <ensEnable> | 0                       |
| local.store.listrecover | NULL        | TestPartitionInsertFull |
| service.http.port       | 80          | 8990                    |
| service.http.sslport    | 443         | 8991                    |

Running `configutil -h` displays two new options (`-x` and `-a`). These options are for a future enhancement that is not active for Messaging Server 7.0. These options do not affect the current configuration other than to issue a warning that they are ignored.

## Sieve Filter Implementation

See [http://msg.wikidoc.info/index.php/Sieve\\_Implementation](http://msg.wikidoc.info/index.php/Sieve_Implementation).

## Vacation Replies Can Be Sent to Forwarded Messages

Messaging Server 7.0 can now generate `:addresses` arguments to Sieve vacation using an LDAP autoreply attribute. The new MTA option `LDAP_AUTOREPLY_ADDRESSES` provides the name of the attribute to use. This option has no value by default. The attribute can be multivalued, with each value specifying a separate address to pass to the `:addresses` vacation parameter. The `:addresses` argument to Sieve vacation specifies other addresses which will be deemed to be the the same as the recipient. This allows vacation autoreply to be sent even when none of the header recipient addresses of the message match any valid address of the user. The attribute will need to be added to the directory server schema, this option specified in `option.dat`, and the attribute values added to users LDAP objects.

## Changes to the `nameservers` channel keyword

When nameserver lookups are being performed, that is, unless the `nsswitch.conf` file selects no use of nameservers, then prior to Messaging Server 7.0 the `nameservers` channel keyword may be used to specify a list of nameservers to consult rather than consulting the TCP/IP stack's own choice of nameservers. This would affect the SMTP server and client and LMTP client, but not the LMTP server (which, if it needs to do any lookups, always relies on the TCP/IP stack's own choice of nameservers). Furthermore, as of Messaging Server 7.0, the `nameservers` keyword only affects MX record lookups, with all other lookups using the TCP/IP stack's choice of nameservers regardless of any `nameservers` keyword setting.

## What's New in Instant Messaging 7.3

Instant Messaging 7.3 includes the following changes and new features:

- Support for LDAP Failover
- Support for Voice Chat and Client-to-Client Chat
- Support for Instant Messaging and Presence Service Protocol
- Support for Service Management Framework
- Side-by-side Upgrade Capability
- Hosted Domain Support with Schema 1 and Schema 2
- Java Messaging Service Support for Calendar Server Alerts
- Property Store Migration
- Support for the `migratecert` Command

### Support for LDAP Failover

Support for LDAP failover in Instant Messaging 7.3 enables you to configure the Instant Messaging server to have multiple LDAP servers as back-end storage. If one LDAP server becomes unavailable, the Instant Messaging server is then able to fail over to another LDAP server.

LDAP failover works on a multi-master replication setup of LDAP servers. All the LDAP servers in the settings are masters and have permission to read and write data. The Instant Messaging server uses only one server at a time but fails over to another LDAP server when the current server becomes unavailable. The other LDAP server is expected to be in sync with the current server as far as data is concerned.

For more information, see the [Instant Messaging Administration Guide](#).

### Support for Voice Chat and Client-to-Client Chat

The previous releases of Instant Messaging did not have any audio capability. Instant Messaging 7.3 provides the capability for Instant Messaging users to talk to each other using PC-based audio hardware. The Instant Messaging client uses the Instant Messaging Server to only set up the call. Afterwards, the

audio streams travel in a peer-to-peer fashion.

To enable voice chat, select the "Enable Audio" checkbox when deploying the Instant Messaging Client Resources.

### **Support for Instant Messaging and Presence Service Protocol**

Instant Messaging 7.3 supports Instant Messaging and Presence Service (IMPS) protocol, which enables mobile instant messaging and presence services. You use IMPS to exchange messages and presence information between mobile devices, mobile services and Internet-based instant messaging services. IMPS access is provided via a web-application in the Instant Messaging server. The IMPS web-application can be deployed to a supported web container using the Instant Messaging configuration utility.

For more information, see the [Instant Messaging Administration Guide](#).

### **Support for Service Management Framework**

Instant Messaging 7.3 supports the Service Management Framework (SMF), for stopping and starting Instant Messaging. On supported platforms, an SMF service is registered when you install Instant Messaging server. You can use either the `svcadm` command or the Instant Messaging `imadmin` utility to start and stop Instant Messaging processes.

### **Side-by-side Upgrade Capability**

Instant Messaging 7.3 enables you to perform a side-by-side upgrade. That is, the upgrade process supports a coexistence approach on the host being upgraded.

### **Hosted Domain Support with Schema 1 and Schema 2**

Instant Messaging 7.3 enables support for hosted domain using LDAP specific tree without using Identity.

For more information, see the [Instant Messaging Administration Guide](#).

### **Java Messaging Service Support for Calendar Server Alerts**

Instant Messaging 7.3 uses Java Message Queue as the calendar agent for calendar reminders. In previous releases, the calendar agent was using ENS, which will be deprecated in a future release.

For more information, see the [Instant Messaging Administration Guide](#).

### **Property Store Migration**

Instant Messaging 7.3 provides property store migration that enables migration to and from the file propstore and from and to the LDAP propstore. The destination store must have the appropriate entries users configured. This migration does not create users; it only migrates the user data. It currently does not support mixed case entries, and flags them as errors.

For more information, see the [Instant Messaging Administration Guide](#).

### **Support for the `migratecert` Command**

Instant Messaging 7.3 enables migration of private key and Multiplexor certificate from the NSS database to JKS. A migration utility has been added for this purpose in the `imadmin` command.

Instant Messaging 7.3 no longer supports SSL through the Multiplexor using NSS-based certificates, however, you can now migrate the existing certificates from NSS store to JKS using the `migratecert` command.

For more information, see the [Instant Messaging Administration Guide](#).

## What's New in Delegated Administrator 6.4

The Delegated Administrator 6.4 released with Communications Suite 6 does not include any new features since the release of Delegated Administrator 6.4 with Communications Suite 5. See [Problems Fixed in This Release of Delegated Administrator](#) for a list of fixes to this release.

The following minor features were introduced in Delegated Administrator 6.4 with the Communications Suite 6 release:

- [Support for Sun Java System Application Server 9.x](#)

## What's New in Communications Express 6.3

Communications Express 6.3 includes the following change:

- [New Property \(uwc.loginseparator\) Added to uwcauth.properties](#)

### **New Property (uwc.loginseparator) Added to uwcauth.properties**

This property is used to configure authentication separator while logging in to Communications Express 6.3. Login separator 'is' or 'are' character(s) are used to separate the userID and domain. For example, the login name could be user@domain.com.

The default value for this property is @.

See [Problems Fixed in This Release of Communications Express](#) for a list of fixes to this release.

## What's New in Connector for Outlook 7.3

Connector for Outlook 7.3 includes the following changes and new features:

- [Support for Large PST Files](#)
- [Service Tags and Connector for Outlook](#)
- [Support for Outlook 2007](#)
- [Support for Microsoft Vista](#)
- [Ability to Disable Save Password Field](#)
- [New Deployment Tool Path](#)
- [Customizing the Location of the Personal Store \(.pst\) File](#)
- [Polling in Address Book](#)
- [Ability to Customize LDAP Attribute Mapping and GAL Display Order](#)

### **Support for Large PST Files**

Connector for Outlook 7.3 supports a larger PST file (20 Gbytes), which was introduced in Microsoft Outlook 2003. In the past, the PST file was limited to 2 Gbytes of data. Users using Microsoft Outlook 2003 and Microsoft Outlook 2007 will now use the large PST file as their local store for Connector for Outlook.

### **Service Tags and Connector for Outlook**

Sun Service Tags are used solely to identify Sun products to Sun. Sun uses service tag information to better support you. Registration data is only collected when your system administrator requests gear

discovery. For more information, see <http://servicetags.central>.

### **Support for Outlook 2007**

Connector for Outlook 7.3 now supports Microsoft Outlook 2007.

### **Support for Microsoft Vista**

Connector for Outlook 7.3 now supports Microsoft's Windows Vista operating system.

### **Ability to Disable Save Password Field**

Connector for Outlook 7.3 now supports a security feature that enables administrators to restrict users from saving their passwords in profile.

### **New Deployment Tool Path**

To conform with Sun's products installation paths, Connector for Outlook deployment tool now uses the following path:

```
Start -> Programs -> Sun Microsystems -> Sun Java System Connector  
Deployment
```

### **Customizing the Location of the Personal Store (.pst) File**

By default, Connector for Outlook 7.3 stores pst files at `C:\Documents and Settings_username_\Local Settings\Sun\Outlook Connector`. This feature enables administrators to decide the location of pst files on a user's machine.

### **Polling in Address Book**

Connector for Outlook 7.3 enables you to set an option to run polling at certain time intervals. This feature ensures you keep your address book updated without any manual intervention.

### **Ability to Customize LDAP Attribute Mapping and GAL Display Order**

Outlook Connector maps the LDAP attributes to the corresponding display items in Outlook. You can now customize the LDAP attribute mapping and GAL display order from the Deployment Program.

# Chapter 22. Convergence 1 Update 1 Initial Configuration

---

## Completing the Sun Convergence Installation: Initial Configuration

After you install the Convergence software with the Communications Suite installer, you must configure the Convergence to complete the installation. You perform this initial runtime configuration by running the Convergence configuration program, `init-config`.

After you configure Convergence the first time, you can change the configuration settings and property values by using the Convergence command-line interface, `iwadmin`. For more information about ongoing administration of Convergence, see [Convergence Administration Guide](#).

This chapter describes the following topics:

- [Gather Your Convergence Configuration Information](#)
- [Configure IM Components to Enable Communication with the Instant Messaging Server](#)
- [Run the Convergence Configuration Program](#)
- [Perform Silent Installation](#)

## Gather Your Convergence Configuration Information

### Convergence Components

You can configure the Convergence to communicate with the following back-end Communication Suite servers:

- Messaging Server
- Calendar Server
- Instant Messaging Server

You can choose to configure any or all of these components. Only the configured components will appear in the Convergence user interface and be available to all Convergence users.



#### **Configure Messaging Server and Calendar Server First**

Before you run the Convergence configuration program, you must install and configure Messaging Server and Calendar Server (if you want to use these services in Convergence).

You do not have to configure IM before you configure Convergence. However, to enable IM service, you must take the steps described in [Configure IM Components to Enable Communication with Instant Messaging Server](#).

### Web Containers

The Convergence server must be deployed to a Web container. You can configure Convergence on

- Sun Java™ System Application Server 9.1 Update 2

## Configuration Worksheets

Before you run the configuration program, you should gather configuration information by filling out the [Convergence Configuration Worksheets](#).

## Configure IM Components to Enable Communication with the Instant Messaging Server

To enable Convergence to communicate with Instant Messaging Server, you must configure values for the following IM Server features before you run the Convergence configuration program:

- Httpbind Component JID
- Httpbind Component Password
- Avatar Component JID
- Avatar Component Password

You need to configure these components manually, after you install and configure IM.



### **A Note About Configuring the IM Server**

When you are configuring the Instant Messaging Server (with the `IM configure` utility), be sure that the XMPP/HTTP Gateway Deployment parameter is set `false`. The XMPP/HTTP Gateway is deployed through the Convergence server; its value is set when you configure Convergence.

### **About the Httpbind Component JID and Avatar Component JID**

The Httpbind JID and Avatar JID can be any string. These values do not have to identify a particular IM host and domain name. However, these values should be meaningful. For example, a good practice might be to include the host and domain name in these JIDs to make the identifiers easy to recognize.

The passwords for Httpbind JID and Avatar JID can be unique. They do not have to match any other password used for IM or another back-end service.

The JIDs and passwords that you configure in the `iim.conf` file must match the Httpbind and Avatar JIDs that you will configure when you configure Convergence with the `init-config` program.

### **Configuring Multiple Instances of Convergence with One IM Server**

If you are configuring multiple instances of Convergence to use one IM server, you must add a unique `httpbind` and `avatar.jid` value for each instance of Convergence. For example, if you configure three instances of Convergence, the IM server configuration (`iim.conf`) file must have three instances of `httpbind` component configuration:

```

iim_server.components=agent-calendar,httpbind1,httpbind2,httpbind3,avatar1,
httpbind1 component (HTTP/XMPP Gateway)
! =====
iim_agent.httpbind1.enable="true"
httpbind1.jid=convergence1-jid.httpbind.example.com
httpbind1.password=secret

! httpbind2 component (HTTP/XMPP Gateway)
! =====
iim_agent.httpbind2.enable="true"
httpbind2.jid=convergence2-jid.httpbind.example.com
httpbind2.password=secret

! httpbind3 component (HTTP/XMPP Gateway)
! =====
iim_agent.httpbind3.enable="true"
httpbind3.jid=convergence3-jid.httpbind.example.com
httpbind3.password=secret

```

Similarly, in this example, the IM server configuration (`iim.conf`) file must have three instances of avatar component configuration:

```

! avatar1 component
! =====
iim_agent.avatar1.enable = "true"
avatar1.jid=convergence1-jid.avatar.example.com
avatar1.password=secret

! avatar2 component
! =====
iim_agent.avatar2.enable = "true"
avatar2.jid=convergence2-jid.avatar.example.com
avatar2.password=secret

! avatar3 component
! =====
iim_agent.avatar3.enable = "true"
avatar3.jid=convergence3-jid.avatar.example.com
avatar3.password=secret

```

You must run the Convergence `init-config` script for each instance of Convergence. For details, see [Run the Convergence Configuration Program](#). When you set the values for the Httpbind Component JID and Avatar Component JID, be sure that these values correspond to the values you have set for this particular instance of Convergence in the `iim.conf` file.

### To configure the IM Server components

1. Perform the initial configuration of Instant Messaging by running the `IM configure` program. For details, see [Completing the Instant Messaging 8 Installation: Initial Configuration](#).
2. Edit the `im-svr-base/config/iim.conf` file.

By default, the `im-svr-base` is `/opt/sun/comms/im` on Solaris and Linux systems.

3. Add the Avatar component to the `iim_server.components` property. For example, this entry can

look like this:

```
im_server.components = "agent-calendar, httpbind, avatar"
```

4. Set the `iim_agent.enable` property to `true`.
5. Provide the Httpbind JID and password. For example:

```
! httpbind component (HTTP/XMPP Gateway)
! =====
iim_agent.httpbind.enable="true"
httpbind.jid="<httpbind.varrius.com>"
httpbind.password="<password>"
```

6. Add the following entries to configure the Avatar component:

```
! avatar component
! =====
iim_agent.avatar.enable = "true"
avatar.jid = "<avatar.varrius.com>"
avatar.password = "<password>"
```

If you are configuring more than one Convergence client to use this IM server, add a unique `httpbind` and `avatar.jid` value for each instance of Convergence. For details, see [Configuring Multiple Instances of Convergence with One IM Server](#).

7. Restart IM Server.

## Run the Convergence Configuration Program

The steps described in this section walk you through configuring Convergence by using the configuration program, `init-config`.

### Before you run the configuration program

Be sure that the back-end servers and web container are up and running:

- Directory Server
- Messaging Server
- Calendar Server
- Application Server 9.1 Update 2

Verify whether users are able to log in to the back-end servers correctly:

- Messaging Server
- Calendar Server

## To launch the configuration program

1. Log in as (or become) root.
2. Go to the *iwc-base/sbin* directory.

For example, on Solaris and Linux, go to:

```
# cd /opt/sun/comms/iwc/sbin
```

3. Enter the command:

```
# ./init-config
```

The configuration program starts, displaying the first panel. The sections that follow lead you through the configuration panels.

This chapter describes how to run the configuration program in GUI mode.

To invoke the configuration program in command-line (non-GUI) mode, enter the command:

```
# ./init-config -nodisplay
```

## To enter information in the configuration program panels

The following steps lead you sequentially through the panels displayed by the *init-config* program.

If you'd rather read a list than a task-based procedure, you can refer instead to the configuration values shown in [Worksheet 1-1](#) and [Worksheet 1-2](#) as you run the program.

### 1. Welcome

The first panel in the configuration program is a copyright page. Click **Next**.

### 2. Select the directory to store configuration and data files

Select the directory where you want to store the Convergence configuration and data files. The default configuration and data directory is located here:

- Solaris and Linux: `/var/opt/sun/comms/iwc`  
This directory should be separate from the *iwc-base* directory. (On Solaris and Linux, this is `/opt/sun/comms/iwc` by default.)

Enter the name of the directory, or keep the default, and click **Next**.

If the directory does not exist, a dialog appears asking if you want to create the directory or choose a new directory. Click **Create Directory** to create the directory or **Choose New** to enter a new directory.

A dialog appears indicating that the components are being loaded. This may take a few minutes.

### 3. Select Services to configure

Select the service or services you want to configure:

- **Mail Service**---the Convergence servlets that communicate with Messaging Server and GUI components that provide end-user access to mail service.

- **Calendar Service**---the Convergence servlets that communicate with Calendar Server and GUI components that provide end-user access to calendar service.
- **Instant Messaging Service**---the Convergence servlets that communicate with Instant Messaging Server and GUI components that provide end-user access to Instant Messaging service.  
**Note:** To configure the Instant Messaging Service, you must also select either Mail Service or Calendar Service (or both). You cannot select Instant Messaging Service only.  
Click **Next**.

#### 4. Convergence server host name and DNS domain name

Enter the host name of the machine on which Convergence is being configured.

For example: `mymachine`

Enter the DNS domain name of the Convergence host machine.

For example: `siroe.com`

Click **Next**.

#### 5. Application Server 9.1 Update 2 Configuration Details

**Installation directory.** Enter the Application Server 9.1 installation directory. By default, on Solaris this directory is `/opt/SUNWappserver`.

**Domain directory.** Enter the Application Server 9.1 domain directory. By default, on Solaris this directory is `/opt/SUNWappserver/domains/domain1`.

**Document root directory.** Enter the Application Server 9.1 document root directory. By default, on Solaris this directory is `/opt/SUNWappserver/domains/domain1/docroot`.

You can browse to select any of these directories.

**Server Target Name.** Enter the Application Server 9.1 target name. For example: `server`.

**Virtual Server Identifier.** Enter the Application Server 9.1 virtual server identifier. For example: `server`.

**Server Instance HTTP port.** Enter the Application Server 9.1 target HTTP port number. Default port is 8080.

Click **Next**.

The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.

Next, the configuration program checks if an Application Server 9.1 target connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or choose new Application Server 9.1 configuration values.

#### 6. Application Server: Administration Instance Details

**Administration Server Port.** Enter the Administration Server port number. For example: 4848

**Administrator User ID.** Enter the Administration Server administrator user ID. For example: `admin`

**Administrator Password.** Enter the administrator user password.

Specify whether the HTTP access to the Administration Server instance is secure (HTTPS) or not (HTTP).

By default, the *Secure Administration Server Instance* box shown in this panel is checked. If your HTTP access is not secure, uncheck the box.

Click **Next**.

The configuration program checks if an Application Server 9.1 Administration Instance is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or choose new Application Server 9.1 configuration values.

Next, the configuration program checks if the credentials are valid. An Information dialog box is displayed with Application Server's Administration Instance running in normal or secure mode.

#### 7. Enter the URI path where Convergence will be deployed.

For example, enter `/iwc`.

Click **Next**.

#### 8. Specify whether or not you want hosted domain support

Select this option if you want to support for hosted domains in the current Convergence deployment.

If you enable or disable this option, ensure that the same settings are applied at the following backend servers:

- Calendar Server - For more information on setting up hosted domains for Calendar Server, see [Chapter 10 Setting Up a Multiple Domain Calendar Server 6.3 Environment in Sun Java System Calendar Server Administration Guide](#).
- Messaging Server - For more information on setting up hosted domains for Messaging Server, see [Chapter 7. Configuring and Administering Multiplexor Services in Sun Java System Messaging Server 6.3 Administration Guide](#).
- Instant Messaging Server - For more information on setting up hosted domains for Instant Messaging Server, see [Configuring Hosted Domain Support in Instant Messaging Administration Guide](#).

#### 9. Specify the LDAP User/Group configuration details.

The Communications Suite servers (Messaging Server, Calendar Server, Instant Messaging) store user and group data in an LDAP directory. This screen asks you to supply configuration information that enables the Convergence server to connect to the Directory Server managing this data.

**User/Group LDAP URL.** Enter the LDAP host and port where the User/Group is located. The URL should be in the format: `ldap://LDAP host name:LDAP port number`.

For example: `ldap://siroe.com:389`

**Bind DN.** Enter the LDAP distinguished name (DN) of the administrator used to bind to the Directory Server. This administrator should have appropriate privileges to manage the User/Group data.

For example `cn=Directory Manager`.

**Bind Password.** Enter the password for the Bind DN.

Click **Next**.

The configuration program checks if the LDAP connection is alive and the credentials are valid. If not, an error box tells you that the configuration program could not connect to the specified target. You need to provide valid User/Group LDAP details.

**10. Confirm the base distinguished name (DN) of the DC Tree suffix.**

For example: `o=isp`

The Convergence configuration program retrieves this base DN from the Directory Server and displays it. Use the displayed value, or change it if your configuration uses another base DN.

This base DN is used to perform domain lookups. If the Communications Suite servers are using Schema 1, this configuration setting specifies the DN of the DC Tree suffix. If the Communications Suite servers are using Schema 2, this setting specifies the DN of the root suffix under which the User/Group tree is located. You must enter (confirm) a value for this item whether you are using Schema 1 or Schema 2.

In a Schema 1 directory layout, Convergence uses the DC Tree suffix to search for domain information. In a Schema 2 directory layout, there is only one root suffix; both domain and user/group data are located under this one suffix.

Click **Next**.

**11. Enter the default domain name.**

When a user logs into Convergence without including a mail domain component in the user name, this domain is used by default to supply the fully qualified domain name. The default domain name is used when a domain name is required but not provided explicitly during login/authentication.

For example: `sesta.com`

In this example, if a user logs in as `fred`, the user name is qualified as `fred@sesta.com`.

**12. Specify the Mail Service configuration details.**

This screen appears only if you selected Messaging Service in the Select Components to Be Configured screen.

**Webmail Host Name.** Enter the name of the machine where Messaging Server is installed. For example: `ms.sesta.com`

**Webmail Server Port Number.** Enter the Messaging Server HTTP (`mshttpd`) port number. For example, the default is: `8990`

**Access in SSL mode.** Select this option if you want a connection between Convergence and Messaging Server in secure mode. If you select this option, make sure that the Messaging Server Port Number provided above is an SSL port.

**Webmail Server Admin UserID.** Enter the Messaging Server administrator user ID. For example: `admin`

By default, the Messaging Server administrator user ID is `admin`. This value is chosen during Messaging Server configuration.

**Webmail Server Admin Password.** Enter the Messaging Server administrator user password.

Click **Next**.

The configuration program checks if Messaging Server connection is alive and Credentials are

valid. If not, a warning box displayed that the configuration program could not connect to the specified target.

### 13. Specify the Calendar Service configuration details.

This screen appears only if you selected Calendar Server in the Select Components to Be Configured screen.

**Calendar Server Host Name.** Enter the name of the machine where Calendar Server is installed. For example: `cs.siroe.com`

**Calendar Server Port Number.** Enter the Calendar Server HTTP port number. For example: 80 (Default Calendar Server port is 80.)

**Access in SSL mode.** Select this option if you want connection between Communication Center and Calendar Server in secure mode, Make sure that Calendar Server Port Number provided above is SSL port if you select this option.

**Calendar Server Admin User ID.** Enter the Calendar Server administrator user ID. For example: `calmaster`

**Calendar Server Admin Password.** Enter the Calendar Server administrator user password.

Click **Next**.

The configuration program checks if the Calendar Server connection is alive and Credentials are valid. If not, a warning box is displayed, stating that the configuration program could not connect to the specified target.

### 14. Specify the Instant Messaging Service configuration details.

This screen appears only if you selected Instant Messaging Service in the Select Components to Be Configured screen.

**Note:** You must configure the Httpbind Component JID, Httpbind Component Password, Avatar Component JID, and Avatar Component Password in the IM Server before you enter these values in the Convergence configuration program. For details, see [Configure IM Components to Enable Communication with the Instant Messaging Server](#).

**Server Domain Name.** Enter the domain name of the Instant Messaging server. For example: `varrius.com`. If multiple domains need to be supported, enter the domain names separated by spaces.

**Server Host Name.** Enter the name of the machine where Instant Messaging is installed. For example: `im.varrius.com`

**Server Port Number.** Enter the Instant Messaging Server HTTP port number. For example: 5269 ((Default Instant Messaging Server port is 5269.)

**Note:** The following items, Httpbind Component JID, Httpbind Component Password, Avatar Component JID, and Avatar Component Password, must match the JID values and passwords that you configured in the `iim.conf` file for the IM Server. If multiple instances of Convergence use one IM server, these items must match the JID values in the `iim.conf` file configured for this particular instance of Convergence. For details, see [Configuring Multiple Instances of Convergence with One IM Server](#).

**Httpbind Component JID.** Enter Instant Messaging Server httpbind component JID. This value must match the JID you configured in the `iim.conf` file. For example: `httpbind.varrius.com`

**Httpbind Component Password.** Enter the Instant Messaging Server httpbind component password

**Avatar Component JID.** Enter Instant Messaging Server avatar component jid. For example: `avatar.varrius.com`

**Avatar Component Password.** Enter Instant Messaging Server avatar component password.

Click **Next**.

#### 15. Specify the Convergence Administrator details

The Administrator username and password are needed for ongoing administration of Convergence, implemented by using the Administration Utility `iwcadmin`. The user details for the Convergence Administrator are stored in the Convergence configuration files, not in the Directory Server. This administrator user is not tied to any back-end server administrator accounts.

**Username.** Enter the administrator username. For example `admin`

**Password.** Enter the password, make sure that password is more than 6 characters

**Password Again.** Enter the password again to confirm

#### 16. Ready to Configure

The verification panel displays the items that will be configured.

Click **Configure Now** to begin the configuration.

To change information on a previous panel, click **Back**.

#### 17. Task Sequence

The Task Sequence Panel displays a sequence of tasks being performed. The actual configuration takes place as these tasks are displayed.

When the panel displays "All Tasks Passed," you can click **Next** to continue or **Cancel** stop the tasks from being performed and exit.

#### 18. Installation Summary

The Installation Summary panel displays the product installed and a **Details...** button that displays more information about this configuration.

A log file for the `init-config` program is created in the `iwc-base/install` directory. (On Solaris and Linux, the default path is `/opt/sun/comms/iwc/install`.) The name of the log file is `Iwc-config-YYYYMMDDHHMMSS.log`, where `YYYYMMDDHHMMSS` identifies the 4-digit year, month, date, hour, minute, and second of the configuration.

Click **Close** to complete the configuration.

## Perform Silent Installation

The Convergence initial runtime configuration program automatically creates a silent installation state file (called `saveState`). This file contains internal information about the configuration program and is used for running silent installations.

The silent installation `saveState` file is stored in the `/opt/sun/comms/iwc/data/setup/Iwc-config-YYYYMMDDHHMMSS/` directory, where `YYYYMMDDHHMMSS` identifies the 4-digit year, month, date, hour, minute, and second of the `saveState` file.

For example, once you have run the `init-config` program once, you can run it in silent install mode:

```
iwc-base/sbin/init-config -nodisplay -noconsole -state fullpath
/saveState
```

The *fullpath* variable is the full directory path of where the `saveState` file is located.

# Chapter 23. Delegated Administrator 6.4 Initial Configuration

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## Completing the Delegated Administrator 6.4 Installation: Initial Configuration

The Delegated Administrator configuration program (`config-commda`) creates a new configuration with your specific requirements. This initial runtime configuration program performs minimal configuration.

After you run the program, complete the initial configuration by following the steps described in [Post-Configuration Tasks](#).

You can further customize your Delegated Administrator configuration by performing the tasks described in [Customizing Delegated Administrator](#).

You might need to perform additional configuration, as described in the *Sun Java System Messaging Server Administration Guide*.

The following topics are described in this article:

- [If You Are Upgrading from a Previous Release of Delegated Administrator](#)
- [Choose Which Components to Configure](#)
- [Run the Configuration Program](#)
- [Perform Silent Installation](#)
- [Run Delegated Administrator Console and Utility](#)
- [Post-Configuration Tasks](#)
- [Configuring Web Server to Run Delegated Administrator in SSL Mode](#)

## If You Are Upgrading from a Previous Release of Delegated Administrator

If you are configuring Delegated Administrator for the first time, you can skip this section and go directly to the section, [Choose Which Components to Configure](#).

If you are upgrading to this release of Delegated Administrator from an earlier release, and you have customized your configuration, you might have to take steps to preserve your customizations.

For instructions on how to upgrade Delegated Administrator from a previous version, see [Delegated Administrator 6.4 Upgrade](#).

To learn how to preserve your customized configuration, see [Preserving Customized Data When You Upgrade Delegated Administrator](#).

## Choose Which Components to Configure

The third panel in the configuration program asks which Delegated Administrator components you want to configure:

- **Delegated Administrator Utility (client)**---the command-line interface invoked with `commadmin`.
- **Delegated Administrator Console**---the Delegated Administrator graphical user interface (GUI).

- **Delegated Administrator Server**---the Delegated Administrator server components required to run the Delegated Administrator utility and console.

The configuration program displays different panels depending on which components you select.

The following steps summarize the configuration choices. Each summary step (below) links you to a section (later in this article) that walks you through the actual configuration panels.

### **Summary of Configuration Choices**

#### 1. [Starting the Configuration](#)

Enter the information requested in these panels to begin the configuration.

#### 2. [Configuring the Delegated Administrator Utility](#)

These panels follow directly after the *Select Components to Configure* panel. They ask for information used to configure the Delegated Administrator utility. You can either use the command line utility or the GUI console to configure Delegated Administrator.

- The standard approach is to configure the Delegated Administrator utility with the other two components, the server and console, on the same machine. You must configure the Delegated Administrator utility on all machines on which you install a Delegated Administrator server.
- You can also configure the Delegated Administrator utility and console on a separate machine. On the machine on which you configure the utility and console, you would select only those components on the *Select Components to Configure* panel. In this case, you must run the configuration program again on the machine where you configure the server.

#### 3. [Configuring the Delegated Administrator Console](#)

These panels follow the panels that configure the utility.

You can choose whether or not to configure the Delegated Administrator console.

- If you configure the Delegated Administrator console and server on the same machine, you would select both the console and the server in *Select Components to Configure* panel.
- You also can configure the Delegated Administrator console and server on different machines.

On the machine on which you configure the console, you would select only the console on the *Select Components to Configure* panel. The utility is selected by default; be sure it remains selected.

In this case, you must run the configuration program again on the machine on which you configure the server.

- If you have not configured the server when using the command line utility, then a dialog box cautions you that you must configure the Delegated Administrator Server on another machine. The server must be configured to enable the Delegated Administrator utility and console to work. If you are using the GUI to configure, then no warning will be displayed. If you configure the console and server on different machines, the utility is configured on *both* machines.

To select a component, enter the number (1,2, or 3) or 0 to deselect it.

The configuration program displays different panels depending on which Web container you select for the console. You can deploy to one of the following Web containers:

- Sun Java System Web Server 6.x [WEB]
- Sun Java System Web Server 7.x [WEB7]
- Sun Java System Application Server 7.x [APP7]
- Sun Java System Application Server 8.x or higher[APP8]

If you are configuring the Delegated Administrator server and console on one machine, you will go through these instructions *twice* (once for the server, once for the console).

#### 4. [Configuring the Delegated Administrator Server](#)

These panels follow the panels that configure the console.

You can choose whether or not to configure the Delegated Administrator server on a given machine.

If you do not choose to configure the server on a given machine, the configuration program warns you that you must configure it on another machine. The server component is required for running the utility and console.

All other considerations for deploying the server are the same as those for the console, as (described in [Configuring the Delegated Administrator Console](#)).



#### Note

**The Delegated Administrator server uses the same Web container as Access Manager.** The configuration program asks for Web container information after it asks for the Access Manager base directory.

#### 5. Completing the Configuration

Enter the information requested in these panels to complete the configuration.

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## Run the Configuration Program

The steps described in this section walk you through configuring Delegated Administrator.

**NOTE:** *da-base* is `/opt/sun/comms/da` by default on all platforms; use this value unless you chose a different path during installation. In Communications Suite 5, the Solaris value is: `/opt/SUNWcomm/`.

## Launching the Configuration Program

To run the configuration program, log in as (or become) root and go to the *da-base*/`sbin` directory. Then enter the command:

```
# ./config-commda
```

Once you run the `config-commda` command, the configuration program starts.

For example, in Communication Suite 5 in Solaris, the command is:  
`/opt/SUNWcomm/sbin/config-commda`.

The sections that follow lead you through the configuration panels.

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## Starting the Configuration

You must enter the information requested in the first configuration-program panels.

### ***To start the configuration***

#### 1. Welcome

The first panel in the configuration program is a copyright page. Click **Next** to continue or **Cancel** to exit.

#### 2. Select directory to store configuration and data files

Select the directory where you want to store the Delegated Administrator configuration and data files. The default configuration directory is `/var/da-base`. This directory should be separate from the *da-base* directory, (which is `/opt/sun/comms/da` by default).

Enter the name of the directory, or keep the default and click **Next** to continue.

If the directory does not exist, a dialog appears asking if you want to create the directory or choose a new directory. Click **Create Directory** to create the directory or **Choose New** to enter a new directory.

A dialog appears indicating that the components are being loaded. This may take a few minutes.

### 3. Select components to configure

Select the component or components you want to configure on the Components Panel.

- **Delegated Administrator Utility (client)**---the command-line interface invoked with `commadmin`. This component is required and is selected by default. It cannot be deselected.
- **Delegated Administrator Console**---the Delegated Administrator graphical user interface (GUI).
- **Delegated Administrator Server**---the Delegated Administrator server components required to run `commadmin` or the Delegated Administrator console.  
Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

For more information about how to choose components, see [Choose Which Components to Configure](#)

If you choose not to configure the Delegated Administrator server, a dialog box cautions you that you must configure the Delegated Administrator Server on another machine. The server must be configured to enable the Delegated Administrator utility and console to work.

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## Configuring the Delegated Administrator Utility

You must configure the Delegated Administrator utility on all machines on which you install a Delegated Administrator component (server or console).

### *To configure the Delegated Administrator Utility*

#### 1. Access Manager host name and port number

Enter the Access Manager host name and port number. If you are installing the Delegated Administrator server component, you must install it on the same host as Access Manager. Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

#### 2. Default domain

Enter the default domain for the Top-Level Administrator. This is the domain used when a domain is not explicitly specified by the `-n` option when executing the `commadmin` command-line utility. This is also known as the default organization. If the domain specified does not exist in the directory, it will be created.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

#### 3. Default SSL port for client

Enter the default SSL port that the Delegated Administrator utility uses.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

- If you chose to configure only the Delegated Administrator utility, go on to

### Completing the Configuration

- If you chose to configure both the Delegated Administrator console and the server, or if you chose to configure the console only, go on to

### Configuring the Delegated Administrator Console

- If you chose to configure the Delegated Administrator server only (together with the required Delegated Administrator utility), go on to

### Configuring the Delegated Administrator Server

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## Configuring the Delegated Administrator Console

The configuration program now displays the following panel:

### Select a Web Container for Delegated Administrator

Select the Web container on which you will deploy the Delegated Administrator console. You can configure Delegated Administrator on

- Sun Java System Web Server 6.x [WEB]
- Sun Java System Web Server 7.x [WEB7]
- Sun Java System Application Server 7.x [APP7]
- Sun Java System Application Server 8.x or higher [APP8]

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

This panel and the panels that follow gather information about the Web container for the Delegated Administrator console. Follow the instructions in the appropriate section:

- [Web Server 6.x Configuration](#)
- [Web Server 7.x Configuration](#)
- [Application Server 7.x Configuration](#)
- [Application Server 8.x or higher Configuration](#)

You can deploy the Delegated Administrator console and server on two different Web containers, on two different instances of the Web container, or on the same Web container.

If you chose to configure both the Delegated Administrator console and Delegated Administrator server in Panel 3, a second series of panels will ask for Web container information for the server.

Thus, you will see the Web container configuration panels twice. Follow the appropriate instructions for deploying each of the Delegated Administrator components.

### When you complete the Web container configuration panels, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to

#### [Configuring the Delegated Administrator Server](#)

- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to

#### [Completing the Configuration](#)

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### Web Server 6.x Configuration

If you are deploying the Delegated Administrator server or console on Web Server 6.x, follow the steps described in this section.

#### **To Configure Web Server 6.x**

##### 1. Web Server 6.x Configuration Details

The panel text tells you if you are providing Web Server 6.x configuration information for the Delegated Administrator server or console.

- Enter the Web Server 6.x root directory. You can browse to select the directory.
- Enter the Web Server 6.x instance identifier. This can be specified by a *host.domain* name such as `west.sesta.com`.
- Enter the virtual server identifier. This can be specified by a `https-host.domain` name such as `https-west.sesta.com`.

For more information about the Web Server 6.x instance identifier and virtual server identifier, see the Web Server documentation.  
Files for the Web Server 6.x instance are stored in the `https-host.domain` directory under the Web Server 6.x installation directory, for example  
`/opt/SUNWwbsvr/https-west.sesta.com`.

- Enter the HTTP port number that the specified virtual server listens to. Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit. The configuration program checks if the values you specified are valid. If a directory or identifier is invalid or does not exist, a dialog box tells you to choose a new value. Next, the configuration program checks if a Web Server 6.x instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Web Server 6.x configuration values.

## 2. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container. Enter the default domain separator to be used for authentication when the user logs on. For example: @.

## 3. If you are configuring the Delegated Administrator console, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to [Configuring the Delegated Administrator Server](#)
- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to [Completing the Configuration](#)
- If you are configuring the Delegated Administrator server, go on to [Step 3 in Configuring the Delegated Administrator Server](#).

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## Web Server 7.x Configuration

If you are deploying the Delegated Administrator server or console on Web Server 7.x, follow the steps described in this section.

### To Configure Web Server 7.x

#### 1. Web Server 7.x Configuration Details

The panel text tells you if you are providing Web Server 7.x configuration information for the Delegated Administrator server or console.

- Enter the Web Server 7.x server root directory. The Web Server software files are installed in this directory. You can browse to select the directory. The default value is  
`/opt/SUNWwbsvr7`.
- Enter the Web Server 7.x configuration root directory. The Web Server configuration files are installed in this directory. You can browse to select the directory. The default value is  
`/var/opt/SUNWwbsvr7`.
- Enter the Web Server 7.x instance identifier. This can be specified by a *host.domain* name such as `west.sesta.com`.
- Enter the virtual server identifier. This can be specified by a *host.domain* name such as `west.sesta.com`.

For more information about the Web Server 7.x instance identifier and virtual server identifier, see the Web Server documentation.  
Files for the Web Server 7.x instance are stored in the `https-host.domain` directory under the Web Server 7.x configuration directory, for example  
`/var/opt/SUNWwbsvr7/https-west.sesta.com`.

- Enter the HTTP port number that the specified virtual server listens to. For example: 80. Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit. The configuration program checks if the values you specified are valid. If a directory or identifier is invalid or does not exist, a dialog box tells you to choose a new value.

Next, the configuration program checks if a Web Server 7.x instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Web Server 7.x configuration values.

## 2. Web Server 7.x: Administration Instance Details

- Enter the Administration Server port number. For example: 8800
- Enter the Administration Server administrator user ID. For example: admin
- Enter the administrator user password.

If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked. Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

## 3. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container. Enter the default domain separator to be used for authentication when the user logs on. For example: @.

**If you are configuring the Delegated Administrator console, take one of the following actions:**

- If you chose to configure both the Delegated Administrator console and the server, go on to [Configuring the Delegated Administrator Server](#)
  - If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to [Completing the Configuration](#)
- \*If you are configuring the Delegated Administrator server: Go on to [Step 3 in Configuring the Delegated Administrator Server](#).

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## Application Server 7.x Configuration

If you are deploying the Delegated Administrator server or console on Application Server 7.x, follow the steps described in this section.

### *To configure Application Server 7.x*

#### 1. Application Server 7.x Configuration Details

The panel text tells you if you are providing Application Server 7.x configuration information for the Delegated Administrator server or console.

Enter the Application Server installation directory. By default, this directory is `/opt/SUNWappserver7`.

Enter the Application Server domain directory. By default, this directory is `/var/opt/SUNWappserver7/domains/domain1`.

Enter the Application Server document root directory. By default, this directory is `{{/var/opt/SUNWappserver7/domains/domain1/server1/docroot}}`.

You can browse to select any of these directories.

Enter the Application Server instance name. For example: `server1`.

Enter the Application Server virtual server identifier. For example: `server1`.

Enter the Application Server instance HTTP port number.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if the directories you specified are valid. If a directory is invalid or does

not exist, a dialog box tells you to choose a new directory.

Next, the configuration program checks if an Application Server instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Application Server configuration values.

### 1. Application Server 7.x: Administration Instance Details

Enter the Administration Server port number. For example: 4848

Enter the Administration Server administrator user ID. For example: `admin`

Enter the administrator user password.

If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container.

Enter the default domain separator to be used for authentication when the user logs on. For example: `@`.

#### 1. If you are configuring the Delegated Administrator console, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to

[Configuring the Delegated Administrator Server](#)

1. **#\*** If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to

[Completing the Configuration](#)

**If you are configuring the Delegated Administrator server:**

Go on to

[Step 3 in Configuring the Delegated Administrator Server.](#)

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## Application Server 8.x or higher Configuration

If you are deploying the Delegated Administrator server or console on Application Server 8.x or higher, follow the steps described in this section.

***To configure Application Server 8.x or higher***

### 1. Application Server 8.x or higher Configuration Details

The panel text tells you if you are providing Application Server 8.x or higher configuration information for the Delegated Administrator server or console.

Enter the Application Server installation directory. By default, this directory is `/opt/SUNWappserver/appserver`.

Enter the Application Server domain directory. By default, this directory is `/var/opt/SUNWappserver/domains/domain1`.

Enter the Application Server document root directory. By default, this directory is `/var/opt/SUNWappserver/domains/domain1/docroot`.

You can browse to select any of these directories.

Enter the Application Server target name. For example: `server`.

Enter the Application Server virtual server identifier. For example: `server`.



#### Note

If you are running the `config-commda` program to upgrade Delegated Administrator, and you also have upgraded Application Server from version 7 to version 8.x, specify the following values for the Application Server target name and virtual server identifier:

1. a.
  - Target name: `server1`
  - Virtual server identifier: `server` You must specify these values because the `asupgrade` utility migrates the Application Server 7 `server1` instance into the Application Server 8.x or higher `server1` target running under a `nodeagent`. However, `asupgrade` changes the value of the virtual server from `server1` in Application Server 7 to `server` in Application Server 8.x or higher.

Enter the Application Server target HTTP port number.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.

Next, the configuration program checks if an Application Server target connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or choose new Application Server configuration values.



#### Note

If you are deploying the Delegated Administrator server or console on Application Server 9.x, please note that the default installation directories are different from those for Application Server 8.x as follow:

Enter the Application Server installation directory. By default, this directory is `/opt/SUNWappserver`.

Enter the Application Server domain directory. By default, this directory is `/opt/SUNWappserver/domains/domain1`.

Enter the Application Server document root directory. By default, this directory is `/opt/SUNWappserver/domains/domain1/docroot`.

## 1. Application Server 8.x or higher: Administration Instance Details

Enter the Administration Server port number. For example: 4849

Enter the Administration Server administrator user ID. For example: `admin`

Enter the administrator user password.

If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container.

Enter the default domain separator to be used for authentication when the user logs on. For example: @.

#### 1. If you are configuring the Delegated Administrator console, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to

[Configuring the Delegated Administrator Server](#)

1. #\* If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to

[Completing the Configuration](#)

**If you are configuring the Delegated Administrator server:**

Go on to

[Step 3 in Configuring the Delegated Administrator Server.](#)

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## Configuring the Delegated Administrator Server

If you chose to configure the Delegated Administrator server, the configuration program displays the following panels.

### *To configure Delegated Administrator Server*

#### 1. Access Manager base directory

Enter the Access Manager Base Directory. The default directory is `/opt/SUNWam`.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if a valid Access Manager base directory is specified. If not, a dialog box displays indicating that an existing Access Manager base directory must be selected.

1. Next, a Web container **Configuration Details** panel appears.

If you chose to configure the console and server, this is the second time a Web container **Configuration Details** panel appears.

The Delegated Administrator server is deployed to the same Web container as Access Manager. (You cannot choose a Web container for the Delegated Administrator server.)

Follow the instructions in the appropriate section:

1. [#\\* Web Server 6.x Configuration](#)
  - [Application Server 7.x Configuration](#)
  - [Application Server 8.x or higher Configuration](#)
2. **Directory (LDAP) Server**

This panel asks for information about connecting to the LDAP Directory Server for the user/group suffix.

Enter the User and Group Directory Server LDAP URL (**LdapURL**), Directory Manager (**Bind As**), and password in the text boxes.

The Directory Manager has overall administrator privileges on the Directory Server and all Sun Java System servers that make use of the Directory Server (for example, Delegated Administrator) and has full administration access to all entries in the Directory Server. The default and recommended Distinguished Name (DN) is `cn=Directory Manager`.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Access Manager Top-Level Administrator

Enter the user ID and password for the Access Manager Top-Level Administrator. The user ID and password are created when Access Manager is installed. The value, `amadmin`, is hard-coded in AM.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Access Manager internal LDAP authentication password

Enter the password for the Access Manager Internal LDAP authentication user.

The authentication user name is hard-coded as `amldapuser`. It is created by the Access Manager installer and is the Bind DN user for the LDAP service.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Organization Distinguished Name (DN)

Enter the Organization DN for the default domain. For example, if your organization DN is `o=siroe.com`, all the users in that organization will be placed under the LDAP DN `o=siroe.com, o=usergroup`, where `o=usergroup` is your root suffix.

By default, the configuration program adds the default domain under the root suffix in the LDAP directory.

If you want to create the default domain at the root suffix (not underneath it), delete the organization name from the DN that appears in the **Organization Distinguished Name (DN)** text box.

For example, if your organization DN is `o=siroe.com` and your root suffix is `o=usergroup`, delete "`o=siroe.com`" from the DN in the text box; leave only `o=usergroup`.

If you choose to create the default domain at the root suffix, and if you later decide to use hosted domains, it can be difficult to migrate to the hosted-domain configuration. The `config-commda` program displays the following warning:

"The Organization DN you chose is the User/Group Suffix. Although this is a valid choice, if you ever decide to use hosted domains, there will be difficult migration issues. If you do wish to use hosted domains, then specify a DN one level below the User/Group suffix."

For more information, see [Directory Structure Supporting a One-Tiered Hierarchy](#).

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Top-Level Administrator for the default organization

Enter the user ID and password for the Top-Level Administrator that is to be created in the default domain (organization).

A \*Confirm Password\*field asks you to enter the password a second time.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

### 1. Service Package and Organization Samples

You can choose to add sample service packages and sample organizations to your LDAP directory.

**Load sample service packages.** Select this option if you want to use or modify sample service package templates to create your own Class-of-Service packages.

**Load sample organizations.** Select this option if you want your LDAP directory tree to contain sample provider organization nodes and subordinate organization nodes.

You can select

1. #\* Both the sample service packages and the sample organizations
  - Only one of these options
  - Neither option

**Preferred Mailhost for Sample.** Enter the name of the machine on which Messaging Server is installed.

For example: `mymachine.siroe.com`

If you chose to load the sample organizations into your LDAP directory, you must enter a preferred mail host name for these samples.

For information about service packages and organizations, see Chapter 2, "Delegated Administrator Overview," in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.

After you run the configuration program, you must modify the service package templates to create your own Class-of-Service packages. For information about this post-configuration task, see [Create Service Packages](#).

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## Completing the Configuration

Take the steps described in this section to finish running the configuration program.

### *To complete the configuration*

#### 1. Ready to Configure

The verification panel displays the items that will be configured.

Click **Configure Now** to begin the configuration, **Back** to return to any previous panel to change information, or **Cancel** to exit.

#### 2. Task Sequence

A sequence of tasks being performed is displayed on the Task Sequence Panel. This is when the actual configuration takes place.

When the panel displays "All Tasks Passed" you can click **Next** to continue or **Cancel** stop the

tasks from being performed and exit.

A dialog box appears reminding you to restart the Web container in order for configuration changes to take effect.

### 3. Installation Summary

The Installation Summary panel displays the product installed and a **Details...** button that displays more information about this configuration.

A log file for the `config-commda` program is created in the `da-base/install` directory. The name of the log file is `commda-config_YYYYMMDDHHMMSS.log`, where `YYYYMMDDHHMMSS` identifies the 4-digit year, month, date, hour, minute, and second of the configuration.

Click **Close** to complete the configuration.

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## Restarting the Web Container

After you complete the Delegated Administrator configuration, you must restart the Web container to which Delegated Administrator is deployed.

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## Configuration and Log Files Deployed by the `config-commda` Program

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### Configuration Files

Using the information you provided in the panels, the `config-commda` program deploys the following configuration files for the three Delegated Administrator components:

- Delegated Administrator utility:
  - `cli-usrprefs.properties`

Location: `da-base/data/config`

- Delegated Administrator server:
  - `resource.properties`
- Delegated Administrator console:
  - `daconfig.properties`
  - `Resources.properties`
  - `Security.properties`
  - `logger.properties`

(The `logger.properties` file specifies the location of log files and whether or not logging is enabled. It is a configuration file, not a log file.)

The `config-commda` program deploys the configuration files to the application repository of the Web container where you deployed Delegated Administrator. For a list of the deployed locations of the files, see [Deployed Locations of the Configuration Files](#).

For information about the properties contained in the configuration files and how to edit these properties to customize your configuration, see Chapter 4, "Customizing Delegated Administrator," in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.

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### Log Files

The Delegated Administrator console creates a runtime log [file:  
]

Default log file name: `da.log`

Default location: `da-base/log`

For more information about this and other Delegated Administrator log files, see [Appendix C, Debugging Delegated Administrator](#) in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.

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## Perform Silent Installation

The Delegated Administrator utility initial runtime configuration program automatically creates a silent installation state file (called `saveState`). This file contains internal information about the configuration program, and is used for running silent installs.

The silent installation `saveState` file is stored in the `da-base/data/setup/commda-config_YYYYMMDDHHMMSS/` directory, where `YYYYMMDDHHMMSS` identifies the 4-digit year, month, date, hour, minute, and second of the `saveState` file.

For example, once you have run the `config-commda` program once, you can run it in silent install mode:

```
da-base/sbin/config-commda -nodisplay -noconsole -state  
fullpath/saveState
```

The `fullpath` variable is the full directory path of where the `saveState` file is located.

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## Run Delegated Administrator Console and Utility

### Launching the Console

The Delegated Administrator console is launched by accessing the Web container to which it is deployed.

#### **To launch the Delegated Administrator console**

1. Go to the following url:  
`http://host:port/dawhere`  
`host` is the Web container host machine  
`port` is the Web container port  
For example:  
`{{http://siroe.com:8080/da}}`The Delegated Administrator console log-in window appears.



#### **Note**

In previous releases of Delegated Administrator, the console was launched from the following url:

`http://host:port/da/DA/Login`You can continue to use this url in the current release.

2. Log in to the Delegated Administrator console.

You could use the Top-Level Administrator (TLA) user ID and password specified in the Delegated Administrator configuration program. This information was requested in the following panel:

### Top-Level Administrator for the default organization



#### Note

Values set in Access Manager can determine session time-outs when you are running the Delegated Administrator console. For information on the session time-out values, see "Session Service Attributes," in the *Sun Java System Access Manager Administration Guide*. For information on viewing these values in the Access Manager console, see "Current Sessions" in the *Sun Java System Access Manager Administration Guide*.

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## Running the Command-Line Utility

You can run the Delegated Administrator utility by entering the command name, `commadmin`, from a terminal window.

### To run the command-line utility

1. Go to the `da-base/bin/` directory.
2. Enter the `commadmin` command.  
For example, in Comm Suite 5 in Solaris: `/opt/SUNWcomm/bin/commadmin`

### Example: Using `commadmin` to search for users

The following command searches for users in the `varrius.com` domain:

```
commadmin user search -D chris -w bolton -d varrius.com -n sesta.com
```

For details about this `commadmin` command, see [commadmin user search](#).

### `commadmin` Return Codes

When a `commadmin` operation success, an OK message is displayed on the command line.

If a failure occurs, the following message appears:

```
FAIL
```

```
<message>
```

Where `<message>` displays the error text.

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## Post-Configuration Tasks

After you run the Delegated Administrator configuration program, you should perform the following tasks:

- [Add Mail and Calendar Services to the Default Domain](#)

- [Enforce Unique Values for Mail Attributes](#)
- [Create Service Packages](#)

Perform the following task only if you are using an LDAP directory in Schema 2 compatibility mode:

- [Add ACIs for Schema 2 Compatibility Mode](#)

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## Add Mail and Calendar Services to the Default Domain

The `config-commda` program creates a default domain.

If you want to create users with mail service or calendar service in the default domain, you first must add mail service and calendar service to the domain.

To perform this task, use the `commadmin domain modify` command with the `-S mail` and `-S cal` options.

The following example shows how you can use `commadmin domain modify` to add mail and calendar services to the default domain:

```
commadmin domain modify -D chris -w bolton -n sesta.com -d siroe.com
-S mail,cal -H test.siroe.com
```

For `commadmin` command syntax and details, see "Chapter 5, "Command Line Utilities," in the *Sun Java System Delegated Administrator 6.4 Administration Guide*.

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## Enforce Unique Values for Mail Attributes

Messaging Server uses the following mail attributes to identify a user's email address and alternate email addresses:

- `mail`
- `mailAlternateAddress`
- `mailEquivalentAddress`

Each user's mail attributes should be unique across the directory.

The following procedure shows how to modify a Directory Server Idif file to enforce the uniqueness of these attributes. Whenever Delegated Administrator (or any LDAP tool) adds an entry or modifies a mail attribute, the Idif plug-in checks that the mail attribute values are unique. If an operation would cause two entries to have the same mail-attribute values, it is terminated.

For definitions of the mail attributes, see Chapter 3, "Messaging Server and Calendar Server Attributes," in the *Sun Java Communications Suite 5 Schema Reference* [<http://docs.sun.com/doc/819-4437/anoct?a=view>].

### ***To enforce the uniqueness of mail attributes***

#### ***Before You Begin***

**Note**

If you are running Directory Server 5.2 Patch 6 (Java ES Release 4) or later, follow the procedures described below.

If you are running Directory Server 5.2.4 (Java ES Release 4), you need to apply patch 5.2\_Patch\_4\_6313027 before you begin the following procedure.

If you are running an earlier version of Directory Server, you need to upgrade to Directory Server 5.2 Patch 6 or later before you begin.

To access Directory Server patches, go to <http://sunsolve.sun.com>.

1. Create a text file with the following lines. Replace the parameters shown in the file with values specific to your installation:

```
dn: cn=Uniqueness in Attribute Set,cn=plugins,cn=config
objectClass: topobjectClass: nsSlapdPlugin
objectClass: ds-signedPluginobjectClass: extensibleObject
cn: Uniqueness in Attribute Setnsslapd-pluginPath: server_root
/lif/uid-plugin.sonsslapd-pluginInitfunc: NSUniqueAttrSet_Init
nsslapd-pluginType: preoperationnsslapd-pluginEnabled: on
nsslapd-pluginarg0: attributeset=mail,mailalternateaddress,mailequ
nsslapd-pluginarg1: ugldapbasedn
nsslapd-plugin-depends-on-type: database
nsslapd-pluginId: NSUniqueAttrSetnsslapd-pluginVersion: 5.2
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Enforce unique values among an attribut
```

Change the following parameters:

Replace *server\_root* with the directory underneath which your Directory Server is installed. For example:  
*/var/opt/mps/serverroot*

Replace *\_ugldapbasedn\_* with your root suffix. Uniqueness checking is performed on all entries underneath this suffix.

1. Stop Directory Server.
2. Add your modified text file to the Directory Server *dse.ldif* file.

**Location of the dse.ldif File:**

The *dse.ldif* file is located in the following directory:

*server\_root/slaped-machine\_name/config*

where

*\_server\_root\_* is the directory underneath which Directory Server is installed. For example:  
*/var/opt/mps/serverroot*

*machine\_name* is the name of the host machine where Directory Server is installed.

**Where to Add Your Text File:**

Add your text file after the *uid uniqueness* section of the *dse.ldif* file. The first line of this section

(the `dn`) is as follows:

```
dn: cn=uid uniquenesss,cn=plugins,cn=config
```

1. Restart Directory Server.

When Directory Server starts, it installs the modified `dse.ldif` file in the directory.

### **Troubleshooting**

If Directory Server does not start because the `dse.ldif` file has generated an error, check the values you used to replace the parameters in the sample text file. Your LDAP root suffix and the Directory Server installation path and host machine must be correct for your installation.

If Directory Server still does not start, you can, as a last resort, remove the text file from the `dse.ldif` file and restart Directory Server.

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## **Create Service Packages**

Each user and group provisioned in the LDAP directory with Delegated Administrator should have a service package. A user or group can have more than one service package.

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### **Predefined Class-of-Service Templates**

When you run the Delegated Administrator configuration program (`config-commda`), you can choose to have the `config-commda` program install sample Class-of-Service templates in the directory.

For information about the sample Class-of-Service templates and the available mail attributes in a service package, see [Service Package Details](#).

You can use the sample Class-of-Service templates to create and assign service packages. However, the sample templates are meant to be examples.

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### **Creating Your Own Service Packages**

Most likely you will want to create your own service packages based on customized Class-of-Service templates with attribute values appropriate for the users and groups in your installation.

To create your own service packages, use the Class-of-Service templates stored in the `da.cos.skeleton.ldif` file, located in the following directory:

```
da-base/lib/config-templates
```

This file was created specifically for use as a template for writing customized Class-of-Service templates. It is not installed in the LDAP directory when Delegated Administrator is configured.

The `da.cos.skeleton.ldif` file contains a parameterized template for each Class-of-Service definition provided by Delegated Administrator:

- `standardUserMail`
- `standardUserCalendar`
- `standardUserMailCalendar`

- standardGroupMail
- standardGroupCalendar
- standardGroupMailCalendar

You can create your own Class-of-Service templates by using one or more of the parameterized templates in the `da.cos.skeleton.ldif` file.

The Class-of-Service templates in the `da.cos.skeleton.ldif` file are as follows:

```
# Templates for creating COS templates for service packages.#
# There are six COS definitions :#  standardUserMail
#  standardUserCalendar#  standardUserMailCalendar
#  standardGroupMail#  standardGroupCalendar
#  standardGroupMailCalendar#
# Each definition can have zero or more COS templates which
# define specific values for the attributes listed in the
# COS definition.#
# Each COS definition points to a corresponding subdirectory
# in which COS templates for that definition (and no other
# definition) are found. The templates directory structure
# is as follows:{{# standardUserMail
=> o=mailuser,o=costemplates,<ugldapbasedn>}}
# standardUserCalendar      => o=calendaruser,o=costemplates,
#                             <ugldapbasedn>
# standardUserMailCalendar => o=mailcalendaruser,o=costemplates,
#                             <ugldapbasedn>{{# standardGroupMail
=> o=mailgroup,o=costemplates,}}
#                             <ugldapbasedn>{{# standardGroupCalendar
=> o=calendargroup,o=costemplates,}}
#                             <ugldapbasedn>
# standardGroupMailCalendar => o=mailcalendargroup,o=costemplates,
#                             <ugldapbasedn>#
# Thus, all COS templates for the user mail service are found in the
# o=mailuser,o=costemplates,<ugldapbasedn> directory, etc.#
# It is not necessary to have any templates for a given definition.
# In that case default values are assumed for those attributes defined
# in the COS definition.#
# If a template is created for a definition there should be at least
# one attribute with a defined value.#
# Consult documentation for values for the attributes.
# Documentation includes units and default values.#
# The finished COS derived from this skeleton is added to the
# directory with the following command:#
# ldapmodify -D <directory manager> -w <password>
# -f <cos.finished.template.ldif>##
#####{{#
standardMailUser COS template}}
#####
# There must be at least one of the following attributes:#
mailMsgMaxBlocks# mailQuota# mailMsgQuota# mailAllowedServiceAccess#
dn: cn=<service package name>,o=mailuser,o=cosTemplates,
    <ugldapbasedn>changetype: addobjectclass: top
objectclass: LDAPsubentryobjectclass: extensibleobject
objectclass: cosTemplatecn: <service package name>
mailMsgMaxBlocks: <mailMsgMaxBlocksValue>mailQuota: <mailQuotaValue>
mailMsgQuota: <mailMsgQuotaValue>
```

```

mailAllowedServiceAccess: <mailAllowedServiceAccessValue>
daServiceType: mail user##
#####{{#
standardCalendarUser COS template}}
#####
# There must be a least one of the following attributes:#
icsPreferredHost# icsDWPHost# - icsFirstDay#
dn: cn=<service package name>,o=calendaruser,o=cosTemplates,
    <ugldapbasedn>changetype: addobjectclass: top
objectclass: LDAPsubentryobjectclass: extensibleobject
objectclass: cosTemplatecn: <service package name>
icsPreferredHost: <preferredHostValue>icsDWPHost: <dwpHostValue>
icsFirstDay: <firstDayValue>daServiceType: calendar user##
#####{{#
standardMailCalendarUser COS template}}
#####
# There must be a least one of the following attributes:#
mailMsgMaxBlocks# mailQuota# mailMsgQuota# mailAllowedServiceAccess#
dn: cn=<service package name>,o=mailcalendaruser,o=cosTemplates,
    <ugldapbasedn>changetype: addobjectclass: top
objectclass: LDAPsubentryobjectclass: extensibleobject
objectclass: cosTemplatecn: <service package name>
mailMsgMaxBlocks: <mailMsgMaxBlocksValue>mailquota: <mailQuotaValue>
mailmsgquota: <mailMsgQuotaValue>
mailAllowedServiceAccess: <mailAllowedServiceAccessValue>
daServiceType: calendar userdaServiceType: mail user##
#####{{#
standardMailGroup COS template}}
#####
# There must be a least one of the following attributes:
# - mailMsgMaxBlocks##
dn: cn=<service package name>,o=mailgroup,o=cosTemplates,
    <ugldapbasedn>changetype: addobjectclass: top
objectclass: LDAPsubentryobjectclass: extensibleobject
objectclass: cosTemplatecn: <service package name>
mailMsgMaxBlocks: <mailMsgMaxBlocksValue>daServiceType: mail group##
#####{{#
standardCalendarGroup COS template}}
#####
# There must be a least one of the following attributes:#
icsdoublebooking# icsautoaccept##
dn: cn=<service package name>,o=calendargroup,o=cosTemplates,
    <ugldapbasedn>changetype: addobjectclass: top
objectclass: LDAPsubentryobjectclass: extensibleobject
objectclass: cosTemplatecn: <service package name>
icsdoublebooking: <doubleBookingValue>
icsautoaccept: <autoAcceptValue>daServiceType: calendar group##
#####{{#
standardMailCalendarGroup COS template}}
#####
# There must be a least one of the following attributes:#
icsdoublebooking# icsautoaccept# - mailMsgMaxBlocks##
dn: cn=<service package name>,o=mailcalendargroup,o=cosTemplates,
    <ugldapbasedn>changetype: addobjectclass: top
objectclass: LDAPsubentryobjectclass: extensibleobject
objectclass: cosTemplatecn: <service package name>
mailmsgmaxblocks: <mailMsgMaxBlocksValue>

```

```
icsdoublebooking: <doubleBookingValue>
icsautoaccept: <autoAcceptValue>daServiceType: calendar group
daServiceType: mail group
```

### To create your own service packages

1. Copy and rename one of the parameterized templates in the `da.cos.skeleton.ldif` file.

When you install Delegated Administrator, the `da.cos.skeleton.ldif` file is installed in the following directory:

`da-base/lib/config-templates`

Choose one of these templates in the `da.cos.skeleton.ldif` file to copy and rename:

```
standardUserMailstandardUserCalendarstandardUserMailCalendar
standardGroupMail
```

1. Edit the following parameters in your copy of the template:
  - `<ugldapbasedn>`

Change the root suffix parameter, `<rootSuffix>`, to your root suffix (such as `o=usergroup`).

The `<ugldapbasedn>` parameter appears in the DN.

1. `#* <service package name>`

Change the `<service package name>` parameter to your own service package name.

The `<service package name>` parameter appears in the DN and the `cn`.

1. `#* Mail attribute values:`

```
<mailMsgMaxBlocksValue> <mailQuotaValue> <mailMsgQuotaValue>
<mailAllowedServiceAccessValue>
```

Edit these values to your specifications.

For example, you could enter the following values for the mail attributes:

```
mailMsgMaxBlocks: 400 mailQuota: 400000000 mailMsgQuota: 5000
mailAllowedServiceAccess: imap:ALL,$+pop:ALL,$+smtp:ALL,$+http:ALL
```

1. `#* Calendar attribute values:`

```
<preferredHostValue><dwpHostValue><firstDayValue>
```

These parameters represent values for the `icsPreferredHost`, `icsDWPHost`, and `icsFirstDay` LDAP attributes.

Edit these values to your specifications.

For definitions and descriptions of these attributes, see Chapter 3, "Messaging Server and Calendar Server Attributes," in the *Sun Java Communications Suite Schema Reference*.

You must use at least one attribute in a customized Class-of-Service template. You do not have to use all four mail attributes in a custom template. You can delete one or more attributes from the service package.

1. Use the LDAP directory tool `ldapmodify` to install the service package in the directory.

For example, you could run the following command:

```
ldapmodify -D <directory manager> -w <password> -f  
<cos.finished.template.ldif>
```

where

<directory manager> is the name of the Directory Server administrator.

<password> is the password of the Directory Service administrator.

<cos.finished.template.ldif> is the name of the edited ldif file to be installed as a service package in the directory.

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## Add ACIs for Schema 2 Compatibility Mode

If you are using an LDAP directory in Schema 2 compatibility mode, you must manually add ACIs to the directory to enable Delegated Administrator to provision in your directory. Take the following steps:

### To add ACIs for Schema 2 compatibility mode

1. Add the following two ACIs to the OSI root. You can find the following two ACIs in the `usergroup.ldif` file, located in the `da-base/config` directory.

Be sure to replace `ugldapbasedn` with your usergroup suffix. Add the edited `usergroup.ldif` into the LDAP directory.

```
## acis to limit Org Admin Role#  
##### dn: <local.ugldapbasedn>  
#####dn: <ugldapbasedn>  
changetype: modifyadd: aci  
aci: (target="ldap:///($dn),<ugldapbasedn>")(targetattr="*")  
(version 3.0; acl "Organization Admin Role access deny to org node";  
deny (write,add,delete) roledn = "ldap:///cn=Organization Admin  
Role,($dn),<ugldapbasedn>" 😊
```

```
dn: <ugldapbasedn>changetype: modifyadd: aci  
aci: (target="ldap:///($dn),<ugldapbasedn>")(targetattr="*")  
(version 3.0; acl "Organization Admin Role access allow read  
to org node";  
allow (read,search) roledn = "ldap:///cn=Organization Admin  
Role,($dn),<ugldapbasedn>" 😊
```

1. Add the following two ACIs to the DC Tree root suffix. You can find the following two ACIs in the `dctree.ldif` file, located in the `da-base/lib/config-templates` directory.

Be sure to replace `dctreebasedn` with your DC Tree root suffix and `ugldapbasedn` with your usergroup suffix. Add the edited `dctree.ldif` into the LDAP directory.

```
## acis to limit Org Admin Role#
##### dn: <dctreebasedn>
#####dn: <dctreebasedn>
changetype: modifyadd: aci
aci: (target="ldap:///($dn),<dctreebasedn>")(targetattr="*")
(version 3.0; acl "Organization Admin Role access deny to dc node";
deny (write,add,delete) roledn = "ldap:///cn=Organization Admin
Role,($dn),<ugldapbasedn>" 😊
```

```
dn: <dctreebasedn>changetype: modifyadd: aci
aci: (target="ldap:///($dn),<dctreebasedn>")(targetattr="*")
(version 3.0; acl "Organization Admin Role access allow read to dc
node"; allow (read,search) roledn = "ldap:///cn=Organization Admin
Role,($dn),<ugldapbasedn>" 😊
```

1. Add the following additional ACIs to the DC Tree root suffix. (These ACIs are not in the `dctree.ldif` file.)

```
dn:<dctreebasedn> changetype:modifyadd:aci
aci: (target="ldap:///<dctreebasedn>")(targetattr="*")
(version 3.0; acl "S1IS Proxy user rights"; allow (proxy)
userdn = "ldap:///cn=puser,ou=DSAME Users,<ugldapbasedn>" 😊
```

```
dn:<dctreebasedn>changetype:modifyadd:aci
aci: (target="ldap:///<dctreebasedn>")(targetattr="*")
(version 3.0; acl "S1IS special dsame user rights for all under th
root suffix"; allow (all) userdn = "ldap:///cn=dsameuser,ou=DSAME
Users,<ugldapbasedn>" 😊
```

```
dn:<dctreebasedn>changetype:modifyadd:aci
aci: (target="ldap:///<dctreebasedn>")(targetattr="*")
(version 3.0; acl "S1IS Top-level admin rights";
allow (all) roledn = "ldap:///cn=Top-level Admin
Role,<ugldapbasedn>" 😊
```

2. Set the `com.ipplanet.am.domaincomponent` property in the `AMConfig.properties` file to your DC Tree root suffix.

For example, modify the following lines in the `<AM_base_directory>/lib/AMConfig.properties` file:

```
[file:
]
from
```

```
com.ipplanet.am.domaincomponent=o=isp
```

to

```
com.ipplanet.am.domaincomponent=o=internet
```

1. Enable Access Manager to use compatibility mode.

In the Access Manager Console, in the Administration Console Service page, check (enable) the **Domain Component Tree Enabled** check box.

1. Add the `inetdomain` object class to all the DC Tree nodes (such as `dc=com,o=internet`), as in following example:

```
/var/mps/serverroot/shared/bin 298% ./ldapmodify
-D "cn=Directory Manager" -w passworddn: dc=com,o=internet
changetype: modifyadd: objectclassobjectclass: inetdomain
```

2. Restart the Web container.

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## Configuring Web Server to Run Delegated Administrator in SSL Mode

If you have deployed the Delegated Administrator console to Web Server 6 or Web Server 7.x, you can run the Delegated Administrator console in SSL mode, over a secure port.

If the Delegated Administrator server is deployed to Web Server 6 or Web Server 7.x, you can run the Delegated Administrator utility (`commadmin`) in SSL mode.

To enable the Delegated Administrator console and utility to use SSL access:

- For the console, complete all the steps in the SSL-configuration procedure.
- For the utility, you only have to complete Step 1 in the SSL-configuration procedure. Use the `-s` option with the `commadmin` commands to run in SSL mode.

For Web Server 6, follow this procedure:

- [To Configure Web Server 6 to Enable Delegated Administrator to Run in SSL Mode](#)

For Web Server 7.x, follow this procedure:

- [To Configure Web Server 7.x to Enable Delegated Administrator to Run in SSL Mode](#)

### **To Configure Web Server 6 to Enable Delegated Administrator to Run in SSL Mode**

In this procedure, the certificate truststore is created in the Delegated Administrator configuration directory. For example: `/var/da-base/config`

1. Request and install a certificate.

In a production environment, you must request a certificate from a Certificate Authority (CA), which issues the certificate to you. Next, you install the certificate.

In a test environment, you can create and install a self-signed certificate.

For information about requesting and installing certificates for Web Server 6, see "Using Certificates and Keys" in the *Sun Java System Web Server 6.1 SP6 Administrator's Guide*.

After you complete this step, you can run the Delegated Administrator utility in SSL mode.

1. Export the specific certificate in ASCII encoding.

For example:

```
/opt/SUNWwbsvr/bin/https/admin/bin/certutil -L -n Server-Cert -d \  
-P https-host.domain-host-/opt/SUNWwbsvr/alias -a > /tmp/host.cert
```

where

1. **#\*** *Server-Cert* is the default name created by the Administration interface
  - *host* is the host name of the machine where Web Server 6 is running. For example: *myhost*.
  - *host.domain* is the host and domain name of the machine where Web Server 6 is running. For example: *myhost.siroe.com*.
2. Use the `java keytool` utility to import the certificate into a truststore.

This step assumes that you are creating a new truststore in the Delegated Administrator configuration directory.

1. a. Import the certificate.

For example:

```
cd /var/da-base/configkeytool -import -alias Server-Cert -file /tmp/  
host.cert-keystore truststore
```

1. a. Enter a password when the `keytool` prompts you for one.
2. Define the `ssl.truststore` property in the JVM Setting for the Web Server 6 instance configuration.

For example:

```
-Djavax.net.ssl.trustStore=/var/da-base/config/truststore  
Djavax.net.ssl.trustStorePassword=password
```

where *password* is the password you entered at the `keytool` prompt.

1. Modify the following property in the JVM Setting for the Web Server 6 instance configuration.

Change

```
-Djava.protocol.handler.pkgs=com.ipplanet.services.comm
```

to the following value:

```
-Djava.protocol.handler.pkgs=com.sun.identity.protocol
```

1. Change the following properties in the `daconfig.properties` file:
  - a. Open the `daconfig.properties` file in a text editor.

The `daconfig.properties` file is located by default in the Delegated Administrator configuration directory:

```
da-base/data/da/WEB-INF/classes/com/sun/comm/da/resources
```

(In a later step, you will deploy the `daconfig.properties` file to the Web Server 6 configuration directory.)

1.
  - a. Change the property values as follows:

```
commadminserver.host=host.domaincommadminserver.port=port  
commadminserver.usessl=true
```

where `host.domain` is the host and domain name of the machine where Web Server 6 is running. For example: `myhost.siroe.com`.

And where `port` is the SSL port. For example: 443.

1. Deploy the Web Server 6 configuration and restart the instance:
  - a. Run the Web Server 6 deploy script:

```
da-base/sbin/config-wbsvr-da
```

- b. Restart the Web Server 6 instance.

### **To Configure Web Server 7.x to Enable Delegated Administrator to Run in SSL Mode**

In this procedure, the certificate truststore is created in the Delegated Administrator configuration directory. For example: `/var/da-base/config`

1. Request and install a certificate.

In a production environment, you must request a certificate from a Certificate Authority (CA), which issues the certificate to you. Next, you install the certificate.

In a test environment, you can create and install a self-signed certificate.

For information about requesting and installing certificates for Web Server 7.x, see [Managing Certificates in Sun Java System Web Server 7.0 Administrator's Guide](#).

After you complete this step, you can run the Delegated Administrator utility in SSL mode.

1. Run the `certutil` utility to list all certificates in the certificate database.

For example:

```
cd /var/da-base/config/usr/sfw/bin/certutil -L -d
/var/opt/SUNWwbsvr7/https-host.domain/config
```

where *host.domain* is the host and domain name of the machine where Web Server 7.x is running. For example: `myhost.siroe.com`

1. Export the specific certificate in ASCII encoding.

For example:

```
/usr/sfw/bin/certutil -L -n cert-host.domain -d
/var/opt/SUNWwbsvr7/https-host.domain/config-a > host.cert
```

where *host* and *host.domain* are the host name or host and domain name of the machine where Web Server 7.x is running.

1. Use the `java keytool` utility to import the certificate into a truststore.

This step assumes that you are creating a new truststore in the Delegated Administrator configuration directory.

1. a. Import the certificate.

For example:

```
keytool -import -alias cert-host.domain -file host.cert
-keystore truststore
```

1. a. Enter a password when the `keytool` prompts you for one.
2. Define the `ssl.truststore` property in the JVM Setting for the Web Server 7.x instance configuration.

For example:

```
-Djavax.net.ssl.trustStore=/var/da-base/config/truststore
-Djavax.net.ssl.trustStorePassword=password
```

where *password* is the password you entered at the `keytool` prompt.

1. Modify the following property in the JVM Setting for the Web Server 7.x instance configuration.

Change

```
-Djava.protocol.handler.pkgs=com.ipplanet.services.comm
```

to the following value:

```
-Djava.protocol.handler.pkgs=com.sun.identity.protocol
```

1. Change the following properties in the `daconfig.properties` file:
  - a. Open the `daconfig.properties` file in a text editor.

The `daconfig.properties` file is located by default in the Delegated Administrator configuration directory:

```
da-base/data/da/WEB-INF/classes/com/sun/comm/da/resources
```

(In a later step, you will deploy the `daconfig.properties` file to the Web Server 7.x configuration directory.)

1.
  - a. Change the property values as follows:

```
commadminserver.port=portcommadminserver.usessl=true
```

where *port* is the SSL port. For example: 443.

2. Deploy the Web Server 7.x configuration and restart the instance:
  - a. Run the Web Server 7.x deploy script:

```
da-base/sbin/config-wbsvr7x-da
```

- b. Restart the Web Server 7.x instance.

# Chapter 24. Get the Software

## Get the Software to Install a Communications Suite Deployment

 **Update, December 16, 2009:** To obtain the software, see the Communications Suite 7 [Get the Software](#) page. The Communications Suite 6 Update 1 download page has been removed.



### Download

To install a Communications Suite 6 Update 1 deployment, including the new Convergence client, download the necessary software from the [Communications Suite 6 Update 1 Download Site](#).

This site also provides download links for the following dependent component products:

- Sun Java System Application Server 9.1 Update 2 with High Availability Database (HADB)
- Sun Java System Directory Server Enterprise Edition 6.3
- Sun Java Enterprise System 5 Update 1 (to obtain Access Manager 7.1 and Web Server 7.0 software)

To obtain the proper versions, download the dependent component products directly from the Communications Suite 6 Update 1 Download Site. For more information about Communications Suite 6 Update 1 component product dependencies, see [Requirements for Communications Suite 6 Update 1](#).

Download the JES 5 Update 1 distro to obtain Access Manager 7.1 and Web Server 7.0 software.

### Notes and Caveats

 Download the Application Server file directly from the Communications Suite download site. Do not install the version of Application Server bundled with JES 5 Update 1. That is an older version of Application Server.

If you are installing the software from the Communications Suite DVD, do not use the Application Server bundled on the DVD. Go to the Communications Suite download site (noted above) to obtain the correct version of Application Server.

To obtain a multi-language version of Application Server, go to the Application Server download site. (The Communications Suite download site does not provide a multi-language version.)

 Download Directory Server Enterprise Edition 6.3 (minimum) from the Communications Suite download site before you run the JES 5 Update 1 installer. Do not install the version of Directory Server bundled with JES 5 Update 1. That is an older version of Directory Server.

If you already started with an older DSEE version, you can still get to the recommended DSEE 6.3. You must apply an upgrade patch as well as other patches to upgrade to DSEE 6.3.

For example, if you obtained the native package format of DSEE on the Solaris 10 x86 or SPARC platform, you must start by installing the DSEE 6.2 version bundled with JES 5 Update 1, then upgrade to DSEE 6.3.

You can instead take the easier path: Download and install the version of DSEE 6.3 directly from the Communications Suite download site.

 If you are installing Access Manager 7.1 on a Linux system, you should verify that a compatible version of Java Development Kit (JDK) is installed. For details, see [Verifying the Correct JDK Version to Support Access Manager](#).

 The Communications Suite DVD does not contain the Sun JES 5 Update 1 distro or the Directory Server Enterprise Edition software.

 To download Connector for Outlook or Communications Sync, choose Windows as the download platform on the download page.

 The letters `m1` in the download file names signify "multilanguage."

# Chapter 25. Instant Messaging 8 Initial Configuration

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## Completing the Sun Java System Instant Messaging 8 Installation: Initial Configuration

After you install the Instant Messaging software with the Communications Suite installer, you must configure the Instant Messaging server and client to complete the installation. You perform this initial runtime configuration by running the Instant Messaging configuration program, `configure`.

This section has the following topics:

- [Configuring Instant Messaging After Installation](#)
- [Setting up and Launching Instant Messenger](#)

# Chapter 26. Messaging Server 7 Update 1 Initial Configuration

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## Completing the Sun Java System Messaging Server 7 Update 1 Installation: Initial Configuration

This document describe the configuration and migration steps you must perform, after installation, before you can use Messaging Server. This document assumes that you have read the [Sun Java Communications Suite 5 Deployment Planning Guide](#) and installed Messaging Server. Performing the following tasks should get you to a point where you have a functioning Messaging Server. You will still want to customize your deployment as well as provision and perhaps migrate users and groups. Provisioning is described in the [Delegated Administrator Administration Guide](#).

This document includes the following sections:

- [Creating UNIX System Users and Groups](#)
- [To Prepare Directory Server for Messaging Server Configuration](#)
- [Creating the Initial Messaging Server Runtime Configuration](#)
- [Installing Messaging Server Against a Directory Server Replica](#)
- [Installing Messaging Server Provisioning Tools](#)
- [SMTP Relay Blocking](#)
- [Enabling Startup After a Reboot](#)
- [Handling sendmail Clients](#)
- [Configuring Messenger Express and Communications Express Mail Filters](#)
- [Performance and Tuning](#)
- [Post-Installation Directory Layout](#)
- [Post-Installation Port Numbers](#)

## Creating UNIX System Users and Groups

System users run specific server processes, and privileges need to be given to these users so that they have appropriate permissions for the processes they are running.

Set up a system user account and group for all Sun Java System servers, and set permissions for the directories and files owned by that user. To do so, follow the steps below.



### Note

For security reasons, in some deployments it may be desirable to have different system administrators for different servers. This is done by creating different system users and groups per server. For example, the system user for Messaging Server would be different from the system user for Web Server, and system administrators Messaging Server would not be able to administer the Web Server.

### To Create UNIX System Users and Groups

1. Log in as `root`.
2. Create a group to which your system users will belong.  
In the following example, the `mail` group is created:

```
# groupadd mail
```

3. Create the system user and associate it with the group you just created. In addition, set the password for that user.

In the following example, the user `mailsrv` is created and associated with the `mail` group:

```
# useradd -g mail mailsrv
```

`useradd` and `usermod` commands are in `/usr/sbin`. See UNIX man pages for more information.

4. You might also need to check the `/etc/group` and `/etc/passwd` files to be sure that the user has been added to the system group that you created.



#### Note

Should you decide not to set up UNIX system users and groups prior to installing Messaging Server, you will be able to specify them when you run the [Creating the Initial Messaging Server Runtime Configuration](#).

## To Prepare Directory Server for Messaging Server Configuration

For more information on directory preparation and the directory preparation script `comm_dssetup.pl`, see [Communications Suite Directory Server Setup Script \(comm\\_dssetup.pl\)](#). The `comm_dssetup.pl` script prepares the Directory Server by setting up new schema, index, and data in your Directory Server. It must be run for new installations of Messaging Server and Communications Express. It is also a good idea to run the latest `comm_dssetup.pl` if you are upgrading any of the component products that depend on Directory Server.

## Creating the Initial Messaging Server Runtime Configuration

The initial runtime configuration program provides a configuration to get your Messaging Server up and running. It is meant to create an *initial runtime configuration* to setup a generic functional messaging server configuration. Thus it gives you a base working configuration from which you can make your specific customizations. The program is only meant to be run once. Subsequent running of this program will result in your configuration being overwritten. To modify your initial runtime configuration, use the configuration utilities described here and in the [Sun Java System Messaging Server 6.3 Administration Reference](#).

## Messaging Server Prerequisites

Before running the initial runtime configuration program, you must:

- Install and configure the Directory Server. (See the [Sun Java Enterprise System 5 Installation Guide for UNIX](#).)
- Run the `comm_dssetup.pl` program. See [Communications Suite Directory Server Setup Script \(comm\\_dssetup.pl\)](#).
- Record your Administration and Directory installation and configuration parameters in the checklists supplied in [Configuration Worksheets - Messaging Server](#).

## Messaging Server Configuration Checklist

When you run the Messaging Server initial runtime configuration program, record your parameters in [Installation Worksheets - Directory Server](#). To answer certain questions, refer to your Directory Server installation checklists in [Configuration Worksheets - Messaging Server](#).

### **To Run the Configure Program**

This procedure walks you through configuring the Messaging Server initial runtime configuration.

1. Ensure in your setup that DNS is properly configured and that it is clearly specified how to route to hosts that are not on the local subnet.
  - The `/etc/defaultrouter` should contain the IP address of the gateway system. This address must be on a local subnet.
  - The `/etc/resolv.conf` exists and contains the proper entries for reachable DNS servers and domain suffixes.
  - In `/etc/nsswitch.conf`, the `hosts:` and `ipnodes:` line has the `files`, `dns` and `nis` keywords added. The keyword `files` must precede `dns` and `nis`. So if the lines look like this:

```
hosts:  nis dns files
ipnodes:  nis dns files
```

They should be changed to this:

```
hosts:  files nis dns
ipnodes:  files nis dns
```

- Make sure that the FQDN is the first host name in the `/etc/hosts` file. If your Internet host table in your `/etc/hosts` file looks like this:

```
123.456.78.910 budgie.west.sesta.com
123.456.78.910 budgie loghost mailhost
```

Change it so that there is only one line for the IP address of the host. Be sure the first host name is a fully qualified domain name. For example:

```
123.456.78.910 budgie.west.sesta.com budgie loghost mailhost
```

- You can verify that the lines are read correctly by running the following commands:

```
# getent hosts <ip_address>
# getent ipnodes <ip_address>
```

If the lines are read correctly, you should see the IP address followed by the FQDN and then the other values. For example:

```
# getent hosts 192.18.126.103
192.18.126.103 budgie.west.sesta.com budgie loghost mailhost
```

2. Invoke the Messaging Server initial runtime configuration with the following command:

```
<msg-svr-base>/sbin/configure <options>
```

You might need to use the `xhost(1)` command if you are configuring Messaging Server on a remote system.

The following table describes options you can set with the `configure` program:

| Option                              | Description                                                                                                                                                          |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>-nodisplay</code>             | Invokes a command-line configuration program.                                                                                                                        |
| <code>-noconsole</code>             | Invokes a GUI user interface program.                                                                                                                                |
| <code>-novalidate</code>            | No text field validation is performed.                                                                                                                               |
| <code>-saveState [statefile]</code> | Saves state of installer input.                                                                                                                                      |
| <code>-state [statefile]</code>     | Uses a silent installation file. Must be used with <code>-nodisplay</code> and <code>-noconsole</code> flags. See <a href="#">To Perform a Silent Installation</a> . |
| <code>-debug</code>                 | Provides general debug info.                                                                                                                                         |

- The Welcome panel appears.  
The first panel in the configure program is a copyright page. Select Next to continue or Cancel to exit. If you didn't configure the administration server (Messaging Server 2005Q4 or earlier only) you will be warned, select okay to continue.
- Type the Fully Qualified Host Name (FQHN).  
This is the machine on which Messaging Server will operate. When you installed the server, you might have specified the physical host name. However, if you are installing a cluster environment, use the logical hostname. Here is the chance to change what you originally specified.
- Select directory to store configuration and data files.  
Select the directory where you want to store the Messaging Server configuration and data files. Specify a pathname that is not under the `msg-svr-base`. Symbolic links will be created under `msg-svr-base` to the configuration and data directory. For more information on these symbolic links, see [Post-Installation Directory Layout](#).  
Make sure you have large enough disk space set aside for these files.
- You will see a small window indicating that components are being loaded.  
This might take a few minutes.
- Select Components to Configure.  
Select the Messaging Server components that you want to configure.
  - Message Transfer Agent: Handles routing, delivering user mail, and handling SMTP authentication. The MTA provides support for hosted domains, domain aliases, and server-side filters.
  - Message Store: Provides the foundation for unified messaging services through its universal Message Store. Access to the message store is available through multiple protocols (HTTP, POP, IMAP). If you are only configuring a Message Store, you must also select the MTA.
  - Webmail Server: Handles the HTTP protocol retrieval of messages from the Message Store. This component is also used by Convergence and Communications Express to provide web-based access to end users.
  - Messaging Multiplexor: Acts as a proxy to multiple messaging server machines within an organization. Users connect to the Multiplexor server, which redirects each connection to the appropriate mail server. This component is not enabled by default. If you do check the MMP as well as the Message Store, they will be enabled on the same system; a warning message will appear for you to change your port numbers after configuration. For instructions on doing so, see [Post-Installation Port Numbers](#).  
To configure the MMP, see [Configuring and Administering Multiplexor Services](#).  
Check any components you want to configure, and uncheck those components you do not want to configure.
- Type the system user name and the group that will own the configured files.  
For information on setting up system users and groups, see [Creating UNIX System Users and Groups](#).

9. Configuration Directory Server Panel.
10. User/Group Directory Server Panel  
Type your Users and Groups Directory LDAPURL, and administrator ID and Password to bind as. Gather the User/Group Server LDAPURL information from the host and port number information from your Directory Server installation. See the [Directory Server Installation Worksheet](#).  
The Directory Manager has overall administrator privileges on the Directory Server and all Sun Java System servers that make use of the Directory Server (for example, the Messaging Server) and has full administration access to all entries in the Directory Server. The default and recommended Distinguished Name (DN) is `cn=Directory Manager` and is set during Directory Server configuration  
If you are installing against a replicated Directory Server instance, you must specify the credentials of the replica, not the master directory.
11. You are prompted for the Postmaster Email Address.  
Type a Postmaster Email Address.  
Select an address that your administrator actively monitors. For example, `pma@siroe.com` for a postmaster on the `siroe.com` domain. This address cannot begin with "Postmaster."  
The user of the email address is not automatically created. Therefore, you need create it later by using a provisioning tool.
12. You are prompted for the password for administrator accounts.  
Type an initial password that will be used for service administrator, server, user/group administrator, end user administrator privileges as well as PAB administrator and SSL passwords. After the initial runtime configuration, you might change this password for individual administrator accounts. For more information, see [To Modify Your Passwords](#).
13. You are prompted for the Default Email Domain.  
Type a Default Email Domain.  
This email domain is the default that is used if no other domain is specified. For example, if `siroe.com` is the default email domain, then the domain to which messages addressed to user IDs without a domain will be sent.  
If you are using the Delegated Administrator CLI, the command-line interface for provisioning users and groups with Sun LDAP Schema 2, you will want to specify the same default domain during its configuration. For more information, see [Delegated Administrator Administration Guide](#).
14. You are prompted for the Organization DN.  
Type an Organization DN under which users and groups will be created. The default is the email domain prepended to the user/group suffix.  
For example, if your user/group suffix is `o=usergroup`, and your email domain is `siroe.com`, then the default is `o=siroe.com, o=usergroup` (where `o=usergroup` is your user/group Directory suffix which was specified in [Creating UNIX System Users and Groups](#).  
If you choose the same user/group Directory suffix as your Organization DN, you might have migration problems if you decide to create a hosted domain. If you want to set up a hosted domain during initial runtime configuration, then specify a DN one level below the User/Group suffix.
15. The Ready to Configure panel appears.  
The configuration program checks for enough disk space on your machine and then outline the components it is ready to configure.  
To configure the Messaging components, select Configure Now. To change any of your configuration variables, select Back. Or to exit from the configuration program, select Cancel.
16. The Starting Task Sequence, Sequence Completed, and Installation Summary Panels appear.  
You can read the installation status by selecting Details on the final Installation Summary page. To exit the program, select Close.  
A log file is created in `msg-svr-base/install/configure_YYYYMMDDHHMMSS.log`, where `YYYYMMDDHHMMSS` identifies the 4-digit year, month, date, hour, minute, and second of the configuration.  
An initial runtime configuration is now set up for your Messaging Server. To change any configuration parameter, refer to other parts of this document for instructions on doing so.  
To start Messaging Server, use the following command:

```
<msg-svr-base>/sbin/start-msg
```

### **To Perform a Silent Installation**

The Messaging Server initial runtime configuration program automatically creates a silent installation *state* file (called *saveState*) that can be used to quickly configure additional Messaging Server instances in your deployment where the Messaging Server packages have been installed. All of your responses to the configuration prompts are recorded in that file.

By running the silent installation, you instruct the `configure` program to read the silent installation state file. The `configure` program uses the responses in this file rather than ask the same installation questions again for subsequent initial runtime configurations of Messaging Server. When you use the state file in a new installation, you are not asked any questions. Instead, all of the state file responses are automatically applied as the new installation parameters.

The silent installation *saveState statefile* file is stored in the *msg-svr-base* /*install/configure\_YYYYMMDDHHMMSS* directory, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the *saveState* file.

To use the silent installation *statefile* to configure another Messaging Server instance on another machine in the deployment, follow these steps:

1. Copy the silent installation *statefile* to a temporary area on the machine where you are performing the new installation.
2. Review and edit the silent installation *statefile* as necessary.  
You will probably want to change some of the parameters and specifications in the *statefile*. For example, the default email domain for the new installation may be different than the default email domain recorded in the *statefile*. Remember that the parameters listed in the *statefile* are automatically applied to this installation.
3. Run the following command to configure other machines with the silent installation file:

```
<msg-svr-base>/sbin/configure -nodisplay -noconsole -state  
<statefile>
```

where *statefile* is file name of the *saveState* file, including the full path to the file. (See Step 1 of this section).



#### Note

After running the silent installation program, a new *statefile* is created from the silent installation in the *msg-svr-base/install/configure\_YYYYMMDDHHMMSS* /*saveState* directory, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the directory containing the *saveState* file.

## Installing Messaging Server Against a Directory Server Replica

The following conditions might prevent you from installing Messaging Server against a Directory Server master:

- You do not have Directory Server master credentials.
- Messaging Server cannot communicate directly with the Directory Server master.

### To Install Messaging Server Against a Directory Server Replica

1. Run the `comm_dssetup.pl` program against all Directory Servers including the Directory Server replicas (see [Communications Suite Directory Server Setup Script \(comm\\_dssetup.pl\)](#)).
2. Run the Messaging `configure` program using the replicated Directory Server credentials as described in [Creating the Initial Messaging Server Runtime Configuration](#).

By default, this program is located in the `msg-svr-base/sbin/configure` directory. Because of invalid privileges, the `configure` program fails in trying to configure the Directory Server Administrators. It does, however, produce the `msg-svr-base/config/*.ldif` files that are needed to allow proper privileges to the Directory Server replicas.

3. Move the `*.ldif` files to the Directory Server master.
4. Run the `ldapmodify` command on the `*.ldif` files.  
See the Sun Java System Directory Server documentation for more information on `ldapmodify` or in the `msg-svr-base/install/configure_YYYYMMDDHHMMSS.log`.
5. Run the `configure` program again.  
Your Directory Server replica (and master) are now configured to work with your Messaging Server.

## Installing Messaging Server Provisioning Tools

The following sections provide a summary of install information about the supported provisioning tools:

### Understanding Schema and Provisioning Options

To learn more about the schema and provisioning options for Messaging Server and Communications Suite, see [Chapter 8, Understanding Schema and Provisioning Options](#), in the Sun Java Communications Suite 5 Deployment Planning Guide.

### LDAP Provisioning Tools

Sun LDAP Schema 1 users and groups can be provisioned using the LDAP Directory tools (Schema 2 is not supported).

#### *To Install Schema 1 LDAP Provisioning Tools*

1. If Directory Server is not already installed, be sure to install and configure it.  
For more information, refer to the [Sun Java Enterprise System 5 Installation Guide for UNIX](#).
2. Configure Access Manager to recognize data in your Directory Server.  
Before Access Manager can recognize the data in your LDAP directory, you must add special object classes to entries for all organizations, groups and users that will be managed by Access Manager. If you have not done this already, do it before you start provisioning new accounts. Sample scripts are bundled in the Access Manager product to help you automatically add these object classes to your directory. For more information on these post-installation steps, see the [Sun Java System Access Manager Migration Guide](#).
3. Install and configure Messaging Server with help from this guide.  
Messaging Server detects which Sun Java System LDAP Schema you are using, depending on whether or not Access Manager is installed.
4. Install and configure Sun Java System Web Server 6.1 to enable mail filtering in Messenger Express.  
For more information on enabling mail filtering, see [Configuring Messenger Express and Communications Express Mail Filters](#).  
Though mail filtering is not a provisioning tool, its functionality existed in the previous GUI version of Delegated Administrator for Messaging.
5. Refer to the Sun Java System Messaging Server documentation to perform LDAP provisioning.  
For Sun LDAP Schema 1 LDAP provisioning, use the [iPlanet Messaging Server 5.2 Provisioning Guide](#) and [Communications Suite Schema Reference](#), which contains object classes and attributes for both Sun LDAP Schema 1 and v.2.

### SMTP Relay Blocking

By default, Messaging Server is configured to block attempted SMTP relays; that is, it rejects attempted message submissions to external addresses from unauthenticated external sources (external systems

are any other system than the host on which the server itself resides). This default configuration is quite aggressive in blocking SMTP relaying in that it considers all other systems to be external systems.

After installation, it is important to manually modify your configuration to match the needs of your site. Specifically, your messaging server should recognize its own internal systems and subnets from which SMTP relaying should always be accepted. If you do not update this configuration, you might encounter problems when testing your MTA configuration.

IMAP and POP clients that attempt to submit messages via Messaging Server system's SMTP server destined for external addresses, and which do not authenticate using SMTP AUTH (SASL), will find their submission attempts rejected. Which systems and subnets are recognized as internal is typically controlled by the `INTERNAL_IP` mapping table, which may be found in the `msg-svr-base{/config/mappings}` file.

For instance, on a Messaging Server system whose IP address is 192.45.67.89, the default `INTERNAL_IP` mapping table would appear as follows:

```
INTERNAL_IP
$(192.45.67.89/32) $Y
127.0.0.1 $Y
* $N
```

The initial entry, using the `$(IP-pattern/significant-prefix-bits)` syntax, is specifying that any IP address that matches the full 32 bits of 192.45.67.89 should match and be considered internal. The second entry recognizes the loopback IP address 127.0.0.1 as internal. The final entry specifies that all other IP addresses should not be considered internal.

You can add additional entries by specifying additional IP addresses or subnets before the final `$N` entry. These entries must specify an IP address or subnet (using the `$(.../...)` syntax to specify a subnet) on the left side and `$Y` on the right side. Or you may modify the existing `$(.../...)` entry to accept a more general subnet.

For instance, if this same sample site has a class C network, that is, it owns all of the 192.45.67.0 subnet, then the site would want to modify the initial entry so that the mapping table appears as follows:

```
INTERNAL_IP
$(192.45.67.89/24) $Y
127.0.0.1 $Y
* $N
```

Or if the site owns only those IP addresses in the range 192.45.67.80–192.45.67.99, then the site would want to use:

```
INTERNAL_IP
! Match IP addresses in the range 192.45.67.80–192.45.67.95
$(192.45.67.80/28) $Y
! Match IP addresses in the range 192.45.67.96–192.45.67.99
$(192.45.67.96/30) $Y
127.0.0.1 $Y
* $N
```

Note that the `msg-svr-base/sbin/imsimta -test-match` utility can be useful for checking whether an IP address matches a particular `$(.../...)` test condition. The `imsimta test -mapping` utility can be more generally useful in checking that your `INTERNAL_IP` mapping table returns the desired

results for various IP address inputs.

After modifying your `INTERNAL_IP` mapping table, be sure to issue the `msg-svr-base/sbin/imsimta cnbuild` and the `msg-svr-base/_sbin/imsimta -restart` utilities so that the changes take effect.

Further information on the mapping file and general mapping table format, as well as information on `imsimta` command line utilities, can be found in [Chapter 2, Message Transfer Agent Command-line Utilities](#), in the *Sun Java System Messaging Server 6.3 Administration Reference*. In addition, information on the `INTERNAL_IP` mapping table can be found in [To Add SMTP Relaying](#).

## Enabling Startup After a Reboot

You can enable Messaging Server startup after system reboots by using the bootup script: `msg-svr-base{/lib/}Sun_MsgSvr`. That is, by default, Messaging Server will not restart after a system reboot unless you run this script. In addition, this script can also start up your MMP, if enabled.

### To Enable Messaging Server After a Reboot

1. Copy the `Sun_MsgSvr` script into the `/etc/init.d` directory.
2. Change the following ownerships and access modes of the `Sun_MsgSvr` script:

| Ownership (chown(1M)) | Group Ownership (chgrp(1M)) | Access Mode (chmod(1M)) |
|-----------------------|-----------------------------|-------------------------|
| root (superuser)      | sys                         | 0744                    |

3. Go to the `/etc/rc2.d` directory and create the following link:

```
ln /etc/init.d/Sun_MsgSvr S92Sun_MsgSvr
```

4. Go to the `/etc/rc0.d` directory and create the following link:

```
ln /etc/init.d/Sun_MsgSvr K08Sun_MsgSvr
```

## Handling sendmail Clients

If end users send messages through `sendmail` clients, you can configure Messaging Server to work with those clients over protocol. Users can continue to use the UNIX `sendmail` client.

To create compatibility between `sendmail` clients and Messaging Server, you can create and modify a `sendmail` configuration file.

Each time a new `sendmail` patch is applied to your system, you will need to modify the `submit.cf` file as described in [To Create the sendmail Configuration File on Solaris OS 9 Platforms](#). On Solaris 8, follow the instructions in [To Obtain the Proper Version of the /usr/lib/sendmail on Solaris OS 8](#).

When you installed previous versions of Messaging Server, the `/usr/lib/sendmail` binary was replaced with a component of the Messaging Server product. In Messaging Server 6.0 to the current version, this replacement during install is no longer necessary. Therefore, you may need to obtain the proper version of the `/usr/lib/sendmail` binary from the most current `sendmail` patch.

On Solaris OS 9 platforms, `sendmail` is no longer a `setuid` program. Instead, it is a `setgid` program.

### To Obtain the Proper Version of the /usr/lib/sendmail on Solaris OS 8

1. Find the file `main-v7sun.mc` file in directory `/usr/lib/mail/cf` and create a copy of this file.

- In the example in this section, a copy called `sunone-msg.mc` is created.
2. In the `sunone-msg.mc` file, add the following lines before the MAILER macros:

```
FEATURE(`nullclient&rsquo;, `smtp:rhino.west.sesta.com&rsquo;)dnl
MASQUERADE_AS(`west.sesta.com&rsquo;)dnl
define(`confDOMAIN_NAME&rsquo;, `west.sesta.com&rsquo;)dnl
```

`rhino.west.sesta.com` is the localhost name and `west.sesta.com` is the default email domain as described in [Creating the Initial Messaging Server Runtime Configuration](#). In an HA environment, use the logical host name. See [Configuring Messaging Server for High Availability](#) for more information about logical hostnames for high availability.

3. Compile the `sunone-msg.mc` file:

```
/usr/ccs/bin/make sunone-msg.cf
```

The `sunone-msg.mc` will output `sunone-msg.cf`.

4. Make a backup copy of the existing `sendmail.cf` file located in the `/etc/mail` directory.
  - a. Copy and rename `/usr/lib/mail/cf/sunone-msg.cf` to `sendmail.cf` file.
  - b. Move the new `sendmail.cf` file to the `/etc/mail` directory.

### **To Create the sendmail Configuration File on Solaris OS 9 Platforms**

1. Find the file `submit.mc` file in directory `/usr/lib/mail/cf` and create a copy of this file. In the example in this section, a copy called `sunone-submit.mc` is created.
2. Change the following line in the file `sunone-submit.mc`:

```
FEATURE("msp&rsquo;)dn
```

to

```
FEATURE("msp&rsquo;, "rhino.west.sesta.com&rsquo;)dnl
```

where `rhino.west.sesta.com` is the localhost name.

`rhino.west.sesta.com` is the localhost name and `west.sesta.com` is the default email domain as described in [Creating the Initial Messaging Server Runtime Configuration](#). In an HA environment, use the logical host name. See [Configuring Messaging Server for High Availability](#) for more information about logical hostnames for high availability.

3. Compile the `sunone-submit.mc` file:

```
/usr/ccs/bin/make sunone-submit.cf
```

The `sunone-submit.mc` will output `sunone-submit.cf`.

4. Make a backup copy of the existing `submit.cf` file in the `/etc/mail` directory.
  - a. Copy and rename `/usr/lib/mail/cf/sunone-submit.cf` file to `submit.cf` file.
  - b. Move the new `submit.cf` file to the `/etc/mail` directory.

## **Configuring Messenger Express and Communications Express Mail**

## Filters

Mail filters are accessible through Messenger Express and Communications Express. There is no need to deploy the `.war` file if you use only Communications Express, but to deploy the mail filters within Messenger Express you need to issue the following commands:

*If using Web Server as your web container:*

```
# cd <web-svr-base>/bin/https/httpadmin/bin
# ./wdeploy deploy -u /MailFilter -i https-<svr>_instance -v
https-virtual-<svr>_instance <msg-svr-base>/SUNWmsgmf/MailFilter.war
```

*If using Application Server as your Web container:*

```
# cd <app-svr-base>/sbin
# ./asadmin
asadmin> deploy --user admin <msg-svr-base>/SUNWmsgmf/MailFilter.war
```

In both cases, set the following `configutil` parameter and restart `mshttpd`:

```
# cd <msg-svr-base>/sbin
# ./configutil -o "local.webmail.sieve.port" -v
"<WS-port-no>|<AS-port-no>"
# ./stop-msg http
# ./start-msg http
```

Information on mail filters for end-users is available in the Messenger Express and Communications Express online help files.

## Performance and Tuning

Refer to [Performance Considerations for a Messaging Server Architecture](#) in the *Sun Java Communications Suite 5 Deployment Planning Guide*.

## Post-Installation Directory Layout

After installing the Sun Java System Messaging Server, its directories and files are arranged in the organization described in the following table. The table is not exhaustive; it shows only those directories and files of most interest for typical server administration tasks.

### *Post-Installation Directories and Files*

| Directory                           | Default Location and Description                                                                                                                                                                                    |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Messaging Server Base               | <code>/opt/sun/comms/messaging/</code> or <code>/opt/sun/comms/messaging64/</code><br>(default location)                                                                                                            |
| (<br><code>msg_svr_base</code><br>) | The directory on the Messaging Server machine dedicated to holding the server program, configuration, maintenance, and information files.<br><br>Only one Messaging Server Base directory per machine is permitted. |

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Configuration</b>                 | <i>msg_svr_base/config/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <code>config</code>                  | <p>Contains all of the Messaging Server configuration files such as the <code>imta.cnf</code> and the <code>msg.conf</code> files.</p> <p>On Solaris and Linux platforms only: This directory is symbolically linked (on UNIX platforms) to the <code>config</code> subdirectory of the data and configuration directory (default: <code>/var/opt/sun/comms/messaging/</code>) or <code>/var/opt/sun/comms/messaging64/</code> that you specified in the initial runtime configuration.</p>                                              |
| <b>Log</b>                           | <i>msg_svr_base/log/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>log</code>                     | <p>Contains the Messaging Server log files like the <code>mail.log_current</code> file.</p> <p>On Solaris and Linux platforms only: This directory is symbolically linked (on UNIX platforms) to the <code>log</code> subdirectory of the data and configuration directory (default: <code>/var/opt/sun/comms/messaging/</code>) or <code>/var/opt/sun/comms/messaging64/</code> that you specified in the initial runtime configuration.</p>                                                                                            |
| <b>Data</b>                          | <i>msg_svr_base/data/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <code>data</code>                    | <p>(required location)</p> <p>Contains databases, configuration, log files, site-programs, queues, store and message files.</p> <p>The data directory includes the <code>config</code> and <code>log</code> directories.</p> <p>On Solaris and Linux platforms only: This directory is symbolically linked (on UNIX platforms) to the data and configuration directory (default: <code>/var/opt/sun/comms/messaging/</code> or <code>/var/opt/sun/comms/messaging64/</code> that you specified in the initial runtime configuration.</p> |
| <b>System Administrator Programs</b> | <i>msg_svr_base/sbin/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <code>sbin</code>                    | <p>(required location)</p> <p>Contains the Messaging Server system administrator executable programs and scripts such as <code>imsimta</code>, <code>configutil</code>, <code>stop-msg</code>, <code>start-msg</code>, and <code>uninstaller</code>.</p>                                                                                                                                                                                                                                                                                 |
| <b>Library</b>                       | <i>msg_svr_base/lib/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>lib</code>                     | <p>(required location)</p> <p>Contains shared libraries, private executable programs and scripts, daemons, and non-customizable content data files. For example: <code>imapd</code> and <code>qm_maint.hlp</code>.</p>                                                                                                                                                                                                                                                                                                                   |
| <b>SDK Include Files</b>             | <i>msg_svr_base/include/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>include</code>                 | <p>(required location)</p> <p>Contains Messaging header files for Software Development Kits (SDK).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Examples</b>                      | <i>msg_svr_base/examples/</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <code>examples</code>                | <p>(required location)</p> <p>Contains the examples for various SDKs, such as Messenger Express AUTH SDK.</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                      |                                                                                                                                                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Installation Data    | <code>msg_svr_base/install/</code>                                                                                                                                                                                   |
| <code>install</code> | (required location)<br><br>Contains installation-related data files such as installation log files, silent installation files, factory default configuration files, and the initial runtime configuration log files. |

## Post-Installation Port Numbers

In the installation and initial runtime configuration programs, port numbers will be chosen for various services. These port numbers can be any number from 1 to 65535. The following table lists the port numbers that are designated after installation.

### *Port Numbers Designated During Installation*

| Port Number | Service ( <code>configutil</code> parameter)                                                                                                                                                                    |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 389         | Standard Directory Server LDAP Port on the machine where you install Directory Server. This port is specified in the Directory Server installation program. ( <code>local.ugldapport</code> )                   |
| 110         | Standard POP3 Port. This port may conflict with the MMP port if installed on the same machine. ( <code>service.pop.port</code> )                                                                                |
| 143         | Standard IMAP4 Port. This port may conflict with the MMP port if installed on the same machine. ( <code>service.imap.port</code> )                                                                              |
| 25          | Standard SMTP Port. ( <code>service.http.smtpport</code> )                                                                                                                                                      |
| 80          | Messenger Express HTTP Port. This port may conflict with the Web Server port if installed on the same machine. ( <code>service.http.port</code> )                                                               |
| 995         | POP3 over SSL port. For encrypted communications. ( <code>service.pop.sslport</code> )                                                                                                                          |
| 993         | IMAP over SSL Port. For encrypted communications. This port may conflict with the MMP port if installed on the same machine. ( <code>service.imap.sslport</code> )                                              |
| 443         | HTTP over SSL Port. For encrypted communications. ( <code>service.http.sslport</code> )                                                                                                                         |
| 7997        | Messaging and Collaboration Event Notification Service (ENS) Port.                                                                                                                                              |
| 27442       | Port that is used by the Job Controller for internal product communication.                                                                                                                                     |
| 49994       | Port that is used by the Watcher for internal product communication. See the?? Sun Java System Messaging Server Administration Guide?? for more information on the Watcher. ( <code>local.watcher.port</code> ) |

If certain products are installed on the same machine, you will encounter port number conflicts. The following table shows potential port number conflicts.

### *Potential Port Number Conflicts*

| Conflicting Port Number | Port            | Conflicting Port        |
|-------------------------|-----------------|-------------------------|
| 995                     | POP3 over SSL   | MMP POP3 Proxy with SSL |
| 143                     | IMAP Server     | MMPIMAP Proxy           |
| 110                     | POP3 Server     | MMPPOP3 Proxy           |
| 993                     | IMAP over SSL   | MMPIMAP Proxy with SSL  |
| 80                      | Web Server port | Messenger Express       |

If possible, you should install products with conflicting port numbers on separate machines. If you are unable to do so, then you will need to change the port number of one of the conflicting products.

#### **To Change Port Numbers**

1. Use the `configutil` utility to change port numbers.  
See `configutil` in the *Sun Java System Messaging Server 6.3 Administration Reference* for complete syntax and usage.

#### **Example: Changing the Messenger Express HTTP Port Number**

The following example uses the `service.http.port` `configutil` parameter to change the Messenger Express HTTP port number to 8080.

```
configutil -o service.http.port -v 8080
stop-msg http
start-msg http
```

## Messaging Server Sun Cluster HA Agent 7.0 Initial Configuration

### Sun Java System Messaging Server Sun Cluster HA Agent 7.0 Initial Configuration

After installing (laying down the bits) for the Messaging Server Sun Cluster HA Agent, you need to do an initial configuration. To do this invoke the command

```
<msg_scha_base>/bin/init-config
```

This command will register the HA agent with the Sun Cluster HA software. Note that you must have the Sun Cluster HA software installed prior to issuing this command.

# Chapter 27. Sun Java Communications Suite 6 Update 1 on a Single Host

## Deployment Example: Sun Java Communications Suite 6 Update 1 on a Single Host



### Note

This deployment example now uses Directory Server 6.3 instead of Directory Server 6.2, which is no longer available due to database integrity problems.

This deployment example describes how to install Sun Java Communications Suite 6 Update 1 software on one computer for a functioning deployment. This document is intended for any evaluator, system administrator, or installation technician who wants to install and evaluate the services delivered by these components.



### Note

Installing the back-end messaging, calendar, and address book servers on the same system is not the optimal configuration, nor does it provide the best performance. This example deployment is not intended for production purposes. Use this configuration for evaluation and for training purposes only. Performance is better if you install services on separate machines.

- [About This Deployment Example](#)
- [Installing the Example](#)
- [Installing Communications Suite Components](#)
- [Configuring Components](#)
- [Configuring Sun Convergence](#)
- [Configuring Communications Express \(Optional\)](#)
- [Creating Additional User Accounts and Groups](#)
- [Known Issues and Limitations](#)

## About This Deployment Example

This section provides an overview of this deployment scenario, the hardware and software used, and the procedures you follow to install, configure, and use this deployment.

This section contains the following topics:

- [Installation Overview](#)
- [Implementation Specifications for This Example](#)
- [Installation Time Estimates](#)
- [Installation Notes and Recommendations](#)
- [Summary of Installation and Configuration](#)

## Installation Overview

This scenario results in a functioning deployment suited for the evaluation and testing of Sun Java Communications Suite 6 Update 1. These instructions are not intended to act as a replacement for the

individual component documentation, but to merely guide the evaluator through an initial installation.

## What Components Are Installed?

This example guides you through installing the following Communications Suite and Java Enterprise System components:

- Sun Java System Messaging Server 7.0 Update 1
- Sun Java System Calendar Server 6.3.1
- Sun Java System Instant Messaging 8
- Sun Java System Directory Server 6.3
- Sun Java System Access Manager 7.1
- Sun Java System Application Server 9.1 Update 2 with HADB support
- Sun Java System Web Server 7.0
- Sun Java System Delegated Administrator 6.4 P1
- Sun Java System Communications Express 6.3
- Sun Convergence 1.0
- All Shared Components

The example installation in this document uses the following data that you change according to your installation and test machine:

- Domain name: `comms.beta.com`
- Host name: `wireless` (running Solaris OS 10)
- Fully qualified (external) host name: `wireless.comms.beta.com`
- Password: `adminpass` used for all passwords except the `amldapuser` password

This example installs all of the software on a single system. Adjust host names accordingly if you install the components on multiple systems.

## Recommended Ports

For convenience, this example uses a set of recommended ports. If you use different ports, be sure to make the changes consistently throughout the installation. For example, this document uses port 8800 for the Web Server admin port. If you decide to use port 3333 instead, be sure to change it everywhere 8800 occurs in the deployment example. See [Table 3](#) for more information.

## Implementation Specifications for This Example

This section describes implementation specifications for this example.

**Table 1 Evaluation Host Hardware and Software Requirements**

| Component  | Platform Requirement                                                                                                                                                                                                                      |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU        | SPARC                                                                                                                                                                                                                                     |
| RAM        | 2 Gbytes or more                                                                                                                                                                                                                          |
| Disk Space | 2.2 Gbytes or more free disk space for installed software. 2.1 Gbytes additional disk space may be needed for temporary storage of Communications Suite zip files.                                                                        |
| Software   | Solaris 10 OS Update 6. Note: Communications Suite is supported on both Solaris OS 9 and 10. Java Enterprise System software is also supported on Solaris OS 9 and 10. This example uses an installation based on Solaris OS 10 Update 6. |
| Users      | Provisioned with test users.                                                                                                                                                                                                              |

**Table 2 Client Software Requirements**

| Component | Platform Requirement                                      |
|-----------|-----------------------------------------------------------|
| Browser   | Firefox 2.0.0.11 or later, Internet Explorer 7.x or later |

**Table 3 Server Configuration Information**

| Component                     | Install Notes                                                                                                           | Install Location           | Database Location              |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------|
| Application Server 9.1        | Installed separately. Required for Convergence                                                                          | /opt/SUNWappserver         | Not Applicable                 |
|                               |                                                                                                                         |                            |                                |
|                               |                                                                                                                         |                            |                                |
| Directory Server 6.3          | Installed separately. This version is not included with Identity Management Suite.                                      | /opt/SUNWdsee              | /var/opt/SUNWdsee              |
|                               |                                                                                                                         |                            |                                |
|                               |                                                                                                                         |                            |                                |
| Messaging Server 7.0 Update 1 | Installed by using Communications Installer. Additional configuration required.                                         | /opt/sun/comms/messaging64 | /var/opt/sun/comms/messaging64 |
|                               |                                                                                                                         |                            |                                |
|                               |                                                                                                                         |                            |                                |
|                               |                                                                                                                         |                            |                                |
| Web Server 7.0                | Installed with Java ES 5 Update 1 or Identity Management Suite. Required for Access Manager and Delegated Administrator | /opt/SUNWwbsvr7            | /var/opt/SUNWwbsvr7            |
|                               |                                                                                                                         |                            |                                |
|                               |                                                                                                                         |                            |                                |

|                            |                                                                                 |                         |                         |
|----------------------------|---------------------------------------------------------------------------------|-------------------------|-------------------------|
| Calendar Server 6.3        | Installed using Communications Installer. Additional configuration required.    | /opt/sun/comms/calendar | /opt/sun/comms/calendar |
| Instant Messaging 8        | Installed by using Communications Installer. Additional configuration required. | /opt/sun/comms/im       | /var/opt/SUNWiim        |
| Communications Express 6.3 | Installed by using Communications Installer. Additional configuration required. | /opt/sun/comms/ce       | /var/opt/sun/comms/ce   |

## Installation Time Estimates

The following table provides time estimates for installing this example.

**Table 4 Installation Time Estimates**

| Activity                                          | Estimate          |
|---------------------------------------------------|-------------------|
| Install Solaris OS                                | 2 hours           |
| Install Communications Suite and Java ES software | 1 hours           |
| Configure software                                | 2 hours           |
| Total                                             | 5 hours (average) |

As part of the configuration, you will use Delegated Administrator to add data to Messaging Server and Calendar Server.

## Installation Notes and Recommendations

1. With Solaris OS 9 and 10, ftp might not work for certain accounts.

These accounts are listed in `/etc/ftpd/ftpusers`. Just remove the account from this list (for example, `root`) and you will be able to ftp as that user.

1. Use `gzip -d` or `gunzip` to decompress the `*gz` files.

## Expected User Input

During installation, you are prompted for various input. User input is indicated by text of the form \*\*. The following table helps you plan for the types of information you must provide during installation.

**Table 5 Information Input During Installation**

| User Input                 | User Input Action                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <enter>                    | Just hit enter, but verify that the default value shown makes sense.                                                                                                                                |
| <sample-password>          | Any password, minimum of 8 characters in length, suitable for evaluation purposes. These instructions assume that anywhere <sample-password> is specified, you will enter the same value each time. |
| <amldapuser-password>      | Same criteria as <sample-password>, but must be different from <sample-password>.                                                                                                                   |
| <fully-qualified-hostname> | For example, assuming that the host name is abc, and the domain name is demo.xyz.com, then this value would be abc.demo.xyz.com.                                                                    |
| <full-cookie-domainname>   | For example, assuming that the full domain name is demo.xyz.com, then this value would be .demo.xyz.com (note the inclusion of the leading ".").                                                    |

## Summary of Installation and Configuration

Installing and configuring this example involves the following high-level steps:

1. Preparing the system for Sun Java Communications Suite
2. Installing and configuring Application Server 9.1
3. Installing and configuring Directory Server 6.3
4. Running the Identity Suite installer and selecting the necessary components required by the Java Communications Suite (Web Server and Access Manager)
5. Running the Communications Suite Installer to install Messaging Server, Calendar Server, Instant Messaging, Communications Express, and Delegated Administrator
6. Configuring Delegated Administrator and Communications CLI
7. Configuring Messaging Server
8. Configuring Calendar Server
9. Configuring Instant Messaging
10. Installing and Configuring Convergence
11. Configuring Communications Express
12. Configuring a user

These installation steps result in a suitable deployment to evaluate and test Communications Suite 6 Update 1. These instructions are not intended to act as a replacement for the individual component documentation, but to merely guide the evaluator through an initial installation.

## Installing the Example

This section describes how to install and configure components on a single machine for evaluation purposes. Some components are configured after installation, using component configuration tools.



### Note

Unless otherwise indicated, all of the examples and instructions in this document assume that you are logged in as `root`.

This section contains the following topics:

- [Checking Installation Requirements](#)
- [Getting the Necessary Software](#)
- [Installing and Configuring Application Server, Directory Server, Access Manager, and Web Server](#)
- [Uninstalling the Components](#)

## Checking Installation Requirements

Before you install components, use the steps in this section to make sure the computer on which you are installing is ready.

### To Check System Requirements

The computer should meet the following requirements:

- These instructions assume all actions are performed by the `root` user.
- The computer must have 2.1 GB free disk space for the zip files and zip image. Recommendation: Have the image already unzipped.

### To Check DNS

Verify that DNS is running and configured properly:

1. Make sure that the `/etc/resolv.conf` file has name server entries with the IP addresses of valid name servers. For example:

```
domain comms.beta.com
nameserver 192.168.100.22
nameserver 192.168.100.23
nameserver 192.168.100.24
nameserver 192.168.100.25
```

2. Make sure that the `/etc/hosts` file has an entry for the fully qualified host name of the server. This fully qualified host name should be listed before the non fully qualified host name. For example:

```
10.1.82.52 wireless.comms.beta.com wireless loghost
```

3. Make sure that the `/etc/nsswitch.conf` file is configured to use files first to resolve host names. The hosts line in the `nsswitch.conf` file should list files first in its entry:

```
hosts: files dns nis [NOTFOUND=return]
# OR (if NIS is not used)
hosts: files dns
```

## Getting the Necessary Software

### To Get the Software

1. [Get the Communications Suite, Application Server, and Identity Suite software.](#)

## Installing and Configuring Application Server, Directory Server, Access Manager, and Web Server

Sun Java System Application Server 9.1 Update 2 is the primary web container used by Convergence. At the time this document was initially written, Application Server did not support Access Manager, so the recommendation was to install a separate Web Server to support Access Manager. Things have changed since then. If you want to install Convergence and Access Manager in the same web container,

you must install the Application Server with HADB support (even though you do not need to enable HADB). Convergence and Access Manager do not need to be installed in the same web container, but if you want SSO to exist between Convergence and another application, you must install either Access Manager or the Access Manager SDK in the same web container as Convergence. This installation example has no need to provide SSO between Convergence and another application. Hence, it uses separate web containers for Access Manager and Convergence.

1. Prior to installing Application Server 9.1 Update 2, check the Java version on the system. Application Server requires at least Java 1.5.0. Solaris 10 Update 6 ships with version 1.5.0\_16, which is fine for Convergence. To check your version type the following command:

```
# java -version
```

The shell returns results that look similar to the following:

```
java version "1.5.0_16"  
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_16-b02)  
Java HotSpot(TM) Client VM (build 1.5.0_16-b02, mixed mode, sharing)
```

2. Create the /tmp/APPSVR91U2 directory, copy the Application Server 9.1 Update 2 bits to this directory, then launch the installer.

```
# cd /tmp/APPSVR91U2  
# chmod +x *  
# ./sjsas_ee-9_1_02-solaris-sparc.bin -console
```

3. When prompted, press Enter to continue.
4. Accept the License Agreement by typing **yes** when prompted.  
The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 6 Application Server Settings**

| Option                                    | [Default Value]               | Enter:                                    |
|-------------------------------------------|-------------------------------|-------------------------------------------|
| Installation Directory                    | [/opt/SUNWappserver]          | <i>accept default</i>                     |
| Create Directory or Choose New            | Create Directory              | <i>accept default</i>                     |
| Install Node Agent                        | [yes]                         | <b>no</b>                                 |
| Install High Availability Database Server | [no]                          | <i>accept default</i>                     |
| Install Load Balancing Plugin             | [no]                          | <i>accept default</i>                     |
| Install Domain Administration Server      | [yes]                         | <i>accept default</i>                     |
| Install Sample Applications               | [yes]                         | <i>accept default</i>                     |
| Install or reuse Java 2 SDK               | [Install]                     | <b>Reuse</b> (as long as correct version) |
| Path to Java 2 SDK 5.0 or greater         | [/usr/jdk/instances/jdk1.5.0] | <i>accept default</i>                     |
| Admin User                                | [admin]                       | <i>accept default</i>                     |
| Admin User's Password                     | —                             | <b>adminpass</b>                          |
| Master Password for SSL Certificate       | —                             | <b>adminpass</b>                          |
| Admin Port                                | [4848]                        | <i>accept default</i>                     |
| HTTP Port                                 | [8080]                        | <b>80</b>                                 |
| HTTPS Port                                | [8181]                        | <i>accept default</i>                     |
| Enable Updatecenter client                | [yes]                         | <i>accept default</i>                     |
| Upgrade from previous AS version          | [no]                          | <i>accept default</i>                     |

5. Start the Application Server:

```
# /opt/SUNWappserver/bin/asadmin start-domain domain1
Starting Domain domain1, please wait.
Log redirected to /opt/SUNWappserver/domains/domain1/logs/server.log.
Please enter the admin user name>admin
Please enter the admin password>adminpass
Please enter the master password>adminpass
```



**Note**

Directory Server 6.3 is the preferred version since the previous version (shipped with the Identity Suite 5 Update 1) had issues that could potentially cause database integrity problems. For evaluations, you could use the Directory Server 6.2 version shipped with the Identity Suite. However, this example illustrates how to install and configure Directory Server 6.3 in lieu of Directory Server 6.2.

6. Create the /tmp/DS directory and copy the Directory Server 6.3 bits to this directory. Uncompress them and then run the installer.

```
# mkdir /tmp/DS
# cp DSEE.6.3.Solaris-Sparc-full.tar.gz /tmp/DS
# cd /tmp/DS
# gzip -dc DSEE.6.3.Solaris-Sparc-full.tar.gz | tar xvf -
# cd DSEE_ZIP_Distribution
# ./dsee_deploy install -i /opt/SUNWdsee
```

7. Press Enter to Continue when prompted.
8. Accept the License Agreement by typing **yes** when prompted.  
The installation proceeds and installs the Directory Server bits in the specified location  
/opt/SUNWdsee.
9. Create your Directory Server instance.

```
# mkdir /var/opt/SUNWdsee
# cd /opt/SUNWdsee/ds6/bin
# ./dsadm create -p 389 -P 636 /var/opt/SUNWdsee/dsins1
```

10. Choose the Directory Manager password: **adminpass**
11. Confirm the Directory Manager password: **adminpass**
12. Start your Directory Server instance.

```
# ./dsadm start /var/opt/SUNWdsee/dsins1
```

13. Create the root suffix o=isp by using the dsconf command:  
./dsconf create-suffix -h *hostname* -p 389 o=isp  
In this example, type:

```
# ./dsconf create-suffix -h wireless -p 389 o=isp
Certificate "CN=wireless, CN=636, CN=Directory Server, O=Sun
Microsystems" presented by the server is not trusted.
```

14. Accept the Certificate and type **adminpass** as the cn=Directory Manager password.

```
Type "Y" to accept, "y" to accept just once, "n" to refuse, "d" for more
: Y
```

```
Enter "cn=Directory Manager" password: adminpass
```

15. Create the /tmp/JIS5 directory and unzip Identity Suite bits in this directory. Then run the Java ES installer.

**Note**

This example uses Identity Suite 5 Update 1 to install only Access Manager and a Web Container, which are required components for Communications Suite. Download Identity Suite instead of the entire Java Enterprise System Suite to save on size. However, if you already have Java Enterprise System 5 Update 1, you can use that as well. The steps may differ slightly from those provided below.

```
# cd java_es-5ul-identsuite
# cd Solaris_sparc
# ./installer &
```

16. Click Next at the Welcome page.
17. Accept the license.

**Note**

Earlier Solaris OS 10 versions install an earlier version of Message Queue (and possibly other software). You might need to upgrade this product prior to installing Identity Suite software. If the Java ES installer detects that your system has an earlier version of a product, it might display an option to Upgrade Existing Software. If you are presented with this option, continue with step 18 below. If you are not presented with this option, skip to step 29. If you are presented with the upgrade option, select the item to be upgraded and run the Java ES installer to upgrade the component. After the installer upgrades the component (or components), you can quit the installer then restart it to install the remaining Identity Suite components. Then repeat the applicable previous steps.

If you happen to be installing Identity Suite on Solaris OS 9, you can skip steps 18-28 and immediately proceed to step 29.

18. Click the Upgrade existing software radio button and click Next to continue.
19. Select the following products, then click Next.
  - Sun Java System Message Queue 3.7 UR1
  - All Shared Components
  - Note: Also select the checkbox for multilingual packages if desired.
20. Click Next to upgrade shared components.
21. The installer verifies system requirements. When done, click Next.
22. At the "Ready to Upgrade" window, click Next.
23. Deselect the registration checkbox, then click Install.  
The upgrade proceeds. When the installation is complete, the Installation Complete page is displayed.
24. Click Close to exit the installer.
25. Restart the Java ES installer to install the remaining Identity Suite components.

```
# ./installer &
```

26. Click Next at the Welcome page.
27. Accept the license.
28. In the "Choose to Upgrade or Install" window, select the "Install new software" radio button, then click Next to continue.
29. Select the following products, then click Next.
  - Web Server 7.0 Update 1
  - Access Manager 7.1 (Choose only the required software. You do not need the Client SDK, Distributed Auth UI, or Session Failover client.)
  - All Shared Components
  - Note: Directory Server might be selected by default. You must deselect this product since Directory Server 6.3 has already been installed. As a result, Directory Preparation Tool 6.4 is automatically deselected as well.
  - Note: Select the checkbox for multilingual packages if desired.
30. In the dependency checking phase, it is noted that Access Manager requires Directory Server. You will be prompted to install Directory Server Enterprise Edition 6.2 locally or use Directory Server Enterprise Edition 6.2 installed on a remote machine. You must choose the Remote option since you do not want to overwrite your existing version of Directory Server.
31. Some versions of Solaris require that the Java SE SDK be upgraded prior to installation. If you are prompted to upgrade the Java SE SDK, choose the default selection to automatically upgrade the SDK to the version included with the installer. Then click Next to continue.
32. If you skipped several previous steps because you installed Solaris OS 9 or a component upgrade was not required on Solaris OS 10, you are required to upgrade the shared components now and you can click Next. If you installed Solaris OS 10 and you already upgraded the shared components when you upgraded the Message Queue component, you should have already completed this step and you can proceed to the next step.
33. Specify Installation Directories.  
Locations:  
Access Manager: /opt (creates /opt/SUNWam)  
Web Server: /opt (creates /opt/SUNWwbsvr7)  
Web Server Instance: /var/opt/SUNWwbsvr7
34. Accept the target directories for each product and click Next.
35. The installer verifies system requirements. When done, click Next.
36. Choose Configure Now, then click Next.
37. Continue with the next procedure to choose Common and Web Server settings.

### To Select Common and Web Server Settings

This installation assumes the use of Sun Java System Web Server. You can choose an alternate web container but that is beyond the scope of this document.

1. In the Account Preferences Panel, you are asked whether or not you want to use your UserID and

Password information for all administrator accounts, or if you want to provide administrator account information for each component.

Choose the All Administrator Accounts option and type admin for the Administrator User ID and adminpass for the Administrator Password then click Next.

2. The installation script prompts for a series of options. The following table shows how to respond to the Common and Web Server configuration options.

**Table 7 Common and Web Server Settings**

| <b>Option</b>                      | <b>[Default Value]</b>                                   | <b>Enter:</b>                 |
|------------------------------------|----------------------------------------------------------|-------------------------------|
| <b>Common Server Settings</b>      |                                                          |                               |
| Host Name                          | [wireless]                                               | <i>accept default</i>         |
| DNS Domain Name                    | [comms.beta.com]                                         | <i>accept default</i>         |
| Host IP Address                    | Machine IP address                                       | <b>Verify correct address</b> |
| System User                        | [root]                                                   | <i>accept default</i>         |
| System Group                       | [root]                                                   | <i>accept default</i>         |
| <b>Web Server Settings</b>         |                                                          |                               |
| Type of configuration              | [Configure Administration Instance as Server]            | <i>accept default</i>         |
| Start servers after system startup | unchecked                                                | <i>accept default</i>         |
| Server Host                        | [wireless.comms.beta.com]                                | <i>accept default</i>         |
| Admin Server SSL port              | [8989]                                                   | <i>accept default</i>         |
| Admin Server HTTP port             | [8800]                                                   | <i>accept default</i>         |
| Admin runtime user id              | [root]                                                   | <i>accept default</i>         |
| Web Server Name                    | [wireless.comms.beta.com]                                | <i>accept default</i>         |
| HTTP Port                          | [81]                                                     | <b>8080</b>                   |
| Web server runtime UNIX User ID    | [webservd]                                               | <b>root</b> (See Note below)  |
| Document root directory            | [/var/opt/SUNWwbsvr7/https-wireless.comms.beta.com/docs] | <i>accept default</i>         |

**Note**

To take advantage of Instant Messaging with Access Manager, Instant Messaging must be run as `root`. If you want to make use of the new IMPS feature and the `httpbind` gateway in Instant Messaging, Web Server must have access to the Instant Messaging configuration files and log directory. You could either run Web Server as a separate user and then manually change the permissions in the Instant Messaging directories or you could run Web Server as the same user as the Instant Messaging user, which in this case is `root`. In the future, the Instant Messaging configurator should perform all the necessary permission changes so that you don't need to run Web Server as `root`.

**To Select Access Manager Settings**

- The following table shows how to respond to the Access Manager configuration options.

**Table 9 Access Manager Settings**

| <b>Option</b>                                | <b>[Default Value]</b>           | <b>Enter:</b>                            |
|----------------------------------------------|----------------------------------|------------------------------------------|
| Install type                                 | [Legacy Mode](version 6.x style) | <i>accept default</i>                    |
| Admin User ID                                | [amadmin]                        | <i>accept default</i>                    |
| Administrator Password                       | –                                | <b>adminpass</b>                         |
| LDAP User ID                                 | [amldapuser]                     | <i>accept default</i>                    |
| LDAP Password                                | –                                | <b>nonadminpass</b>                      |
| Password Encryption Key                      | [87dfjkauefjkdaafdaf...]         | <i>accept default</i>                    |
| Access Manager Deployment Container Options  | [Sun Java System Web Server]     | <b>Choose Sun Java System Web Server</b> |
| Host Name                                    | [wireless.comms.beta.com]        | <b>wireless.comms.beta.com</b>           |
| Services Deployment URI                      | [amserver]                       | <i>accept default</i>                    |
| Common Domain Deployment URI                 | [amcommon]                       | <i>accept default</i>                    |
| Cookie Domain                                | [.beta.com]                      | <b>.comms.beta.com</b>                   |
| Password Deployment URI                      | [ampassword]                     | <i>accept default</i>                    |
| Console Protocol                             | [HTTP]                           | <i>accept default</i>                    |
| Access Manager Console                       | [Deploy new console]             | <i>accept default</i>                    |
| Console Deployment URI                       | [amconsole]                      | <i>accept default</i>                    |
| Console Host Name                            | [wireless.comms.beta.com]        | <i>accept default</i>                    |
| Console Port                                 | [8080]                           | <i>accept default</i>                    |
| Directory Server Host                        | –                                | <b>wireless.comms.beta.com</b>           |
| Directory Server Port                        | [389]                            | <i>accept default</i>                    |
| Directory Root Suffix                        | [dc=comms,dc=beta,dc=com]        | <b>o=isp</b>                             |
| Directory Manager DN                         | [cn=Directory Manager]           | <i>accept default</i>                    |
| Directory Manager Password                   | –                                | <b>adminpass</b>                         |
| Directory Server provisioned with user data? | [No]                             | <i>accept default</i>                    |

### **To Install the Identity Suite Software**

1. Click Install when you are satisfied with the Ready to Install list.  
Because of the number of components selected, the installation process can be lengthy.
2. When installation is complete, the Installation Complete page is displayed. Click Close to exit the installer.

### **To Verify the Installation**

1. Start Web Server:

```

cd /var/opt/SUNWwbsvr7/admin-server/bin
./stopserv
./startserv
cd /var/opt/SUNWwbsvr7/https-wireless.comms.beta.com/bin
./stopserv
./startserv

```

The Web Server can take a while to start.

2. Verify that you can log in to the Access Manager console as `amadmin`. The URL for the Access Manager console is:

```
http://fully-qualified-hostname:web-server-port/amconsole
```

In this example, type:

```
*http://wireless.comms.beta.com:8080/amconsole*
```

Use `amadmin` and `adminpass` as the user ID and password.

3. After verifying that you can log in to the Access Manager console, log out.
4. Verify the Application Server by typing the following URL:

```
http://fully-qualified-hostname
```

In this example, type:

```
*http://wireless.comms.beta.com
```

\*

5. Proceed to [Installing Communications Suite Components](#) for instructions on how to install and configure Communications Suite components.

## Uninstalling the Components

After you complete your evaluation, you can remove the components that you installed:

- To uninstall Communications Suite 6 Update 1 components:

```
./commpkg uninstall
```

- To uninstall Identity Suite:

```
cd /var/sadm/prod/SUNWident-entsys5uli/bin
./uninstall
```

## Installing Communications Suite Components

Deploying Communications Suite components is a two-step process. You first install the software then you configure the individual servers.

This section contains the following topics:

- [Before You Begin](#)
- [Installing Communications Suite 6 Update 1 Software](#)

### Before You Begin

Before you configure the Communications Suite software, you need to create the `mailsrv` user and disable the `sendmail` process. The `mailsrv` user is used to configure Messaging Server.

- Messaging Server requires a mail server user, which must exist before you can finish the installation. You can skip this step, because the group and user are created during the configuration time. However, you might want to create the `mailsrv` user yourself as shown below. For this installation, use the `useradd` command to create a user with username `mailsrv` and group `mail`. You use this ID in Step 2 in the [Configuring Messaging Server](#) section.

Type the following commands to create the user `mailsrv` with a user ID of 7633, a group ID of `mail`, and a user home directory of `/export/home/mailsrv`. (These commands assume that the `/export/home` directory already exists.)

```
groupadd mail
useradd -u 7633 -g mail -d /export/home/mailsrv -m mailsrv
```

Note: if the `mailsrv` user is already in use, this could be an indication that `mailsrv` is not a local user as required by the Messaging Server. Messaging Server requires a local user and group and not one defined in a naming service such as NIS. You should create a different user such as `mailsrv2` but be sure to change the reference to that user when prompted for the mail server username.

For example,

```
# useradd -u 7633 -g mail -d /export/home/mailsrv2 -m mailsrv2
```

### To Disable sendmail

- Prior to configuring Messaging Server, use the following procedures to kill the `sendmail` process and prevent it from starting during bootup.

For Solaris OS 10:

```
svcadm disable sendmail
```

For Solaris OS 8 and 9:

```
ps -ef | grep sendmail
kill -9 sendmail_pid
cd /etc/rc2.d
mv S88sendmail save.S88sendmail
```

## Installing Communications Suite 6 Update 1 Software

This section describes how to install the Communications Suite software on your host.

### To Install the Communications Suite Software

1. Create a `/tmp/JCS6` directory, unzip the Communications Suite 6 Update 1 software zip file in this directory, then run the Communications Suite 6 Update 1 Installer.

```
# cd /tmp/JCS6
# ./commpkg install
```

2. Press RETURN to continue when prompted
3. Review the license and type **c** to continue when prompted.  
You can also type **s** to skip the license display.
4. Accept the License Agreement by typing **yes** when prompted.
5. Accept the default Install location: `/opt/sun/comms`
6. Select the components you wish to install.

Select the following products:

- Messaging Server (64bit) 7u1 (7.0-3.01)
- Comms DSsetup 6.4 (6.4-3.01)
- Comms Delegated Administrator 6.4 (6.4-3.01)
- Calendar Server 6.3 (6.3-11.01)
- Instant Messaging 8 (8.0-00.06)
- Communications Express 6.3 (6.3-11.01)
- Convergence 1 (1.0-4.01)

This corresponds to selections 2, 3, 4, 5, 6, 7, and 11.

7. The installation script prompts for a series of options. You might not be prompted for all options, depending on your system.

The following table shows how to respond to the configuration options:

**Table 10 Values for NSS, Java Help Runtime, Message Queue, and Service Tags Options**

| Option                                | [Default Value] | Enter: |
|---------------------------------------|-----------------|--------|
| Change pkg versions for NSS/NSPR/JSS  | [n]             | y      |
| Change pkg versions for Service Tags  | [n]             | y      |
| Change pkg versions for Message Queue | [n]             | y      |

8. Press RETURN when prompted to continue.
9. Installation Proceeds.
10. Press RETURN when prompted to continue.

## Configuring Components

This section describes how to run the individual component configuration utilities to perform initial software configuration.

This section contains the following topics:

- [Preparing the Directory](#)
- [Configuring Delegated Administrator and Communications CLI](#)
- [Configuring Messaging Server](#)
- [Configuring Calendar Server](#)
- [Configuring Instant Messaging](#)
- [Configuring Access Manager](#)

### Preparing the Directory

This section explains how to prepare the Directory Server LDAP schema.

#### To Apply Schema 2 to Your Directory Tree

1. Change the directory where the `comm_dssetup` script is located and run the script, for example:

```
cd /opt/sun/comms/dssetup/sbin
/usr/bin/perl comm_dssetup.pl
```

2. Type **y** to continue.

The perl script prompts for a series of options. The following table shows how to respond to the prompts.

#### Table 11 Values for `comm_dssetup.pl` Script

| Option                                | [Default Value]            | Enter:                |
|---------------------------------------|----------------------------|-----------------------|
| Directory server root                 | [/var/opt/SUNWdsee/dsins1] | <i>accept default</i> |
| Directory Manager DN                  | [cn=Directory Manager]     | <i>accept default</i> |
| Directory Manager Password            | –                          | <b>adminpass</b>      |
| Use directory server for users/groups | [Yes]                      | <i>accept default</i> |
| Users/Groups base suffix              | [o=isp]                    | <i>accept default</i> |
| Schema type?                          | [2]                        | <i>accept default</i> |
| Update the schema files?              | [yes]                      | <i>accept default</i> |
| Configure new indexes?                | [yes]                      | <i>accept default</i> |
| Reindex new indexes?                  | [yes]                      | <i>accept default</i> |

3. Confirm your choices and type **y** to continue.  
The `comm_dssetup` proceeds.
4. When prompted, type **y** to continue with the script.  
Continue with the next step after `comm_dssetup` completes and the Successful Completion message is displayed.

## Configuring Delegated Administrator and Communications CLI

This section describes configuring Delegated Administrator console and utility, which provide user management.

### To Configure Delegated Administrator

1. Change to the directory where the configuration script was installed and run the script, for example:

```
cd /opt/sun/comms/da/sbin
./config-commda
```
2. Click Next in the Welcome window.
3. Accept the default for the Directory to store Configuration and Data Files:

```
/var/opt/sun/comms/da
```

 If the directory does not exist, click Create Directory to create the directory.
4. Install Delegated Administrator Utility, Console, and Server.  
The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 12 Values for config-commda Script**

| Option                                  | [Default Value]           | Enter:                |
|-----------------------------------------|---------------------------|-----------------------|
| AM Hostname                             | [wireless.comms.beta.com] | <i>accept default</i> |
| AM Port                                 | [8080]                    | <b>8080</b>           |
| Default Domain                          | [comms.beta.com]          | <i>accept default</i> |
| Default SSL Port                        | [443]                     | <i>accept default</i> |
| Web Container                           | [Web Server 6.x]          | <b>Web Server 7.x</b> |
| Install Root Directory (for DA Console) | [/opt/SUNWwbsvr7]         | <i>accept default</i> |

|                                             |                                      |                               |
|---------------------------------------------|--------------------------------------|-------------------------------|
| Instance Root Directory                     | [/var/opt/SUNWwbsvr7]                | <i>accept default</i>         |
| Server Instance Identifier                  | [wireless.comms.beta.com]            | <i>accept default</i>         |
| Virtual Server Identifier                   | [wireless.comms.beta.com]            | <i>accept default</i>         |
| Web Server HTTP Port                        | [80]                                 | <b>8080</b>                   |
| Administration Server Port                  | [8800]                               | <i>accept default</i>         |
| Administrator User ID                       | [admin]                              | <i>accept default</i>         |
| Administrator Password                      | –                                    | <b>adminpass</b>              |
| Secure Administration Server Instance?      | [unchecked]                          | <i>accept default</i>         |
| Default Domain Separator                    | [@]                                  | <i>accept default</i>         |
| Access Manager Base Directory               | [/opt/SUNWam]                        | <i>accept default</i>         |
| Install Root Directory (for DA Server)      | [/opt/SUNWwbsvr7]                    | <i>accept default</i>         |
| Instance Root Directory                     | [/var/opt/SUNWwbsvr7]                | <i>accept default</i>         |
| Server Instance Identifier                  | [wireless.comms.beta.com]            | <i>accept default</i>         |
| Virtual Server Identifier                   | [wireless.comms.beta.com]            | <i>accept default</i>         |
| Web Server HTTP Port                        | [80]                                 | <b>8080</b>                   |
| Administration Server Port                  | [8800]                               | <i>accept default</i>         |
| Administrator User ID                       | [admin]                              | <i>accept default</i>         |
| Administrator Password                      | –                                    | <b>adminpass</b>              |
| Secure Administration Server Instance?      | [unchecked]                          | <i>accept default</i>         |
| URL of Directory Server                     | [ldap://wireless.comms.beta.com:389] | <i>accept default</i>         |
| Bind As                                     | [cn=Directory Manager]               | <i>accept default</i>         |
| Password                                    | –                                    | <i>adminpass</i>              |
| AM Top level admin                          | [amadmin]                            | <i>accept default</i>         |
| AM admin passwd                             | –                                    | <b>adminpass</b>              |
| Access Manager Internal LDAP Auth Username  | [amldapuser]                         | <i>accept default</i>         |
| AM Internal LDAP Auth Passwd for amldapuser | –                                    | <b>nonadminpass</b>           |
| Organization DN                             | [o=comms.beta.com,o=isp]             | <b>o=comms.beta.com,o=isp</b> |
| Top Level Admin for Default Organization    | [admin]                              | <i>accept default</i>         |
| Password                                    | –                                    | <b>adminpass</b>              |
| Load Sample Service Packages                | –                                    | <b>Yes (Checked)</b>          |

|                               |                           |                       |
|-------------------------------|---------------------------|-----------------------|
| Load Sample Organizations     | –                         | Yes (Checked)         |
| Preferred Mailhost for Sample | [wireless.comms.beta.com] | <i>accept default</i> |

- Click Configure Now.  
The script begins to run.
- When the panel displays "All Tasks Passed," click Next to continue.  
Two warnings appear: one reminds you to restart the Web Server; the other reminds you to enable the mail and calendar services in the domain. The next steps complete these steps.
- Click Close to exit the Delegated Administrator Configuration wizard.
- Restart the Web Server.

```
cd /var/opt/SUNWwbsvr7/https-wireless.comms.beta.com/bin
./stopserv
./startserv
```

- Modify the mail and calendar domains, and create users by using the `commadmin` utility:

```
/opt/sun/comms/da/bin/commadmin domain modify -D admin -w adminpass -X
wireless.comms.beta.com -n comms.beta.com -p 8080 -d comms.beta.com -S
mail,cal -H wireless.comms.beta.com
```

```
/opt/sun/comms/da/bin/commadmin user create -D admin -F John -l jdoe -L
Doe -n comms.beta.com -p 8080 -w adminpass -W demo -X
wireless.comms.beta.com -S mail,cal -E jdoe@comms.beta.com -H
wireless.comms.beta.com
```

```
/opt/sun/comms/da/bin/commadmin user create -D admin -F Calendar -l
calmaster -L Master -n comms.beta.com -p 8080 -w adminpass -W adminpass
-X wireless.comms.beta.com -S mail,cal -E calmaster@comms.beta.com -H
wireless.comms.beta.com
```

You can create as many users as you like at this point. Steps later in this document show how to add Presence and Instant Messaging services to those users.

## To Log in to Delegated Administrator

- In your web browser, open a URL for Delegated Administrator. The URL for Delegated Administrator is:  
`http://fully-qualified-hostname:web-server-port/da/DA/Login`  
In this example, type:  
`*http://wireless.comms.beta.com:8080/da/DA/Login`  
\*
- Log in using `admin` and `adminpass` as the user ID and password.
- After verifying that you can access Delegated Administrator, log out.
- Continue with the next section.

## Configuring Messaging Server

This section describes configuring Messaging Server.

### To Configure Messaging Server

- Change to the directory where the Messaging Server `configure` script is stored, then run the script, for example:

```
cd /opt/sun/comms/messaging64/sbin
./configure
```

The Configuration Wizard appears. Read the introductory information and proceed by clicking Next.

2. Verify the following:
  - Fully qualified host name of messaging server, FQHN: [wireless.comms.beta.com]
  - Directory to store config/data files: [/var/opt/sun/comms/messaging64]
  - Install MTA, Message Store, and Webmail Server: No need to install multiplexor.
  - Name of the mail server Unix user: username [mailsrv]
    - You might need to change to mailsrv2 if this was the actual user created previously.
  - Name of Unix group: group [mail]
3. The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 13 Values for Messaging Server configure Script**

| Option                                 | [Default Value]                      | Enter:                             |
|----------------------------------------|--------------------------------------|------------------------------------|
| User/Group Server Ldap                 | [ldap://wireless.comms.beta.com:389] | <i>accept default</i>              |
| Bind As                                | [cn=Directory Manager]               | <i>accept default</i>              |
| Password                               | –                                    | <b>adminpass</b>                   |
| Postmaster email address               | –                                    | <b>foo@wireless.comms.beta.com</b> |
| Password for Messaging Server accounts | –                                    | <b>adminpass</b>                   |
| Default email Domain                   | [comms.beta.com]                     | <i>accept default</i>              |
| Organization DN                        | [o=comms.beta.com,o=isp]             | <i>accept default</i>              |

4. Click Next, then click Configure Now.
  - You might receive an error about the Webmail port being in use. Click OK to acknowledge this message. The configuration begins.
5. When configuration is finished, click Next to continue, then click Close to exit



**Note**

You might observe a failure such that not all the messaging configuration tasks have passed. If this is the case, rerun the Messaging Server configuration script by repeating all the previous steps in the To Configure Messaging Server section. When prompted for the directory in which to store configuration or data files, use the same directory as before. A popup window will state that this directory already exists. Click Accept Anyway to verify that the same directory will be used.

6. Configure the webmail port.
 

```
/opt/sun/comms/messaging64/bin/configutil -o service.http.port -v 2080
```
7. Start Messaging Server:
 

```
/opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/start-msg
```
8. Continue with the next section to configure Calendar Server.

## Configuring Calendar Server

This section shows you how to run the Calendar Server configuration script and how to verify the

Calendar Server configuration.

1. Change to the directory where the configuration script was installed then run the configuration script, for example:

```
cd /opt/sun/comms/calendar/SUNWics5/cal/sbin
./csconfigurator.sh
```

2. Click Next at the Welcome page.  
The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 14 Values for Calendar Server csconfigure Script**

| <b>Option</b>                            | <b>[Default Value]</b>     | <b>Enter:</b>         |
|------------------------------------------|----------------------------|-----------------------|
| LDAP Server Host Name                    | [wireless.comms.beta.com]  | <i>accept default</i> |
| LDAP Server Port                         | [389]                      | <i>accept default</i> |
| Directory Manager DN                     | [cn=Directory Manager]     | <i>accept default</i> |
| Directory Manager Password               | –                          | <b>adminpass</b>      |
| Enable Virtual Domains support           | checked                    | <i>accept default</i> |
| Virtual Domains settings: Default domain | [comms.beta.com]           | <i>accept default</i> |
| Calendar Administrator Username          | [calmaster]                | <i>accept default</i> |
| Calendar Administrator Password          | –                          | <b>adminpass</b>      |
| Calendar Administrator Email address     | [calmaster@comms.beta.com] | <i>accept default</i> |
| Site administrator                       | [Yes]                      | <i>accept default</i> |
| Setup a Front End/Back End deployment    | unchecked                  | <i>accept default</i> |
| Email Alarms                             | [Enabled]                  | <i>accept default</i> |
| Administrator Email Address              | [calmaster@comms.beta.com] | <i>accept default</i> |
| SMTP Host Name                           | [wireless.comms.beta.com]  | <i>accept default</i> |
| Service Port                             | [80]                       | <b>3080</b>           |

|                                                      |                                                       |                       |
|------------------------------------------------------|-------------------------------------------------------|-----------------------|
| Maximum Sessions                                     | [5000]                                                | <i>accept default</i> |
| Maximum Threads                                      | [20]                                                  | <i>accept default</i> |
| Number of server processes                           | [1]                                                   | <i>accept default</i> |
| Runtime User ID                                      | [icsuser]                                             | <i>accept default</i> |
| Runtime Group ID                                     | [icsgroup]                                            | <i>accept default</i> |
| Start Calendar Server after successful configuration | unchecked                                             | <i>accept default</i> |
| Start Calendar Server on system startup              | checked                                               | <b>Uncheck</b>        |
| Config Directory                                     | [/etc/opt/sun/comms/calendar/SUNWics5/config]         | <i>accept default</i> |
| Database Directory                                   | [/var/opt/sun/comms/calendar/SUNWics5/csdb]           | <i>accept default</i> |
| Attachment Store Directory                           | [/var/opt/sun/comms/calendar/SUNWics5/astore]         | <i>accept default</i> |
| Logs Directory                                       | [/var/opt/sun/comms/calendar/SUNWics5/logs]           | <i>accept default</i> |
| Temporary Files Directory                            | [/var/opt/sun/comms/calendar/SUNWics5/tmp]            | <i>accept default</i> |
| Enable Archive                                       | Checked                                               | <i>accept default</i> |
| Archive Directory                                    | [/var/opt/sun/comms/calendar/SUNWics5/csdb/archive]   | <i>accept default</i> |
| Enable Hot Backup                                    | Checked                                               | <i>accept default</i> |
| Hot Backup Directory                                 | [/var/opt/sun/comms/calendar/SUNWics5/csdb/hotbackup] | <i>accept default</i> |
| Keep archives for (in days)                          | [Minium: 3, Maximum: 6]                               | <i>accept default</i> |
| Keep hot backups for (in days)                       | [Minium: 3, Maximum: 6]                               | <i>accept default</i> |
| Same as archive checkbox                             | Checked                                               | <i>accept default</i> |

3. Click Configure Now to configure Calendar Server.
4. Click Next when the configuration is complete.
5. Click Details to verify that all packages configured correctly. Click Close to exit the configurator.
6. Edit the `ics.conf` file to set calendar alarms and other default preferences.

```
cd /etc/opt/sun/comms/calendar/SUNWics5/config
cp ics.conf ics.conf.orig
vi ics.conf
```

7. Remove the comments from the following values to enable Calendar Server alarms:

```
caldb.serveralarms.url = "enp:///ics/customalarm"
caldb.serveralarms.contenttype = "text/xml"
```

8. Consider changing the following values:

```
calstore.default.timezoneID = "America/Los_Angeles"
service.calendarsearch.ldap = "no"
service.http.ui.enable = "y"
service.http.renderhtml = "yes"
```

9. Change the Calendar ACL:

From

```
calstore.calendar.default.acl = "@@o^a^r^g;@@o^c^wdeic^g;@^a^fs^g;@^c^g;@^p^r^g"
```

to

```
calstore.calendar.default.acl = "@@o^a^r^g;@@o^c^wdeic^g;@^a^rfs^g;@^c^g;@^p^r^g"
```

10. (Optional) If you changed the `calstore.default.timezoneID` in the `ics.conf` file, make the following edit to the

`/opt/sun/comms/calendar/SUNWics5/cal/html/en/default_user_prefs.xml` file:

```
<userpref name="icsTimeZone" default_value="America/Los_Angeles" />
```

11. (Optional) To change the default time zone in Delegated Administrator, edit the `DomainCalendarService.xml` and `UserCalendarService.xml` files in the `/opt/sun/comms/da/lib/services` directory.

These files control users' default time zones created by using Delegated Administrator.

- In these files, change the value of the time zone:

```
America/Denver
```

to `America/Los_Angeles` (or your preferred time zone).

- Run the following commands to delete and reload the service schemas.

```
/opt/SUNWam/bin/amadmin -u amadmin -w adminpass -r
DomainCalendarService
/opt/SUNWam/bin/amadmin -u amadmin -w adminpass -s
/opt/sun/comms/da/lib/services/DomainCalendarService.xml
/opt/SUNWam/bin/amadmin -u amadmin -w adminpass -r
UserCalendarService
/opt/SUNWam/bin/amadmin -u amadmin -w adminpass -s
/opt/sun/comms/da/lib/services/UserCalendarService.xml
```

12. Start the Calendar Server daemons, for example:

```
cd /opt/sun/comms/calendar/SUNWics5/cal/sbin
./stop-cal
./start-cal
```

13. Restart your Web container, for example:

```
cd /var/opt/SUNWwbsvr7/https-wireless.comms.beta.com/bin
./stopserv
./startserv
```

14. Continue with the next section to configure Instant Messaging.

## Configuring Instant Messaging

This section shows you how to run the Instant Messaging configurator script.

### To Configure Instant Messaging

1. Change to the directory where the configuration script was installed then run the configurator script.

For example:

```
cd /opt/sun/comms/im/sbin
./configure
```

The Components Selection page appears.

2. Verify that both Server components and Client components are selected for configuration, then click Return to continue.

The configuration wizard prompts for a series of options.

3. Respond to the series of options as follows.

After each question, you are prompted if you want to go back to previous panel. Always accept the default answer of `no` unless you need to make a change to a previous answer.

The following table shows how to respond to the configuration options:

**Table 15 Values for Instant Messaging configure Script**

| Option                                   | [Default Value]           | Enter:                      |
|------------------------------------------|---------------------------|-----------------------------|
| Use AM for Single-Sign-On                | no                        | <b>yes</b>                  |
| Runtime User ID                          | [inetuser] See Note.      | <b>root</b>                 |
| Runtime Group ID                         | [inetgroup] See Note.     | <b>root</b>                 |
| Runtime Directory                        | [/var/opt/SUNWiim]        | <i>accept default</i>       |
| Create Runtime Directory                 | [Choose New]              | <b>Create Directory</b>     |
| Domain Name                              | [comms.beta.com]          | <i>accept default</i>       |
| XMPP Port                                | [5222]                    | <i>accept default</i>       |
| Multiplexed XMPP Port                    | [45222]                   | <i>accept default</i>       |
| XMPP Server Port                         | [5269]                    | <i>accept default</i>       |
| Disable Server (enable only multiplexor) | [no]                      | <i>accept default</i>       |
| LDAP Host Name                           | [wireless.comms.beta.com] | <i>accept default</i>       |
| LDAP Port Number                         | [389]                     | <i>accept default</i>       |
| Base DN                                  | [dc=comms,dc=beta,dc=com] | <b>o=isp</b>                |
| Bind DN                                  | --                        | <b>cn=Directory Manager</b> |
| Bind Password                            | --                        | <b>adminpass</b>            |
| Enable Email Integration                 | [yes]                     | <i>accept default</i>       |
| SMTP Server                              | [wireless.comms.beta.com] | <i>accept default</i>       |

|                              |                                            |                                              |
|------------------------------|--------------------------------------------|----------------------------------------------|
| Enable Email Archiving       | [yes]                                      | <i>accept default</i>                        |
| Deploy Messenger Resources   | [yes]                                      | <i>accept default</i>                        |
| Codebase                     | [http://wireless.comms.beta.com:80/im]     | *[http://wireless.comms.beta.com:8080/im]*   |
| Enable Audio                 | [no]                                       | <b>yes</b>                                   |
| Webcontainer Path            | --                                         | <b>/opt/SUNWwbsvr7</b>                       |
| Web Administration URL       | --                                         | *[https://wireless.comms.beta.com:8989/]*    |
| Web Administrator User Id    | [admin]                                    | <i>accept default</i>                        |
| Web Administrator Password   | --                                         | <b>adminpass</b>                             |
| Deploy IM HTTP Gateway       | [yes]                                      | <b>no</b>                                    |
| Deploy IM IMPS Gateway       | [yes]                                      | <i>accept default</i>                        |
| Context Root                 | [http://wireless.comms.beta.com:8080/imps] | *[http://wireless.comms.beta.com:8080/imps]* |
| Webcontainer Path            | /opt/SUNWwbsvr7                            | <b>/opt/SUNWwbsvr7</b>                       |
| Web Administration URL       | [https://wireless.comms.beta.com:8989/]    | <i>accept default</i>                        |
| Web Administrator User Id    | [admin]                                    | <i>accept default</i>                        |
| Web Administrator Password   | --                                         | <b>adminpass</b>                             |
| Enable Calendar Agent        | [no]                                       | <b>yes</b>                                   |
| Enable local component       | [no]                                       | <b>yes</b>                                   |
| XMPP server Hostname         | [wireless.comms.beta.com]                  | <i>accept default</i>                        |
| XMPP server port             | [5269]                                     | <i>accept default</i>                        |
| Notification Server Hostname | --                                         | <b>wireless.comms.beta.com</b>               |
| Notification Server Port     | [57997]                                    | <i>accept default</i>                        |
| Calendar alarm URL           | [enp:///ics/customalarm]                   | <i>accept default</i>                        |
| Enable SMS Gateway           | [no]                                       | <i>accept default</i>                        |
| Enable local component       | [no]                                       | <i>accept default</i>                        |
| Enable MSN Gateway           | [no]                                       | <i>accept default</i>                        |

|                                               |       |                       |
|-----------------------------------------------|-------|-----------------------|
| Enable local component                        | [no]  | <i>accept default</i> |
| Enable AIM Gateway                            | [no]  | <i>accept default</i> |
| Enable local component                        | [no]  | <i>accept default</i> |
| Start Services After Successful Configuration | [yes] | <b>no</b>             |
| Start Services When System starts             | [yes] | <b>no</b>             |



**Note**

Access Manager requires that you install and run Instant Messaging services as `root`. You will see a pop-up that running as `root` is not recommended. For this evaluation, accept the super-user setting.

- The Instant Messaging configuration begins. It could take a while to complete the configuration. When the configuration is complete, continue to the next step.
- Edit the `iim.conf` file to prepare for the new Communications Client.

```
# cd /etc/opt/SUNWiim/default/config
# cp iim.conf iim.conf.orig
# vi iim.conf
```

You will add the new `httpbind` and `avatar` component JIDs to this file by making the following changes/additions:

```
iim_server.components =
"agent-calendar,httpbind,smppbind,msn_gateway,aim_gateway,avatar"
iim_agent.enable = "true"

! httpbind component (HTTP/XMPP Gateway)
! =====

iim_agent.httpbind.enable = "true"
httpbind.jid = "wireless.httpbind.comms.beta.com"
httpbind.password = "adminpass"

! avatar component
! =====
iim_agent.avatar.enable = "true"
avatar.jid = "wireless.avatar.comms.beta.com"
avatar.password = "adminpass"
```

- Start the Instant Messaging server. For example:

```
# /opt/sun/comms/im/sbin/imadmin start
```
- If you choose to monitor the SMF logs, they are located in the `/var/svc/log` directory. The log name is `application-sunim:default.log`.
- Continue with the next section.

**To Log in to Instant Messaging**

1. In your web browser, open a URL for Instant Messaging. The URL for Instant Messaging is:  
`http://fully-qualified-hostname:port/im/en/im.jnlp`  
In this example, type:  
`*http://wireless.comms.beta.com:8080/im/en/im.jnlp`  
\*



#### Note

If you cannot log in to Instant Messaging as a user, you might need to manually add the Instant Messaging and Presence Services to the user. See [To Add Services to the Lower Level Organization](#) for more information.

## Configuring Access Manager

The following procedures enable Access Manager authentication with Instant Messaging, and enable the Instant Messaging services for all users.

### To Log In to Access Manager

1. In your web browser, open a URL for the Access Manager console and log in as `amadmin`. The URL for the Access Manager console is:  
`http://fully-qualified-hostname:port/amconsole`  
In this example, type:  
`*http://wireless.comms.beta.com:8080/amconsole`  
\*
2. Log in as `amadmin`.  
The password is `adminpass`.

### To Add Services to the Lower Level Organization

If you set your Organization DN to `o=comms.beta.com,o=isp` you will need to add IM and Presence services to the `comms.beta.com` organization. Once these services have been added to the suborg, you must add the necessary services to each user in this suborg.



#### Note

Previously, you created a set of users with the `comadmin` command. These users exist in the `comms.beta.com` organization. At this point, there are no Services defined for these users. You need to register the services with these users for them to be able to log in to Instant Messaging.

1. Upon logging into the Access Manager Console, you see a view of all your organizations, including the `comms.beta.com` organization. Click the link to `comms.beta.com`.
2. In the right pane, you see a list of General Properties. One of these properties is Domain Name. Verify the Instant Messaging domain name that you specified during the Instant Messaging configuration.  
In this example, the domain name is `comms.beta.com`. If the field is blank, type the domain name then click the Save button.
3. Choose Services from the View menu in the left pane.
4. Click the Add button.
5. Either click the individual services to add to this organization, or click the box at the top of the list that shows two checkboxes. This selects all the services. Upon selecting all the services, click the OK button to add all the services to the suborganization.
6. Within this same suborganization, click the properties icon next to the name of Authentication Configuration. Normally, the service instance "IdapService" will exist. If a service instance (such as IdapService") does not exist, you will need to create one. To do so, perform the following steps.  
Note that if the IdapService instance already exists you may skip these steps:

- Click the New button to define a new service instance.
- Type the Instance Name **ldap1**, then click the Submit button.  
The ldap1 service instance is created.
- Click the ldap1 link.
- Click Edit besides Authentication Configuration.  
A new window appears.
- Click the Add button to add the LDAP module of this new ldap1 instance and select the LDAP Module Name from the pulldown menu. The Enforcement Criteria should be REQUIRED. Click OK to add the module, then click OK again to save the module properties. Then click Cancel to close the window.



#### Note

If the LDAP module name is missing in the pulldown menu, complete the next step (of assigning ldap1 to the Core service). Then exit the Access Manager console and restart Web Server. After logging into the Access Manager Console, try again to add the LDAP module and LDAP should appear.

7. Click the properties icon next to Core, just below Authentication Modules.  
You need to select the existing ldap service instance ldapService or the newly created ldap1 service for both Administrator Authentication Configuration and Organization Authentication Configuration.
8. Click Save.
9. Choose Users from the View menu in the left pane.  
A list of users is presented. You need to add the services you just registered in this suborganization to each user.
10. Click the property icon beside a user.
11. In the right pane, open the View drop-down menu and choose Services.  
No services are listed.
12. Click the Add button.  
A list of services appears.
13. Click the double-checked box at the top of the list of services to add all services. Then click the OK button.



#### Note

The minimum services that you need to add to each user are the IM and Presence services. The Authentication Configuration service does not need to be added to each user but must be configured in each subdomain.

### To Configure User Services

Use this procedure if you want Access Manager services to automatically be added upon user creation. This is useful if you want the Instant Messaging, Presence, and Portal services to be automatically created for each user you create through Delegated Administrator (either the command-line utility or console).



#### Caution

Try this on a test system first to verify that you don't have subsequent performance issues.

1. In the Access Manager console, from within the comms.beta.com organization, select the Service Configuration tab.
2. Click the properties icon beside Administration service.
3. In the right pane, scroll down until you see Required Services.
4. Add the following services by typing the name of the service in the entry box and clicking Add.
  - SunIM
  - SunPresence

5. Add any other services you choose.
6. Click Save.

### To Configure User Services for All Users in a Given Domain

You can also configure the IM and Presence services for all users in a given domain at once by using the `imadmin assign_services` command, instead of manually adding the services in the Access Manager console or automatically adding the services upon user creation.

1. Run the following commands to add IM and Presence services for all users in a given domain:

```
cd /opt/sun/comms/im/sbin
./imadmin assign_services
Please enter base DN:
o=comms.beta.com,o=isp
Assigning IM and Presence services to users under baseDN:
o=comms.beta.com,o=isp ...
Done.
```

2. Restart the web container.

```
cd /var/opt/SUNWwbsvr7/https-wireless.comms.beta.com/bin
./stopserv
./startserv
```

## Configuring Sun Convergence

This section describes how to configure Sun Convergence by using the `init-config` command.

1. Run the Convergence configuration script.

```
cd /opt/sun/comms/iwc/sbin
./init-config
```

2. Read the Software Requirements and click Next to continue.
3. Directory to store Configuration and Data Files [/var/opt/sun/comms/iwc]  
The Components Selection page appears.
4. Verify that Mail Service, Calendar Service, and Instant Messaging Service are selected for configuration, then click Next to continue.

The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 16 Values for Convergence configure Script**

| Option                               | [Default Value]                              | Enter:                |
|--------------------------------------|----------------------------------------------|-----------------------|
| Host Name                            | [wireless]                                   | <i>accept default</i> |
| DNS Domain Name                      | [comms.beta.com]                             | <i>accept default</i> |
| Application Server Install Directory | [/opt/SUNWappserver]                         | <i>accept default</i> |
| Domain Directory                     | [/opt/SUNWappserver/domains/domain1]         | <i>accept default</i> |
| Document Root Directory              | [/opt/SUNWappserver/domains/domain1/docroot] | <i>accept default</i> |
| Server Target Name                   | [server]                                     | <i>accept default</i> |

|                                       |                                       |                                    |
|---------------------------------------|---------------------------------------|------------------------------------|
| Virtual Server Identifier             | [server]                              | <i>accept default</i>              |
| Server Instance HTTP Port             | [8080]                                | <b>80</b>                          |
| Administration Server Port            | [4848]                                | <i>accept default</i>              |
| Administrator User ID                 | [admin]                               | <i>accept default</i>              |
| Administrator Password                | –                                     | <b>adminpass</b>                   |
| Secure Administration Server Instance | Checked                               | <b>Checked</b>                     |
| URI Path                              | [iwc]                                 | <i>accept default</i>              |
| Enable Hosted Domain Support          | checked                               | <i>accept default</i>              |
| Directory Server LDAP URL             | [ldap://wireless.comms.beta.com:389/] | <i>accept default</i>              |
| Bind DN                               | [cn=Directory Manager]                | <i>accept default</i>              |
| Bind Password                         | –                                     | <b>adminpass</b>                   |
| DC Tree suffix                        | [o=isp]                               | <i>accept default</i>              |
| Default Domain Name                   | [comms.beta.com]                      | <i>accept default</i>              |
| Webmail Server Host Name              | [wireless.comms.beta.com]             | <i>accept default</i>              |
| Webmail Server Port Number            | [8990]                                | <b>2080</b>                        |
| Access in SSL mode                    | unchecked                             | <i>accept default (Not secure)</i> |
| Webmail Admin User ID                 | [admin]                               | <i>accept default</i>              |
| Admin Password                        | –                                     | <b>adminpass</b>                   |
| Calendar Server Host Name             | [wireless.comms.beta.com]             | <i>accept default</i>              |
| Calendar Server Port                  | [80]                                  | <b>3080</b>                        |
| Access in SSL mode                    | unchecked                             | <i>accept default (Not secure)</i> |
| Administrator User ID                 | [calmaster]                           | <i>accept default</i>              |
| Administrator User Password           | –                                     | <b>adminpass</b>                   |

|                                      |                                    |                       |
|--------------------------------------|------------------------------------|-----------------------|
| Instant Messaging Server Domain Name | [comms.beta.com]                   | <i>accept default</i> |
| Instant Messaging Server Host Name   | [wireless.comms.beta.com]          | <i>accept default</i> |
| Server Port                          | [5269]                             | <i>accept default</i> |
| httpbind Component JID               | [wireless.httpbind.comms.beta.com] | <i>accept default</i> |
| Password                             | –                                  | <b>adminpass</b>      |
| Avatar Component JID                 | [wireless.avatar.comms.beta.com]   | <i>accept default</i> |
| Password                             | –                                  | <b>adminpass</b>      |
| Convergence Administrator Username   | [admin]                            | <i>accept default</i> |
| Password                             | –                                  | <b>adminpass</b>      |

5. Click Configure Now to configure Sun Convergence.
6. Click Next when the configuration is complete.
7. The system displays a message to restart the Application Server Instance. Click OK to dismiss the message.
8. Click Next to continue.
9. Click Close to quit the Sun Convergence configuration wizard.
10. Restart Application Server.

```
/opt/SUNWappserver/bin/asadmin stop-domain domain1
/opt/SUNWappserver/bin/asadmin start-domain domain1
```

11. In your web browser, open a URL for Sun Convergence and log in as a test user. The URL for Sun Convergence is:

`http://fully-qualified-hostname/iwc`

In this example, type:

<http://wireless.comms.beta.com/iwc>

## Configuring Communications Express (Optional)

1. Go to the directory where the configuration script was installed.

```
cd /opt/sun/comms/ce/sbin
```

2. Run the Communications Express configurator script:

```
./config-uwc
```

3. Click Next at the Welcome page.
4. Accept the directory to store configuration and data files: [/var/opt/sun/comms/ce]
5. Install Mail and Calendar Components.
6. The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 17 Values for the Communications Express config-uwc Script**

| Option | [Default Value] | Enter: |
|--------|-----------------|--------|
|--------|-----------------|--------|

|                                          |                                       |                                        |
|------------------------------------------|---------------------------------------|----------------------------------------|
| Host Name                                | [wireless]                            | <i>accept default</i>                  |
| DNS Domain Name                          | [comms.beta.com]                      | <i>accept default</i>                  |
| Web Container                            | [Web Server]                          | <i>accept default</i>                  |
| Server Root Directory                    | [/opt/SUNWwbsvr7]                     | <i>accept default</i>                  |
| Config Root Directory                    | [/var/opt/SUNWwbsvr7]                 | <i>accept default</i>                  |
| Server Instance Identifier               | [wireless.comms.beta.com]             | <i>accept default</i>                  |
| Virtual Server Identifier                | [wireless.comms.beta.com]             | <i>accept default</i>                  |
| HTTP Port                                | [80]                                  | <b>8080</b>                            |
| Administration Server Port               | [8800]                                | <i>accept default</i>                  |
| Administrator User ID                    | [admin]                               | <i>accept default</i>                  |
| Administrator Password                   | –                                     | <b>adminpass</b>                       |
| Secure Administration Server Instance    | [Unchecked]                           | <i>accept default</i>                  |
| Web Container User ID                    | [root]                                | <i>accept default</i>                  |
| Web Container Group IP                   | [root]                                | <i>accept default</i>                  |
| URI Path                                 | [/uwc]                                | <i>accept default</i>                  |
| Enable Hosted Domain Support             | [Checked]                             | <b>Checked (Yes)</b>                   |
| Directory Server LDAP URL                | [ldap://wireless.comms.beta.com:389/] | <i>accept default</i>                  |
| Bind DN                                  | [cn=Directory Manager]                | <i>accept default</i>                  |
| Bind Password                            | –                                     | <b>adminpass</b>                       |
| DC Tree suffix                           | [o=isp]                               | <i>accept default</i>                  |
| Default Domain Name                      | [comms.beta.com]                      | <i>accept default</i>                  |
| Enable Access Manager for Single Sign-On | [Unchecked]                           | <i>accept default</i><br>(Not enabled) |
| Webmail Server Host Name                 | [wireless.comms.beta.com]             | <i>accept default</i>                  |
| Webmail Server Port Number               | –                                     | <b>2080</b> (See Note 1)               |
| Enable login in secure mode              | [Unchecked]                           | <i>accept default</i><br>(Not secure)  |
| Webmail Server SSL Port Number           | –                                     | Leave blank                            |
| Webmail Admin UserID                     | –                                     | <b>admin</b>                           |
| Admin Password                           | –                                     | <b>adminpass</b>                       |
| Calendar Server Hostname                 | [wireless.comms.beta.com]             | <i>accept default</i>                  |
| Calendar Server Port                     | [9004]                                | <b>3080</b>                            |
| Calendar Administrator User ID           | [calmaster]                           | <i>accept default</i>                  |

|                                      |                                      |                       |
|--------------------------------------|--------------------------------------|-----------------------|
| Calendar Administrator User Password | –                                    | <b>adminpass</b>      |
| URL of PAB Directory Server          | [ldap://wireless.comms.beta.com:389] | <i>accept default</i> |
| Bind As                              | [cn=Directory Manager]               | <i>accept default</i> |
| Bind Password                        | –                                    | <b>adminpass</b>      |

**Note 1:** After selecting a Webmail Port Number, a popup might occur stating that it is unable to connect to *hostname*: 2080. Accept this port anyway. In other cases a popup may occur reminding you to enable Communications Express Webmail. Click OK to dismiss any popup that might occur.

7. Click Configure Now to configure Communications Express.
8. After the configuration is complete, click Next to continue.  
The system displays a message to restart the Web Server Instance. Click OK to dismiss the message.
9. Click Next to continue.
10. Click Close to quit the Communications Express configurator.
11. Enable UWC Webmail.

```
cd /opt/sun/comms/messaging64/sbin
./configutil -o local.webmail.sso.uwcnabled -v 1
./stop-msg
./start-msg
```

12. Restart Web Server.

```
cd /var/opt/SUNWwbsvr7/https-wireless.comms.beta.com/bin
./stopserv
./startserv
```

13. In your web browser, open a URL for Communications Express and log in as a test user. The URL for Communications Express is:  
`http://fully-qualified-hostname:8080/uwc`  
In this example, type:  
`*http://wireless.comms.beta.com:8080/uwc`  
\*

## Creating Additional User Accounts and Groups

This section describes how to create additional users accounts and groups. Users and groups created in this fashion work with both Communications Services products and Portal Server (if you add Portal Server to this deployment at a later date).

### To Create Users and Groups

- The following example shows how to create users using the Delegated Administrator command-line utility and also how to create a group consisting of the users created.

```
/opt/sun/comms/da/bin/commadmin user create -D admin -F Demo -l demo1 -L
One -n comms.beta.com -p 8080 -w adminpass -W demo -X
wireless.comms.beta.com -S mail,cal -E demo1@comms.beta.com -H
wireless.comms.beta.com
```

```
/opt/sun/comms/da/bin/commadmin user create -D admin -F Demo -l demo2 -L
Two -n comms.beta.com -p 8080 -w adminpass -W demo -X
wireless.comms.beta.com -S mail,cal -E demo2@comms.beta.com -H
wireless.comms.beta.com
```

```
/opt/sun/comms/da/bin/commadmin group create -D admin -G Demostaff -n
comms.beta.com -p 8080 -w adminpass -X wireless.comms.beta.com -S mail
-E Demostaff@comms.beta.com -H wireless.comms.beta.com -o calmaster -m
demo1 -m demo2
```



#### Note

Creating groups using the Delegated Administrator command-line interface will guarantee that these groups will be recognized by Access Manager as LDAP groups that can be searched on using Instant Messenger. They can also be used to send email to the entire group.

### To Use Delegated Administrator to Create Users

An alternative to using the Delegated Administrator command-line utility to create users is to use the Delegated Administrator console. The high-level steps to create users with Delegated Administrator console are the following:

- Creating the user
- Using Access Manager to add Services to those user accounts (if necessary)

Prior to using Delegated Administrator, check the `resource.properties` file to make sure users will be created using options consistent with your usage. Because this example uses a hosted domain scenario, you do not need to edit this file to make changes. If you do want to make changes, perform the following steps.

#### 1. Change to the

`/var/opt/sun/comms/da/WEB-INF/classes/sun/comm/cli/server/servlet` directory and edit the `resource.properties` file. #\* The default settings for servicepackage refresh rates are:

```
servicepackage-ttlhours=5
servicepackage-ttlminutes=0
```

These parameters establish the time between service packages refreshes. In this demo scenario, service packages do not change very often so there is no need to refresh them every five minutes. Instead, change the rate to refresh service packages every five hours. Making this change improves Delegated Administrator performance. If you later decide to change the refresh rate to 20 hours, set `servicepackage-ttlhours` to 20, that is, `servicepackage-ttlhours=5`.

- The default setting for calendar ID type is set using the `switch-caltype` variable as follows:

```
switch-caltype=hosted
```

The `caltype` can be either `hosted` or `legacy`. When `caltype` is set to `hosted`, users that are created through Delegated Administrator are created as `uid@domain` rather than `uid`.

2. If you make any changes to the `resource.properties` file, restart the Web Server.
3. The first time you use Delegated Administrator, you must add service packs to the organization that contains your users:
  - In your web browser, open the URL for Delegated Administrator.  
In this example, type:  
`*http://wireless.comms.beta.com:8080/da/DA/Login`  
\*
  - Log in as `amadmin`. The password is `adminpass`.
  - Click the check box next to `comms.beta.com` organization, then click the Allocate Service Package button.  
The Allocate Service Package window appears with a list of service packages organized within a set of three pages. Near the top of this list is a Compare button. To the right of this button is a button that maps the three pages into a single view.
  - Click the Single Page button.
  - Select the desired service packages then click Next.  
The `earth`, `mars`, `mercury`, and `venus` choices are appropriate for this example, since they have mail and calendar services enabled. Each service package has a different mail quota.
  - Accept the Mail Service defaults, then click Next.
  - If you chose a service package that contains Calendar, type the Calendar Host `wireless.comms.beta.com` and **Yes** for Anonymous Login. Then click Next.
  - Select the quantity of each service pack desired then click Next.  
A quantity of 100 is appropriate for this example.
  - Review your choices and click Finish to create the service packages.  
Once the service packs have been allocated for the domain, you can add users to the domain.
  - Click the domain link. That is, click `comms.beta.com`.
  - Click the New button to create a new user within this domain.
  - Type a First Name (such as **Demo**), a Last Name (such as **Five**), a Display Name (such as **Demo Five**), then click Next.
  - You do not need to type postal information. Click Next again.
  - Select a service pack for this user, for example, `earth`, then click Next.
  - Type the email address, for example, `demo5@comms.beta.com`. The Mail Delivery Option should be Local Inbox. Leave the remaining fields blank then click Next.
  - Choose your calendar preferences, select your preferred timezone, then click Next.
  - Type the Login ID and Password then click Next.  
In this example, Login ID is `demo5` and password is `demo`.
  - Verify the user information then click Finish to create the user.
4. Log in to Access Manager as `amadmin` and verify that the IM and Presence services have been added to the newly created user.  
If not, you will need to assign services to those users as explained in [To Add Services to the Lower Level Organization](#).

## Known Issues and Limitations

For more information about known issues, see [Communications Suite 6 Update 1 Release Notes](#).

# Chapter 28. Sun Java Communications Suite 6 Update 1 on a Single Host (Linux)

## Deployment Example: Sun Java Communications Suite 6 Update 1 on a Single Host (Linux)

This deployment example describes how to install Sun Java Communications Suite 6 Update 1 software on a single Red Hat Enterprise Linux 4 computer for a functioning deployment. This document is intended for any evaluator, system administrator, or installation technician who wants to install and evaluate the services delivered by these components.



### Note

Installing the messaging, calendar, instant messaging, and address book servers on the same system is not the optimal configuration, nor does it provide the best performance. This example deployment is not intended for production purposes. Use this configuration for evaluation and for training purposes only. Performance is improved when services are deployed across multiple systems.

- [About This Deployment Example](#)
- [Installing the Example](#)
- [Installing Communications Suite Components](#)
- [Configuring Components](#)
- [Enabling service start-up on boot](#)
- [Known Issues and Limitations](#)

## About This Deployment Example

This section provides an overview of this deployment scenario, the hardware and software used, and the procedures you follow to install, configure, and use this deployment.

This section contains the following topics:

- [Installation Overview](#)
- [Implementation Specifications for This Example](#)
- [Installation Time Estimates](#)
- [Installation Notes and Recommendations](#)
- [Summary of Installation and Configuration](#)

## Installation Overview

This scenario results in a functioning deployment suited for the evaluation and testing of Sun Java Communications Suite 6 Update 1 on Red Hat Enterprise Linux 4. These instructions are not intended to act as a replacement for the individual component documentation, but to merely guide the evaluator through an initial installation.

## What Components Are Installed?

This example guides you through installing the following Communications Suite and pre-requisite components:

- Sun Java System Messaging Server 7 Update 1
- Sun Java System Calendar Server 6.3 + Patches
- Sun Java System Instant Messaging 8
- Sun Java System Directory Server 6.3
- Sun Java System Application Server 9.1 Update 2
- Sun Java System Delegated Administrator 6.4 + Patches
- Sun Java System Communications Express 6.3 + Patches
- Sun Convergence 1 Update 1
- All Shared Components

The example installation in this document uses the following data that you change according to your installation and test machine:

- Domain name: `comms.beta.com`
- Host name: `demo` (running Red Hat Linux 4)
- Fully qualified (external) host name: `demo.comms.beta.com`
- Password: `adminpass` used for all passwords except the `amldapuser` password

This example installs all of the software on a single system. Adjust host names accordingly if you install the components on multiple systems.

### Recommended Ports

For convenience, this example uses a set of recommended ports. If you use different ports, be sure to make the changes consistently throughout the installation. For example, this document uses port 4848 for the Application Server admin port. If you decide to use port 3333 instead, be sure to change it everywhere 4848 occurs in the deployment example. See [Table 3](#) for more information.

### Implementation Specifications for This Example

This section describes implementation specifications for this example.

**Table 1 Evaluation Host Hardware and Software Requirements**

| Component  | Platform Requirement                                                                                                                                               |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU        | x86                                                                                                                                                                |
| RAM        | 2 Gbytes or more                                                                                                                                                   |
| Disk Space | 2.1 Gbytes or more free disk space for installed software. 2.3 Gbytes additional disk space may be needed for temporary storage of Communications Suite zip files. |
| Software   | Red Hat Linux EL 4.                                                                                                                                                |
| Users      | Provisioned with test users.                                                                                                                                       |



#### Note

Although it is technically possible to install and configure Communications Suite 6 Update 1 and dependent products on Red Hat Enterprise Linux 5, this is not currently a supported configuration. A list of known issues with installing Communications Suite 6 Update 1 onto Red Hat Enterprise Linux 5 are documented here: [Red Hat Linux 5 with Communications Suite 6 Update 1](#).

**Table 2 Client Software Requirements**

| Component | Platform Requirement                            |
|-----------|-------------------------------------------------|
| Browser   | Firefox 2.0.0.X or 3.0.X, Internet Explorer 7.x |

**Table 3 Server Configuration Information**

| Component                   | Install Notes                                                                                                         | Install Location         | Database Location                  | Port Name             | Port Number |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------|-----------------------|-------------|
| Application Server 9.1      | Installed separately. Required for Convergence, Delegated Administrator and Communications Express and Access Manager | /opt/SUNWappserver       | /opt/sun/appserver/domains/domain1 | HTTP Port             | 80          |
|                             |                                                                                                                       |                          |                                    | Admin Port            | 4848        |
|                             |                                                                                                                       |                          |                                    | HTTPS Port            | 443         |
| Directory Server 6.3        | Installed separately.                                                                                                 | /opt/sun/directory       | /var/opt/sun/dsins1                | Directory Server Port | 389         |
|                             |                                                                                                                       |                          |                                    | LDAP Port             | 389         |
|                             |                                                                                                                       |                          |                                    | SSL Port              | 636         |
| Access Manager 7.1          | Installed using JES5 Update 1 Installer.                                                                              | /opt/sun/identity        | Not Applicable                     | HTTP Port             | 80          |
|                             |                                                                                                                       |                          |                                    | HTTPS Port            | 443         |
| Messaging Server 7 Update 1 | Installed by using Communications Installer. Additional configuration required.                                       | /opt/sun/comms/messaging | /var/opt/sun/comms/messaging       | Webmail Port (HTTP)   | 8990        |
|                             |                                                                                                                       |                          |                                    | SMTP Port             | 25          |
|                             |                                                                                                                       |                          |                                    | POP Port              | 110         |
|                             |                                                                                                                       |                          |                                    | IMAP Port             | 143         |
| Calendar Server 6.3         | Installed using Communications Installer. Additional configuration required.                                          | /opt/sun/comms/calendar  | /opt/sun/comms/calendar            | Calendar Server Port  | 3080        |

|                     |                                                                              |                   |                  |                       |       |
|---------------------|------------------------------------------------------------------------------|-------------------|------------------|-----------------------|-------|
| Instant Messaging 8 | Installed using Communications Installer. Additional configuration required. | /opt/sun/comms/im | /var/opt/SUNWiim | XMPP Port             | 5222  |
|                     |                                                                              |                   |                  | Multiplexed XMPP Port | 45222 |
|                     |                                                                              |                   |                  | Server-to-Server Port | 5269  |

## Installation Time Estimates

The following table provides time estimates for installing this example.

**Table 4 Installation Time Estimates**

| Activity                                                              | Estimate            |
|-----------------------------------------------------------------------|---------------------|
| Install Red Hat Linux OS                                              | 2 hours             |
| Install Application Server software                                   | 30 minutes          |
| Install Communications Suite, Application Server and Directory Server | 1 hour              |
| Configure software                                                    | 3 hours             |
| Total                                                                 | 6.5 hours (average) |

As part of the configuration, you will use Delegated Administrator to add for Messaging Server and Calendar Server.

## Installation Notes and Recommendations

1. Use `gzip -d` or `gunzip` to decompress the \*.gz files.
2. Use `unzip` to decompress the \*.zip files.

### Expected User Input

During installation, you are prompted for various input. User input is indicated by text of the form **<user-input>**. The following table helps you plan for the types of information you must provide during installation.

**Table 5 Information Input During Installation**

| User Input                 | User Input Action                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <enter>                    | Just hit enter, but verify that the default value shown makes sense.                                                                                                                                |
| <sample-password>          | Any password, minimum of 8 characters in length, suitable for evaluation purposes. These instructions assume that anywhere <sample-password> is specified, you will enter the same value each time. |
| <amldapuser-password>      | Same criteria as <sample-password>, but must be different from <sample-password>.                                                                                                                   |
| <fully-qualified-hostname> | For example, assuming that the host name is <code>abc</code> , and the domain name is <code>demo.xyz.com</code> , then this value would be <code>abc.demo.xyz.com</code> .                          |
| <full-cookie-domainname>   | For example, assuming that the full domain name is <code>demo.xyz.com</code> , then this value would be <code>.demo.xyz.com</code> (note the inclusion of the leading ".").                         |

## Summary of Installation and Configuration

Installing and configuring this example involves the following high-level steps:

1. Preparing the system for Sun Java Communications Suite
2. Installing and configuring Directory Server 6.3
3. Installing and configuring Application Server 9.1 Update 2
4. Running the Java ES installer to install Access Manager 7.1
5. Deploying and enabling the Directory Server Control Center
6. Running the Communications Suite Installer to install Messaging Server, Calendar Server, Instant Messaging, Delegated Administrator, Convergence, and Communications Express
7. Configuring Delegated Administrator and Communications CLI
8. Configuring Messaging Server
9. Configuring Calendar Server
10. Configuring Communications Express
11. Configuring Instant Messaging
12. Configuring Convergence

These installation steps result in a suitable deployment to evaluate and test Communications Suite 6 Update 1. These instructions are not intended to act as a replacement for the individual component documentation, but to merely guide the evaluator through an initial installation.

## Installing the Example

This section describes how to install and configure components on a single machine for evaluation purposes. Some components are configured after installation, using component configuration tools.



### Note

Unless otherwise indicated, all of the examples and instructions in this document assume that you are logged in as the **root** user.

This section contains the following topics:

- [Checking Installation Requirements](#)
- [Getting the Necessary Software](#)
- [Installing and Configuring Directory Server 6.3](#)

- [Installing and Configuring Application Server 9.1 Update 2](#)
- [Installing and Configuring Access Manager 7.1](#)

## Checking Installation Requirements

Before you install components, use the steps in this section to make sure the computer on which you are installing is ready.

### To Check System Requirements

The computer should meet the following requirements:

- These instructions assume all actions are performed by the `root` user.
- The computer must have 2.1 GB free disk space for the zip files and zip image. Recommendation: Have the image already unzipped.

### To Check DNS

Verify that DNS is running and configured properly:

1. Make sure that the `/etc/resolv.conf` file has name server entries with the IP addresses of valid name servers. For example:

```
domain comms.beta.com
nameserver 192.168.100.22
nameserver 192.168.100.23
nameserver 192.168.100.24
nameserver 192.168.100.25
```

2. Make sure that the `/etc/hosts` file has an entry for the fully qualified host name of the server. This fully qualified host name should be listed before the non fully qualified host name. For example:

```
10.1.82.52 demo.comms.beta.com wireless demo
```

3. Make sure that the `/etc/nsswitch.conf` file is configured to use files first to resolve host names. The hosts line in the `nsswitch.conf` file should list files first in its entry:

```
hosts: files dns nis [NOTFOUND=return]
# OR (if NIS is not used)
hosts: files dns
```

### To Check for Sufficient Number of File-Descriptors

The default installation of Red Hat Enterprise Linux 4.6 uses 1,024 file descriptors, which is insufficient for the correct operation of Communications Suite 6. A Communications Suite 6 system needs the maximum file descriptors set to 16,384.

1. In a terminal window, as `root` user, verify the number of file descriptors.
 

```
ulimit -n
```
2. If this number is than 16,384 you will need to increase the value.
3. To change the number of file descriptors, add the following to the `/etc/sysctl.conf` file. Or, if the parameter is already set, increase the value to 16384.
 

```
fs.file-max = 16384
```
4. Add the following two lines to the `/etc/security/limits.conf` file.

```
# Increase max file descriptors
* - nofile 16384
```

5. Either reboot the system for the value to take effect or run the following command:

- ```
sysctl -p /etc/sysctl.conf.
```
6. In a new terminal window, as `root` verify the change.

```
ulimit -n
```

### To Verify Correct Java Development Kit (JDK) Version

The Java Enterprise 5 update 1 (JES5u1) installer is not able to successfully deploy Access Manager 7.1 if Java Development Kit (JDK) 1.6 or above is installed. The following command can be used to verify the currently installed release.

In a terminal window, as `root` run the following command.

```
rpm -qa jdk
```



#### Note

A default installation of Red Hat Enterprise Linux 3 or 4 will return no output to this command.

If the output of the command is `jdk-1.6.<version>`, the JDK version will need to be downgraded prior to deploying Access Manager 7.1.

This can be achieved by downloading and installing **JDK 5.0 Update 16** from the following URL:

[http://java.sun.com/products/archive/j2se/5.0\\_16/index.html](http://java.sun.com/products/archive/j2se/5.0_16/index.html)

## Getting the Necessary Software

### To Get the Software

1. Get the Communications Suite, Application Server, Access Manager (Sun Java Enterprise System 5 Update 1) and Directory Server.

## Installing and Configuring Directory Server 6.3

### To Install the Zip Version of Directory Server 6.3

1. Move the downloaded Directory Server 6.3 zip file `DSEE.6.3.Linux-X86-full.tar.gz` to a temporary location, such as `/tmp/DSEE63`.
2. Unzip the file.

```
gunzip -dc DSEE.6.3.Linux-X86-full.tar.gz | tar xf -
```

3. Change to the `DSEE_ZIP_Distribution` directory.
4. Deploy the DSEE software to the `/opt/sun/directory` directory.

```
./dsee_deploy install -i /opt/sun/directory
```

5. When prompted, press **Enter** to continue.
6. Accept the License Agreement by typing **yes** when prompted.
7. Create a new directory server instance in the `/var/opt/sun/directory/dsins1` directory.

```
mkdir -p /var/opt/sun/directory/  
cd /opt/sun/directory/ds6/bin  
./dsadm create /var/opt/sun/directory/dsins1
```

8. When prompted, type **adminpass** for the Directory Manager password.
9. Create the user and group suffix **o=isp**.

```
cd /opt/sun/directory/ds6/bin  
./dsadm start /var/opt/sun/directory/dsins1  
./dsconf create-suffix "o=isp"
```

10. When prompted, type **y** to accept the certificate.
11. When prompted, type **adminpass** for the Directory Manager password.
12. Continue with the next section.

## Installing and Configuring Application Server 9.1 Update 2

Application Server 9.1 Update 2 is the primary web container used by Convergence, Communications Express, Delegated Administrator, Access Manager, Directory Control Center, and Instant Messaging.

1. Move the downloaded Application Server Update 2 installer `sjsas_ee-9_1_02-linux.bin` to a temporary location, such as `/tmp/APPSVR91U2`.
2. Launch the installer.

```
cd /tmp/APPSVR91U2  
chmod +x sjsas_ee-9_1_02-linux.bin  
./sjsas_ee-9_1_02-linux.bin -console
```

3. When prompted, press Enter to continue.
4. Accept the License Agreement by typing **yes** when prompted.  
The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

### Table 6 Application Server Settings

| Option                                    | [Default Value]            | Enter:                    |
|-------------------------------------------|----------------------------|---------------------------|
| Installation Directory                    | [/opt/SUNWappserver]       | <b>/opt/sun/appserver</b> |
| Create Directory or Choose New            | Create Directory           | <i>accept default</i>     |
| Install Node Agent                        | [yes]                      | <i>accept default</i>     |
| Install High Availability Database Server | [no]                       | <i>accept default</i>     |
| Install Load Balancing Plugin             | [no]                       | <i>accept default</i>     |
| Install Domain Administration Server      | [yes]                      | <i>accept default</i>     |
| Install Sample Applications               | [yes]                      | <b>no</b>                 |
| Java Configuration                        | [Install Java 2 SDK (5.0)] | <i>accept default</i>     |
| Admin User                                | [admin]                    | <i>accept default</i>     |
| Admin User's Password                     | –                          | <b>adminpass</b>          |
| Master Password for SSL Certificate       | —                          | <b>adminpass</b>          |
| Admin Port                                | [4848]                     | <i>accept default</i>     |
| HTTP Port                                 | [8080]                     | <b>80</b>                 |
| HTTPS Port                                | [8181]                     | <b>443</b>                |
| Enable Updatecenter client                | [yes]                      | <b>no</b>                 |
| Upgrade from previous AS version          | [no]                       | <i>accept default</i>     |

5. Select Install Now at the Ready to Install screen.  
The installer begins to install the software.
6. Start the Application Server:

```
cd /opt/sun/appserver/bin
./asadmin start-domain domain1
```

7. When prompted, type:  
username: **admin**  
admin password: **adminpass**  
master password: **adminpass**
8. Log in to Application Server and perform the following to save from having to type the admin user and password in the future. (You must still type the master password.)

```
cd /opt/sun/appserver/bin
./asadmin login
```

9. Type **admin** and **adminpass** as the username and password when prompted.
10. Continue with the next section.

## Installing and Configuring Access Manager 7.1

Access Manager 7.1 is included in Java ES 5.1 Update 1. Although the Java ES 5.1 Update 1 bundle also includes Directory Server and Application server, the versions provided are not as up-to-date as the versions installed in the previous steps.

1. Move the downloaded Java ES 5.1 Update 1 software (java\_es-5u1-ga-linux-x86.zip) to a

- temporary location, such as /tmp/JES5U1.
- Unzip the file in this directory, then launch the Java ES installer.

```
cd Linux_x86
./installer -nodisplay
```

- Press Enter at the Welcome page and Software License Agreement
- Accept the licence when prompted.
- Select: **No** to installing the full set of products and services.
- Select only the following products and sub-products:
  - Access Manager 7.1
    - Access Manager Core Services
    - Access Manager Administration Console
    - Access Manager Common Domain Services
    - Access Manager SDK
  - Install Multi-lingual packages



#### Note

When selecting Access Manager 7.1, Directory Server 6.2 is auto-selected as a dependant component, along with the Directory Preparation Tool. This deployment example uses Directory Server 6.3, which was earlier. Thus, you can deselect Directory Server 6.2 and the Directory Preparation Tool.

- Choose web container for Access Manager 7.1.  
Select: **A compatible web container previously installed on this system.**
- Choose directory server (Directory Server)  
Select: **Use Directory Server Enterprise Edition 6.2 installed on remote machine.**
- Specify Installation Directories  
Access Manager: /opt/sun
- After the Verify System Requirements process completes, select Next/continue.
- Select the **Configure Now** option.
- Continue with the next procedure to choose Common and Web Server settings.

### To Select Common Settings

Use the following table to respond to the Common Server configuration options.

**Table 7 Common and Web Server Settings**

| Option                  | [Default Value]    | Enter:                        |
|-------------------------|--------------------|-------------------------------|
| Host Name               | [demo]             | <i>accept default</i>         |
| DNS Domain Name         | [comms.beta.com]   | <i>accept default</i>         |
| Host IP Address         | Machine IP address | <b>Verify correct address</b> |
| Administration User ID  | [admin]            | <i>accept default</i>         |
| Administration Password | -                  | <b>adminpass</b>              |
| System User             | [root]             | <i>accept default</i>         |
| System Group            | [root]             | <i>accept default</i>         |

### To Select Access Manager Settings

Use the following table to respond to the Access Manager configuration options.

**Table 8 Access Manager Settings**

| Option | [Default Value] | Enter: |
|--------|-----------------|--------|
|--------|-----------------|--------|

|                                             |                                                      |                                                  |
|---------------------------------------------|------------------------------------------------------|--------------------------------------------------|
| Install type                                | [Legacy Mode](version 6.x style)                     | <i>accept default</i>                            |
| Admin User ID                               | [amadmin]                                            | <i>accept default</i>                            |
| Administrator Password                      | –                                                    | <b>adminpass</b>                                 |
| LDAP User ID                                | [amldapuser]                                         | <i>accept default</i>                            |
| LDAP Password                               | –                                                    | <b>nonadminpass</b>                              |
| Password Encryption Key                     | [87dfjkauefjkdadfadf...]                             | <i>accept default</i>                            |
| Access Manager Deployment Container Options | [Sun Java System Application Server]                 | <i>accept default</i>                            |
| Installation Directory                      | [/opt/sun/appserver]                                 | <i>accept default</i>                            |
| Instance Directory                          | [var/opt/sun/appserver/<br>domains/domain1]          | */opt/sun/appserver/<br>domains/domain1*         |
| Runtime Instance                            | [server]                                             | <i>accept default</i>                            |
| Instance Port                               | [8080]                                               | <b>80</b>                                        |
| Document Root                               | [/var/opt/sun/appserver/<br>domains/domain1/docroot] | */opt/sun/appserver/<br>domains/domain1/docroot* |
| Admin Username                              | [admin]                                              | <i>accept default</i>                            |
| Admin Password                              | -                                                    | <b>adminpass</b>                                 |
| Master Password                             | -                                                    | <b>adminpass</b>                                 |
| Admin Port                                  | [4849]                                               | <b>4848</b>                                      |
| Secure Server Instance Port                 | [no]                                                 | <i>accept default</i>                            |
| Secure Admin Instance Port                  | [yes]                                                | <i>accept default</i>                            |
| Web Container: Host Name                    | [demo.comms.beta.com]                                | <i>accept default</i>                            |
| Services Deployment URI                     | [amserver]                                           | <i>accept default</i>                            |
| Common Domain Deployment URI                | [amcommon]                                           | <i>accept default</i>                            |
| Cookie Domain                               | [.beta.com]                                          | <b>.comms.beta.com</b>                           |
| Password Deployment URI                     | [ampassword]                                         | <i>accept default</i>                            |
| Console Protocol                            | [HTTP]                                               | <i>accept default</i>                            |
| Administration Console                      | [Yes]                                                | <i>accept default</i>                            |
| Console Deployment URI                      | [amconsole]                                          | <i>accept default</i>                            |
| Console Host Name                           | [demo.comms.beta.com]                                | <i>accept default</i>                            |
| Directory Server Host                       | -                                                    | <b>demo.comms.beta.com</b>                       |
| Directory Server Port                       | [389]                                                | <i>accept default</i>                            |
| Directory Root Suffix                       | [dc=comms,dc=beta,dc=com]                            | <b>o=isp</b>                                     |
| Directory Manager DN                        | [cn=Directory Manager]                               | <i>accept default</i>                            |
| Directory Manager Password                  | -                                                    | <b>adminpass</b>                                 |

|                                              |      |                       |
|----------------------------------------------|------|-----------------------|
| Directory Server provisioned with user data? | [No] | <i>accept default</i> |
|----------------------------------------------|------|-----------------------|

## To Install the Identity Suite Software

1. Select Install when you are satisfied with the Ready to Install list.  
When installation is complete, the Installation Complete page is displayed.
2. Select close or ! to exit the installer.

## To Deploy and Enable Directory Server Control Center (DSCC)

The Directory Server Control Center is a web-based GUI used to configure and administer Directory Server instances.

1. Enable the DSCC registry.

```
cd /opt/sun/directory/dscc6/bin/
./dsccsetup ads-create
```

2. At the Choose password for Directory Service Manager option, type **adminpass** (the default password).
3. Edit the `/opt/sun/appserver/domains/domain1/config/server.policy` file to add the following required DSCC permissions:

```
// Permissions for Directory Service Control Center
grant codeBase
"file:${com.sun.aas.instanceRoot}/applications/j2ee-modules/dscc/-"
{
permission java.security.AllPermission;
};
```

4. Access the Application Server administration console using a web-browser at the following location:  
[https://\\_fully-qualified-hostname\\_:\\_admin-port/](https://_fully-qualified-hostname_:_admin-port/)

In this example, type:

```
*https://demo.comms.beta.com:4848/
```

\*

5. Log in by using the `admin` username and `adminpass` password.
6. To deploy application from the `/opt/sun/directory/var/dscc6/dscc.war` file, select **Applications** then **Web Applications** from the left-hand menu in the Administration Console.
7. Select the **Deploy** option from the Web Applications menu.
8. Select Local packaged file or directory that is accessible from the Application Server.
9. Type the full path of the DSCC war file: `/opt/sun/directory/var/dscc6/dscc.war`.
10. Click the OK button at the bottom of the page.
11. Log out of the Administration Console once the DSCC deployment has completed.
12. Restart Application Server:

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

13. When prompted, type the master password: **adminpass**
14. Start the DSCC registry:

```
/opt/sun/directory/ds6/bin/dsadm start
/opt/sun/directory/var/dscc6/dcc/ads
```

## To Register the Directory Server Instance in DSCC

1. Access the DSCC console at the following location:  
[http://\\_fully-qualified-hostname\\_:\\_application-server-port\\_/dscc](http://_fully-qualified-hostname_:_application-server-port_/dscc)

In this example, type:

```
*http://demo.comms.beta.com/dscc
```

\*

2. Log in by using the `admin` username and `adminpass` password.
3. Select the Directory Server tab.
4. Select Register Existing Directory Server action from the More Server Actions drop-down menu. A new screen appears.
5. Type or select the following values:
  - Host: `demo.comms.beta.com`
  - Instance Path: `/var/opt/sun/directory/dsins1`
  - DSCC Agent Port: `11162`
  - Description: `Demo Directory Server`
6. Select the Next button to continue.
7. In the Provide Authentication Information for the Host step, type the following values:
  - User ID: `root`
  - Password: `root-password`
8. Select the Next button to continue.
9. In the Review Server Certificate step, select the Next button.



### Note

Bug 6710506 (DSCC Application Error Exception encountered during forward when registering a ds instance in dscc) can cause an Exception error at this step. If you experience this error, repeat the registration steps from the beginning.

10. In the Provide Authentication Information step, type the following values:
  - Administration DN: `cn=Directory Manager`
  - Password: `adminpass`
11. Select the **Next** button to continue.
12. At the final Summary step, click the **Finish** button to complete the process then close the window once the registration has completed.  
You should now see the server `demo.comms.beta.com:389` listed in the Directory Servers listing.
13. Log out of the DSCC interface.

## To Verify the Installation

1. Verify that you can log in to the Access Manager console as `amadmin`. The URL for the Access Manager console is:

```
http://fully-qualified-hostname:web-server-port/amconsole
```

In this example, type:

```
*http://wireless.comms.beta.com:8080/amconsole
```

\*

Use `amadmin` and `adminpass` as the user ID and password.

2. After verifying that you can log in to the Access Manager console, log out.
3. Verify the Application Server by typing the following URL:  

```
http://fully-qualified-hostname
```

In this example, type:

\*<http://demo.comms.beta.com:80/amconsole>

\*

4. Use `amadmin` and `adminpass` as the user ID and password.
5. After verifying that you can log in to the Access Manager console, log out.
6. Proceed to *Installing Communications Suite Components* for instructions on how to install and configure Communications Suite components.

## Installing Communications Suite Components

Deploying Communications Suite components is a two-step process. You first install the software then you configure the individual servers.

### To Install the Communications Suite Software

This section describes how to install the Communications Suite software on your host.

1. Create the `/tmp/JCS6U1` directory, move the Communication Suite 6 update 1 software ( `SunJava_CommsInstaller_Suite6u1_linux-x86.zip`) to this directory and extract the files.

```
cd /tmp/JCS6U1
unzip SunJava_CommsInstaller_Suite6u1_linux-x86.zip
```

2. Run the Communications Suite installer.

```
./commpkg install
```

3. Press Return to continue when prompted.
4. Review the license and type `c` to continue when prompted.  
You can also type `s` to skip the license display.

1. Accept the License Agreement by typing `yes` when prompted.
2. Accept the default Install location: `/opt/sun/comms`
3. Select the components you wish to install.

```
Select the following products:

1.      Messaging Server 7u1 (7.0-3.01)
2.      Comms DSsetup 6.4 (6.4-3.01)
3.      Comms Delegated Administrator 6.4 (6.4-3.01)
4.      Calendar Server 6.3 (6.3-11.01)
5.      Instant Messaging 8 (8.0-00.06)
6.      Communications Express 6.3 (6.3-11.01)
7.      Convergence 1u1 (1.0-4.01)
```

This corresponds to selections 1, 2, 3, 4, 5, 6 and 7.

4. The installation script prompts for a series of options.  
You might not be prompted for all options, depending on your operating system configuration and previously
5. The following table shows how to respond to the configuration options:  
**Table 9 Values for Unicode, NSS/NSPR/JSS, Service Tags and Java Development Kit (JDK) Options**

| Option                       | [Default Value] | Enter:         |
|------------------------------|-----------------|----------------|
| Upgrade Unicode              | [n]             | y              |
| Upgrade NSS/NSPR/JSS         | [n]             | y              |
| Upgrade Service Tags         | [n]             | y              |
| Upgrade Java Development Kit | [n]             | accept default |

6. Press Return when prompted to continue. The installation proceeds.
7. Press Return when prompted to continue.
8. Continue with the next section.

## Configuring Components

This section describes how to run the individual component configuration utilities to perform initial software configuration.

This section contains the following topics:

- [Preparing the Directory](#)
- [Configuring Delegated Administrator and Communications CLI](#)
- [Configuring Messaging Server](#)
- [Configuring Calendar Server](#)
- [Configuring Communications Express](#)
- [Configuring Instant Messaging](#)
- [Configuring Sun Convergence](#)
- [Creating Additional User Accounts and Groups](#)

### Preparing the Directory

This section explains how to prepare the Directory Server LDAP schema.

#### To Apply Schema 2 to Your Directory Tree

1. Change the directory where the `comm_dssetup` script is located and run the script, for example:

```
cd /opt/sun/comms/dssetup/sbin/
./comm_dssetup.pl
```

2. Type **y** to continue. The perl script prompts for a series of options. The following table shows how to respond to the prompts.

**Table 10 Values for `comm_dssetup.pl` Script**

| Option                                | [Default Value]          | Enter:                |
|---------------------------------------|--------------------------|-----------------------|
| Directory server root                 | [/var/opt/sun/directory] | <i>accept default</i> |
| Directory server instance             | [dsins1]                 | <i>accept default</i> |
| Directory Manager DN                  | [cn=Directory Manager]   | <i>accept default</i> |
| Directory Manager Password            | -                        | <b>adminpass</b>      |
| Use directory server for users/groups | [yes]                    | <i>accept default</i> |
| Users/Groups base suffix              | [o=isp]                  | <i>accept default</i> |
| Schema type?                          | [2]                      | <i>accept default</i> |
| Update the schema files?              | [yes]                    | <i>accept default</i> |
| Configure new indexes?                | [yes]                    | <i>accept default</i> |
| Reindex new indexes?                  | [yes]                    | <i>accept default</i> |

3. Confirm your choices and type **y** to continue.  
The `comm_dssetup` script proceeds.
4. When prompted, type **y** to continue with the script.
5. Continue with the next section after `comm_dssetup` completes and the Successful Completion message is displayed.

## Configuring Delegated Administrator and Communications CLI

This section describes configuring Delegated Administrator console and utility, which provide user and group management.

### To Configure Delegated Administrator

1. Change to the directory where the configuration script was installed and run the script, for example:

```
cd /opt/sun/comms/da/sbin
./config-commda -nodisplay
```

2. Select Next/Enter in the Welcome window.
3. Accept the default, `/var/opt/sun/comms/da`, for the Directory to store Configuration and Data Files:  
If the directory does not exist, select Create Directory to create the directory.
4. Install Delegated Administrator Utility, Console, and Server.  
The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 11 Values for config-commda Script**

| Option           | [Default Value]       | Enter:                |
|------------------|-----------------------|-----------------------|
| AM Hostname      | [demo.comms.beta.com] | <i>accept default</i> |
| AM Port          | [8080]                | <b>80</b>             |
| Default Domain   | [comms.beta.com]      | <i>accept default</i> |
| Default SSL Port | [443]                 | <i>accept default</i> |
| Web Container    | [Web Server 6.x/WEB]  | <b>APP8</b>           |

|                                             |                                                      |                                                          |
|---------------------------------------------|------------------------------------------------------|----------------------------------------------------------|
| Install Directory (for DA Console)          | [/opt/sun/appserver]                                 | <i>accept default</i>                                    |
| Domain Directory                            | [/var/opt/sun/appserver/<br>domains/domain1]         | <i>*/opt/sun/appserver/<br/>domains/domain1*</i>         |
| Doc Root Directory                          | [/var/opt/sun/appserver/<br>domains/domain1/docroot] | <i>*/opt/sun/appserver/<br/>domains/domain1/docroot*</i> |
| Server Target Name                          | [server]                                             | <i>accept default</i>                                    |
| Virtual Server Identifier                   | [server]                                             | <i>accept default</i>                                    |
| Server Instance HTTP Port                   | [80]                                                 | <i>accept default</i>                                    |
| Administration Server Port                  | [4849]                                               | <b>4848</b>                                              |
| Administrator User ID                       | [admin]                                              | <i>accept default</i>                                    |
| Administrator Password                      | -                                                    | <b>adminpass</b>                                         |
| Secure Administration Server Instance?      | [yes]                                                | <i>accept default</i>                                    |
| Default Domain Separator                    | [@]                                                  | <i>accept default</i>                                    |
| Access Manager Base Directory               | [/opt/sun/identity]                                  | <i>accept default</i>                                    |
| Install Directory (for DA Server)           | [/opt/sun/appserver]                                 | <i>accept default</i>                                    |
| Domain Directory                            | [/var/opt/sun/appserver/<br>domains/domain1]         | <i>*/opt/sun/appserver/<br/>domains/domain1*</i>         |
| Doc Root Directory                          | [/var/opt/sun/appserver/<br>domains/domain1/docroot] | <i>*/opt/sun/appserver/<br/>domains/domain1/docroot*</i> |
| Server Target Name                          | [server]                                             | <i>accept default</i>                                    |
| Virtual Server Identifier                   | [server]                                             | <i>accept default</i>                                    |
| Server Instance HTTP Port                   | [80]                                                 | <i>accept default</i>                                    |
| Administration Server Port                  | [4849]                                               | <b>4848</b>                                              |
| Administrator User ID                       | [admin]                                              | <i>accept default</i>                                    |
| Administrator Password                      | -                                                    | <b>adminpass</b>                                         |
| Secure Administration Server Instance?      | [yes]                                                | <i>accept default</i>                                    |
| URL of Directory Server                     | [ldap://demo.comms.beta.com:<br>389]                 | <i>accept default</i>                                    |
| Bind As                                     | [cn=Directory Manager]                               | <i>accept default</i>                                    |
| Password                                    | -                                                    | <b>adminpass</b>                                         |
| AM Top level admin                          | [amadmin]                                            | <i>accept default</i>                                    |
| AM admin passwd                             | -                                                    | <b>adminpass</b>                                         |
| Access Manager Internal LDAP Auth Username  | [amldapuser]                                         | <i>accept default</i>                                    |
| AM Internal LDAP Auth Passwd for amldapuser | -                                                    | <b>nonadminpass</b>                                      |

|                                          |                          |                       |
|------------------------------------------|--------------------------|-----------------------|
| Organization DN                          | [o=comms.beta.com,o=isp] | <i>accept default</i> |
| Top Level Admin for Default Organization | [admin]                  | <i>accept default</i> |
| Password                                 | -                        | <b>adminpass</b>      |
| Load Sample Service Packages             | [yes]                    | <i>accept default</i> |
| Load Sample Organizations                | [yes]                    | <b>no</b>             |
| Preferred Mailhost for Sample            | [demo.comms.beta.com]    | <i>accept default</i> |

5. Select **Configure Now**.  
The script begins to run.
6. When the panel displays "All Tasks Passed," click **Next** to continue.  
Two warnings appear: one reminds you to restart the Application Server; the other to remind you to enable the mail and calendar services in the domain. The following steps address these issues.
7. Select **Close/Done** to exit the Delegated Administrator Configuration wizard.
8. Restart the Application Server

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

9. Type the master password when prompted: **adminpass**
10. Modify the mail and calendar domains, and create a test user account (jdoe) by using the `commadmin` utility:

```
cd /opt/sun/comms/da/bin/
./commadmin domain modify -D admin -w adminpass -X
demo.comms.beta.com -n comms.beta.com \
-p 80 -d comms.beta.com -S mail,cal -H demo.comms.beta.com
./commadmin user create -D admin -F John -l jdoe -L Doe -n
comms.beta.com -p 80 \
-w adminpass -W demo -X demo.comms.beta.com -S mail,cal -E
jdoe@comms.beta.com \
-H demo.comms.beta.com
```

You can create as many users as you like at this point. Steps later in this document show how to add Presence and Instant Messaging services to those users.

11. Continue with the next procedure.

### To Log in to Delegated Administrator

1. In your web browser, open a URL for Delegated Administrator.  
[http://\\_fully-qualified-hostname\\_:\\_app-server-port\\_/da/](http://_fully-qualified-hostname_:_app-server-port_/da/)

In this example, type:

```
*http://demo.comms.beta.com:80/da
*
```

2. Log in using **admin** and **adminpass** as the user ID and password.
3. After verifying that you can access Delegated Administrator, log out.
4. Continue with the next section to configure Messaging Server

## Configuring Messaging Server

This section describes configuring Messaging Server.

### To Disable sendmail

Prior to configuring Messaging Server, use the following to stop the current sendmail process and prevent it from starting during boot.

```
/etc/init.d/sendmail stop
chkconfig --del sendmail
```

### To Configure Messaging Server

1. Change to the directory where the Messaging Server configure script is stored, then run the script, for example:

```
cd /opt/sun/comms/messaging/sbin
./configure -nodisplay
```

The Configuration Wizard appears. Read the introductory information and proceed.

2. Verify the following:
  - Fully qualified host name of messaging server, FQHN: `demo.comms.beta.com`
  - Directory to store config/data files: `/var/opt/sun/comms/messaging`
  - Select MTA, Message Store, and Webmail Server to install.
3. The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 12 Values for Messaging Server configure Script**

| Option                                 | [Default Value]                  | Enter:                     |
|----------------------------------------|----------------------------------|----------------------------|
| Messaging Server Unix user             | [mailsrv]                        | <i>accept default</i>      |
| Messaging Server Unix group            | [mail]                           | <i>accept default</i>      |
| User/Group Server Ldap                 | [ldap://demo.comms.beta.com:389] | <i>accept default</i>      |
| Bind As                                | [cn=Directory Manager]           | <i>accept default</i>      |
| Password                               | -                                | <b>adminpass</b>           |
| Postmaster email address               | -                                | <b>jdoe@comms.beta.com</b> |
| Password for Messaging Server accounts | -                                | <b>adminpass</b>           |
| Default email Domain                   | [comms.beta.com]                 | <i>accept default</i>      |
| Organization DN                        | [o=comms.beta.com,o=isp]         | <i>accept default</i>      |

4. Select **Configure Now**.
5. When configuration is finished, Select **Next/Done** to continue and exit the configuration utility
6. Enable Communications Express (UWC) access to webmail server

```
cd /opt/sun/comms/messaging/sbin
./configutil -o local.webmail.sso.uwcenabled -v 1
./configutil -o service.imap.maxsessions -v 1000
```

7. Start Messaging Server.

```
cd /opt/sun/comms/messaging/sbin
./start-msg
```

8. Continue with the next section to configure Calendar Server.

## Configuring Calendar Server

This section shows you how to run the Calendar Server configuration script and how to verify the Calendar Server configuration.

### To Configure Calendar Server

1. Change to the directory where the configuration script was installed then run the configuration script, for example:

```
cd /opt/sun/comms/calendar/calendar/sbin
./csconfigurator.sh -nodisplay
```

2. Select **Next/Enter** at the Welcome page.
3. The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 13 Values for Calendar Server csconfigure Script**

| Option                                   | [Default Value]        | Enter:                          |
|------------------------------------------|------------------------|---------------------------------|
| LDAP Server Host Name                    | [demo.comms.beta.com]  | <i>accept default</i>           |
| LDAP Server Port                         | [389]                  | <i>accept default</i>           |
| Directory Manager DN                     | [cn=Directory Manager] | <i>accept default</i>           |
| Directory Manager Password               | -                      | <b>adminpass</b>                |
| Enable Virtual Domains support           | [yes]                  | <i>accept default</i>           |
| Virtual Domains settings: Default domain | [comms.beta.com]       | <b>comms.beta.com</b>           |
| Calendar Administrator Username          | [calmaster]            | <i>accept default</i>           |
| Calendar Administrator Password          | -                      | <b>adminpass</b>                |
| Calendar Administrator Email address     | [root@comms.beta.com]  | <b>calmaster@comms.beta.com</b> |
| Site administrator                       | [Yes]                  | <i>accept default</i>           |
| Create calmaster@aus.sun.com account     | [Create it]            | <i>accept default</i>           |
| Setup a Front End/Back End deployment    | [no]                   | <i>accept default</i>           |
| Email Alarms                             | [Enabled]              | <i>accept default</i>           |

|                                                      |                                                       |                       |
|------------------------------------------------------|-------------------------------------------------------|-----------------------|
| Administrator Email Address                          | [calmaster@comms.beta.com]                            | <i>accept default</i> |
| SMTP Host Name                                       | [demo.comms.beta.com]                                 | <i>accept default</i> |
| Service Port                                         | [80]                                                  | <b>3080</b>           |
| Maximum Sessions                                     | [5000]                                                | <i>accept default</i> |
| Maximum Threads                                      | [20]                                                  | <i>accept default</i> |
| Number of server processes                           | [1]                                                   | <i>accept default</i> |
| Runtime User ID                                      | [icsuser]                                             | <i>accept default</i> |
| Runtime Group ID                                     | [icsgroup]                                            | <i>accept default</i> |
| Start Calendar Server after successful configuration | [no]                                                  | <i>accept default</i> |
| Start Calendar Server on system startup              | [yes]                                                 | <b>no</b>             |
| Create "icsuser" User ID?                            | [Create User ID]                                      | <i>accept default</i> |
| Config Directory                                     | [/etc/opt/sun/comms/calendar/calendar/config]         | <i>accept default</i> |
| Database Directory                                   | [/var/opt/sun/comms/calendar/calendar/csdb]           | <i>accept default</i> |
| Attachment Store Directory                           | [/var/opt/sun/comms/calendar/calendar/astore]         | <i>accept default</i> |
| Logs Directory                                       | [/var/opt/sun/comms/calendar/calendar/logs]           | <i>accept default</i> |
| Temporary Files Directory                            | [/var/opt/sun/comms/calendar/calendar/tmp]            | <i>accept default</i> |
| Enable Archive                                       | [yes]                                                 | <i>accept default</i> |
| Archive Directory                                    | [/var/opt/sun/comms/calendar/calendar/csdb/archive]   | <i>accept default</i> |
| Keep archives for (in days)                          | [Minium: 3, Maximum: 6]                               | <i>accept default</i> |
| Enable Hot Backup                                    | [yes]                                                 | <i>accept default</i> |
| Hot Backup Directory                                 | [/var/opt/sun/comms/calendar/calendar/csdb/hotbackup] | <i>accept default</i> |
| Keep hot backups for (in days)                       | [Minium: 3, Maximum: 6]                               | <i>accept default</i> |

4. Select **Configure Now** to configure Calendar Server.
5. Select **Next/Done** when the configuration is complete and exit the configurator.
6. Open the `/opt/sun/comms/calendar/calendar/config/ics.conf` file by using your preferred editor e.g. `vi`.
7. Set the following values to enable Calendar Server reminders:

```

caldb.serveralarms = "yes"
caldb.serveralarms.url = "enp:///ics/customalarm"
caldb.serveralarms.contenttype = "text/xml"

```

8. Start the Calendar Server daemons, for example:

```
cd /opt/sun/comms/calendar/calendar/sbin
./stop-cal
./start-cal
```

9. Continue with the next section to configure Communications Express.

## Configuring Communications Express

1. Change to the directory where you installed Communications Express then run the configuration utility, for example:

```
cd /opt/sun/comms/ce/uwc/sbin
./config-uwc -nodisplay
```

2. Select **Next/Enter** at the Welcome page.

3. Accept the default directory, `/var/opt/sun/comms/ce/uwc`, in which to store Configuration and Data Files.

If the directory does not exist, select Accept Directory to create the directory.

4. Install both the Mail and Calendar Components

The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 14 Values for Communications Express Configuration Utility**

| Option                                | [Default Value]                                      | Enter:                                                   |
|---------------------------------------|------------------------------------------------------|----------------------------------------------------------|
| Host name                             | [demo]                                               | <i>accept default</i>                                    |
| DNS Domain                            | [comms.beta.com]                                     | <i>accept default</i>                                    |
| Web Container                         | [Webserver 7.X]                                      | <b>App Server (APP)</b>                                  |
| Application Server Install Directory  | [/opt/sun/appserver]                                 | <i>accept default</i>                                    |
| Application Server Domain Directory   | [/var/opt/sun/appserver/<br>domains/domain1]         | <i>*/opt/sun/appserver/<br/>domains/domain1*</i>         |
| Application Server Doc Root Directory | [/var/opt/sun/appserver/<br>domains/domain1/docroot] | <i>*/opt/sun/appserver/<br/>domains/domain1/docroot*</i> |
| Server Instance HTTP Port             | [80]                                                 | <i>accept default</i>                                    |
| Administration Server Port            | [4849]                                               | <b>4848</b>                                              |
| Administrator User ID                 | [admin]                                              | <i>accept default</i>                                    |
| Administrator Password                | -                                                    | <b>adminpass</b>                                         |
| Secure Admin Server Instance          | [no]                                                 | <b>yes</b>                                               |
| Module Name                           | [Communications_Express]                             | <i>accept default</i>                                    |
| Web Container User                    | [root]                                               | <i>accept default</i>                                    |
| Web Container Group                   | [root]                                               | <i>accept default</i>                                    |
| URI Path                              | [/uwc]                                               | <i>accept default</i>                                    |
| Hosted Domain Support                 | [yes]                                                | <i>accept default</i>                                    |

|                                        |                                  |                       |
|----------------------------------------|----------------------------------|-----------------------|
| LDAP URL                               | [ldap://demo.comms.beta.com:389] | <i>accept default</i> |
| Bind DN                                | [cn=Directory Manager]           | <i>accept default</i> |
| Bind Password                          | -                                | <b>adminpass</b>      |
| DC Tree Suffix                         | [o=isp]                          | <i>accept default</i> |
| Default Domain                         | [comms.beta.com]                 | <i>accept default</i> |
| Access Manager for SSO                 | [no]                             | <i>accept default</i> |
| Webmail Host Name                      | [demo.comms.beta.com]            | <i>accept default</i> |
| Webmail Port Number                    | -                                | <b>8990</b>           |
| Login in Secure Mode                   | [no]                             | <i>accept default</i> |
| Webmail SSL Port Number                | -                                | <b>8991</b>           |
| Webmail Administrator Username         | -                                | <b>admin</b>          |
| Webmail Administrator Password         | -                                | <b>adminpass</b>      |
| Calendar Server Host Name              | [demo.comms.beta.com]            | <i>accept default</i> |
| Calendar Server Port Number            | [9004]                           | <b>3080</b>           |
| Calendar Server Administrator Username | [calmaster]                      | <i>accept default</i> |
| Calendar Server Administrator Password | -                                | <b>adminpass</b>      |
| PAB Directory Server URL               | [ldap://demo.comms.beta.com]     | <i>accept default</i> |
| PAB Directory Server Bind DN           | [cn=Directory Manager]           | <i>accept default</i> |
| PAB Directory Server Bind Password     | -                                | <b>adminpass</b>      |

5. Select **Configure Now** to configure Communications Express (UWC).
6. Select **Next/Done** when the configuration is complete and close the configurator.
7. Restart the Application Server

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

8. Type the master password when prompted: **adminpass**

### To Log in to Communications Express

1. In your web browser, open a URL for Communications Express. The URL for Communications Express (UWC) is:  
`http://fully-qualified-hostname:app-server-port/uwc/`  
In this example, type:  
`*http://demo.comms.beta.com:80/uwc`  
\*
2. Log in using **jdoe** and **demo** as the user ID and password.
3. After verifying that you can access Communications Express, log out.
4. Continue with the next section to configure Instant Messaging.

## Configuring Instant Messaging

This section shows you how to run the Instant Messaging configurator script.

### To Configure Instant Messaging

1. Change to the directory where the configuration script was installed then run the configurator script, for example:

```
cd /opt/sun/comms/im/sbin
./configure -nodisplay
```

2. Select **Next/Enter** at the Welcome page.  
The Components Selection page appears.
3. Select both *Server* and *Client* components for configuration.
4. The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 15 Values for Instant Messaging configure Script**

| Option                                   | [Default Value]           | Enter:                      |
|------------------------------------------|---------------------------|-----------------------------|
| Use AM for Single-Sign-On                | [yes]                     | <i>accept default</i>       |
| User ID                                  | [inetuser]                | <b>root</b>                 |
| Group ID                                 | [inetgroup]               | <b>root</b>                 |
| Runtime Directory                        | [/var/opt/sun/im]         | <i>accept default</i>       |
| Run with super-user permissions?         | [Choose New]              | <b>accept</b>               |
| Domain Name                              | [comms.beta.com]          | <i>accept default</i>       |
| XMPP Port                                | [5222]                    | <i>accept default</i>       |
| Multiplexed XMPP Port                    | [45222]                   | <i>accept default</i>       |
| Disable Server (enable only multiplexor) | [no]                      | <i>accept default</i>       |
| LDAP Host Name                           | [demo.comms.beta.com]     | <i>accept default</i>       |
| LDAP Port Number                         | [389]                     | <i>accept default</i>       |
| Base DN                                  | [dc=comms,dc=beta,dc=com] | <b>o=isp</b>                |
| Bind DN                                  | -                         | <b>cn=Directory Manager</b> |
| Bind Password                            | -                         | <b>adminpass</b>            |
| Enable Email Integration                 | [yes]                     | <i>accept default</i>       |
| SMTP Server                              | [demo.comms.beta.com]     | <i>accept default</i>       |

|                            |                                            |                                     |
|----------------------------|--------------------------------------------|-------------------------------------|
| Enable Email Archiving     | [yes]                                      | <i>accept default</i>               |
| Deploy Messenger Resources | [yes]                                      | <i>accept default</i>               |
| Codebase                   | [http://demo.comms.beta.com:80/im]         | <i>accept default</i>               |
| Enable Audio               | [no]                                       | <b>yes</b>                          |
| Webcontainer Path          | -                                          | <b>/opt/sun/appserver</b>           |
| Web Administration URL     | [https://demo.comms.beta.com:4849/]        | *https://demo.comms.beta.com:4848/* |
| Web Administrator User Id  | [admin]                                    | <i>accept default</i>               |
| Web Administrator Password | -                                          | <b>adminpass</b>                    |
| Deploy IM HTTP Gateway     | [yes]                                      | <b>no</b>                           |
| Context Root               | [http://demo.comms.beta.com:8080/httpbind] | -                                   |
| Web Administration URL     | [http://demos.comms.beta.com:4848/]        | -                                   |
| Web Administrator User Id  | [admin]                                    | -                                   |
| Web Administrator Password | -                                          | -                                   |
| Deploy IM IMPS Gateway     | [yes]                                      | <b>no</b>                           |
| Context Root               | [http://demo.comms.beta.com:80/imps]       | -                                   |
| Webcontainer Path          | [/opt/sun/appserver]                       | -                                   |
| Web Administration URL     | [https://demo.comms.beta.com:4848/]        | -                                   |
| Web Administrator User Id  | [admin]                                    | -                                   |
| Web Administrator Password | -                                          | -                                   |

|                                               |                          |                       |
|-----------------------------------------------|--------------------------|-----------------------|
| Enable Calendar Agent                         | [no]                     | <b>yes</b>            |
| Enable local component                        | [no]                     | <b>yes</b>            |
| XMPP server hostname                          | [demo.comms.beta.com]    | <i>accept default</i> |
| XMPP server port                              | [5269]                   | <i>accept default</i> |
| Notification Server Hostname                  | [demo.comms.beta.com]    | <i>accept default</i> |
| Notification Server Port                      | [57997]                  | <i>accept default</i> |
| Calendar alarm URL                            | [enp:///ics/customalarm] | <i>accept default</i> |
| Enable SMS Gateway                            | [no]                     | <i>accept default</i> |
| Enable local component                        | [no]                     | <i>accept default</i> |
| Enable MSN Gateway                            | [no]                     | <i>accept default</i> |
| Enable local component                        | [no]                     | <i>accept default</i> |
| Enable AIM Gateway                            | [no]                     | <i>accept default</i> |
| Enable local component                        | [no]                     | <i>accept default</i> |
| Start Services After Successful Configuration | [yes]                    | <b>no</b>             |
| Start Services When System starts             | [yes]                    | <b>no</b>             |

5. At the Configuration Summary page, select **Close/Done** to exit.
6. Edit the `/opt/sun/comms/im/config/iim.conf` file using your preferred editor, e.g. `vi`, to prepare for the Convergence web-interface.  
Add the new `httpbind` and `avatar` component JIDs to this file by making the following changes/additions:

```

iim_server.components = "agent-calendar,httpbind,avatar"
iim_agent.enable = "true"
! httpbind component (HTTP/XMPP Gateway)
! =====
iim_agent.httpbind.enable = "true"
httpbind.jid = "demo.httpbind.comms.beta.com"
httpbind.password = "adminpass"

! avatar component
! =====
iim_agent.avatar.enable = "true"
avatar.jid = "demo.avatar.comms.beta.com"
avatar.password = "adminpass"

```

7. Start the Instant Messaging server.

```

cd /opt/sun/comms/im/sbin/
./imadmin start

```

8. Continue with the next procedure.

### To Grant IM Services for All Users in a Given Domain

You can also configure the Instant Messaging and Presence services for all users in a given domain at once by using the `imadmin assign_services` command, instead of manually adding the services in the Access Manager console or automatically adding the services upon user creation.

1. Run the following commands to add Instant Messaging and Presence services for all users in a given domain:

```

cd /opt/sun/comms/im/sbin
./imadmin assign_services
Please enter base DN: o=comms.beta.com,o=isp
Done.

```

2. Restart the Application Server.

```

cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1

```

3. Type the master password when prompted: **adminpass**
4. Continue with the next procedure.

### To Add Services to the Lower Level Organization

If you set your Organization DN to `o=comms.beta.com,o=isp`, you need to add Instant Messaging and Presence services to the `comms.beta.com` organization and configure the organization to use LDAP authentication.

1. In your web browser, open a URL for the Access Manager console and log in as `amadmin`. The URL for the Access Manager console is:  
<http://fully-qualified-hostname:port/amconsole>

In this example, type:

\*<http://demo.comms.beta.com:80/amconsole>

\*

2. Log in using the user **amadmin** and the password **adminpass**.
3. Upon logging into the Access Manager Console, you see a view of all your organizations, including the `comms.beta.com` organization. Click the `comms.beta.com` link in the left pane. In the right pane, you see a list of General Properties.
4. Choose Services from the View menu in the left pane.
5. Click the **Add** button if you do not see the Instant Messaging Service and Presence Service listed in the left pane Services listing.
  - If you clicked the Add button you should see the Instant Messaging Service and Presence Service services listed in the right-pane.
  - Select these two services and click the OK button to add them.
6. Within this same `comms.beta.com` suborganization, click the triangle shaped properties icon next to the name of Authentication Configuration in the left pane. Normally, the service instance `ldapService` will exist and show in the right-pane. If a service instance (such as `ldapService`) does not exist, you will need to create one. To do so, perform the following steps. Skip these steps if the `ldapService` instance already exists.
  - Click the New button to define a new service instance.
  - Type the Instance Name `ldap1`, then click the Submit button to create the `ldap1` service instance.
  - Click the `ldap1` link.
  - Click the Edit link besides Authentication Configuration. A new window appears.
  - Click the Add button to add the LDAP module of this new `ldap1` instance and select the LDAP Module Name from the pulldown menu.
  - The Enforcement Criteria should be REQUIRED.
  - Click OK to add the module, then click OK again to save the module properties.
  - Then click Cancel to close the window.
7. Click the triangle shaped properties icon next to `Core`, just below Authentication Modules in the left pane.
8. You need to select the existing `ldapService` or the newly created `ldap1` service for both Administrator Authentication Configuration and Organization Authentication Configuration settings in the right pane.
9. Click Save.
10. Choose Users from the View menu in the left pane. A list of users is presented. You need to add the services you just registered in this suborganization to each user.
11. Click the triangle shaped property icon beside a user in the user listing in the left pane.
12. In the right pane, open the View drop-down menu and choose Services.
13. If no services are listed, click the Add button. A list of services appears.
14. Click the double-checked box at the top of the list of services to add all services. Then click the OK button.



#### Note

The minimum services that you need to add to each user are the Instant Messaging and Presence services. The Authentication Configuration service does not need to be added to each user but must be configured in each subdomain.

15. Log out of the Access Manager interface.
16. Continue with the next procedure.

### To Log into Instant Messaging Java Client

1. In your web browser, open a URL for the Instant Messaging Java Client. The URL for the Instant Messaging Java Client is:

`http://fully-qualified-hostname:app-server-port/im/`

In this example, type:

\*<http://demo.comms.beta.com:80/im>

\*

2. Click the **Start** button to launch the Instant Messaging client.
3. Log in using **jdoe** and **demo** as the user ID and password.
4. After verifying that you can access the Instant Messaging client, close the client by selecting Exit from the File menu.
5. Continue with the next section to configure the Sun Convergence web interface.

## Configuring Sun Convergence

This section describes how to configure Sun Convergence by using the `init-config` command.

1. Change to the directory where you installed the Convergence then run the configuration utility, for example:

```
cd /opt/sun/comms/iwc/sbin
./init-config -nodisplay
```

2. Select **Next/Enter** at the Welcome page.
3. Accept the default value for the Directory to store Configuration and Data Files:  
`/var/opt/sun/comms/iwc`  
If the directory does not exist, select Create Directory to create the directory.
4. Configure the Mail and Calendar and Instant Messaging Services.
5. The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:

**Table 16 Values for Convergence configure Script**

| Option                               | [Default Value]                              | Enter:                |
|--------------------------------------|----------------------------------------------|-----------------------|
| Host Name                            | [demo]                                       | <i>accept default</i> |
| DNS Domain Name                      | [comms.beta.com]                             | <i>accept default</i> |
| Application Server Install Directory | [/opt/sun/appserver]                         | <i>accept default</i> |
| Domain Directory                     | [/opt/sun/appserver/domains/domain1]         | <i>accept default</i> |
| Document Root Directory              | [/opt/sun/appserver/domains/domain1/docroot] | <i>accept default</i> |
| Server Target Name                   | [server]                                     | <i>accept default</i> |
| Virtual Server Identifier            | [server]                                     | <i>accept default</i> |
| Server Instance HTTP Port            | [8080]                                       | <b>80</b>             |
| Administration Server Port           | [4848]                                       | <i>accept default</i> |
| Administrator User ID                | [admin]                                      | <i>accept default</i> |
| Administrator Password               | -                                            | <b>adminpass</b>      |

|                                       |                                   |                       |
|---------------------------------------|-----------------------------------|-----------------------|
| Secure Administration Server Instance | [no]                              | <b>yes</b>            |
| URI Path                              | [/iwc]                            | <i>accept default</i> |
| Enable Hosted Domain Support          | [yes]                             | <i>accept default</i> |
| Directory Server LDAP URL             | [ldap://demo.comms.beta.com:389/] | <i>accept default</i> |
| Bind DN                               | [cn=Directory Manager]            | <i>accept default</i> |
| Bind Password                         | -                                 | <b>adminpass</b>      |
| DC Tree suffix                        | [o=isp]                           | <i>accept default</i> |
| Default Domain Name                   | [comms.beta.com]                  | <i>accept default</i> |
| Webmail Server Host Name              | [demo.comms.beta.com]             | <i>accept default</i> |
| Webmail Server Port Number            | [8990]                            | <i>accept default</i> |
| Access in SSL mode                    | [no]                              | <i>accept default</i> |
| Webmail Admin User ID                 | [admin]                           | <i>accept default</i> |
| Admin Password                        | -                                 | <b>adminpass</b>      |
| Calendar Server Host Name             | [demo.comms.beta.com]             | <i>accept default</i> |
| Calendar Server Port                  | [80]                              | <b>3080</b>           |
| Access in SSL mode                    | [no]                              | <i>accept default</i> |
| Administrator User ID                 | [calmaster]                       | <i>accept default</i> |
| Administrator User Password           | -                                 | <b>adminpass</b>      |
| Instant Messaging Server Domain Name  | [comms.beta.com]                  | <i>accept default</i> |
| Instant Messaging Server Host Name    | [demo.comms.beta.com]             | <i>accept default</i> |
| Server Port                           | [5222]                            | <b>5269</b>           |
| httpbind Component JID                | [demo.httpbind.comms.beta.com]    | <i>accept default</i> |
| Password                              | -                                 | <b>adminpass</b>      |
| Avatar Component JID                  | [demo.avatar.comms.beta.com]      | <i>accept default</i> |

|                                    |         |                       |
|------------------------------------|---------|-----------------------|
| Password                           | -       | <b>adminpass</b>      |
| Convergence Administrator Username | [admin] | <i>accept default</i> |
| Password                           | -       | <b>adminpass</b>      |

6. Select **Configure Now** to configure Sun Convergence.  
The system displays a message to remind you to restart the Application Server Instance.
7. Once the configuration is completed, exit the configuration tool.
8. Restart Application Server.

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

9. Type the master password when prompted: **adminpass**
10. Continue with the next procedure.

### To Log into the Sun Convergence Client

1. In your web browser, open a URL for Sun Convergence and log in as a test user. The URL for Sun Convergence is:  
`http://fully-qualified-hostname:app-server-port/iwc`  
In this example, type:  
`*http://demo.comms.beta.com:80/iwc`  
\*
2. Log in using **jdoe** and **demo** as the user ID and password.
3. After verifying that you can access the Sun Convergence Client, log out.

## Creating Additional User Accounts and Groups

This section describes how to create additional users accounts and groups.

### To Create Users and Groups using CLI

The following example shows how to create two new users (demo1 and demo2) with the password demo using the Delegated Administrator command-line utility and also how to create a group (Demostaff@comms.beta.com) consisting of the newly created users.

```
cd /opt/sun/comms/da/bin
./commadmin user create -D admin -F Demo -l demo1 -L One -n
comms.beta.com -p 80 -w adminpass \
-W demo -X demo.comms.beta.com -S mail,cal -E demo1@comms.beta.com -H
demo.comms.beta.com
./commadmin user create -D admin -F Demo -l demo2 -L Two -n
comms.beta.com -p 80 -w adminpass \
-W demo -X demo.comms.beta.com -S mail,cal -E demo2@comms.beta.com -H
demo.comms.beta.com
./commadmin group create -D admin -G Demostaff -n comms.beta.com -p 80
-w adminpass \
-X demo.comms.beta.com -S mail -E Demostaff@comms.beta.com -H
demo.comms.beta.com \
-o jdoo -m demo1 -m demo2
```



### Note

Creating groups using the Delegated Administrator command-line interface will guarantee that these groups will be recognized by Access Manager as LDAP groups that can be searched on using Instant Messenger. They can also be used to send email to the entire group.

## To Use the Delegated Administrator GUI to Create Users

An alternative to using the Delegated Administrator command-line utility to create users is to use the Delegated Administrator web-based GUI. The high-level steps to creating users with Delegated Administrator are:

1. The first time you use the Delegated Administrator GUI, you must add service packs to the organization that contains your users:
  - In your web browser, open the URL for Delegated Administrator.  
In this example, type:  
`*http://demo.comms.beta.com:80/da`  
\*
  - Log in using **admin** as the Login ID and **adminpass** as the Password.
  - Click the check box next to `comms.beta.com` organization, then click the Allocate Service Package button. The Allocate Service Package window appears with a list of service packages organized within a set of three pages. Near the top of this list is a Compare button.
  - To the right of this button is a button that maps the three pages into a single view. Click the Single Page button.
  - Select the desired service packages then click Next. The `earth` and `mars` choices are appropriate for this example, since they have mail and calendar services enabled. Each service package has a different mail quota.
  - Accept the Mail Service defaults, then click Next.



### Note

If the Preferred Mail Host value is not set to the mail server host name `demo.comms.beta.com` in the Mail Service Details screen, close the window, log out of the Delegated Administrator GUI and return to the start of these steps.

- If you chose a service package that contains Calendar, type the Calendar Host `demo.comms.beta.com` and **Yes** for Anonymous Login. Then click Next.
  - Select the quantity of each service pack desired then click Next. A quantity of 100 is appropriate for this example.
  - Review your choices and click Finish to create the service packages.
  - Once the service packs have been allocated for the domain, you can add users to the domain.
2. Click the domain link. That is, click the `comms.beta.com` link
  3. Click the New button to create a new user within this domain. The New User window should appear.
    - Type a First Name (such as **Demo**), a Last Name (such as **Five**), a Display Name (such as **Demo Five**), then click Next.
    - You do not need to type postal information. Click Next again.
    - Select a service pack for this user (as added in step 1 earlier), for example, `mars`, then click Next.
    - Type the email address, for example, `demo5@comms.beta.com`. The Mail Delivery Option should be Local Inbox. Leave the remaining fields blank then click Next.
    - Choose your calendar preferences, select your preferred timezone, then click Next.
    - Type the Login ID and Password then click Next. In this example, Login ID is `demo5` and

- password is demo.
  - Verify the user information then click Finish to create the user.
4. Log in to Access Manager as `amadmin` and verify that the Instant Messaging and Presence services have been added to the newly created user. If not, you will need to assign services to those users as explained in [Add Services to the Lower Level Organization](#)

## Enabling service start-up on boot

The following guide steps through the process of enabling Communication Suite 6 services to start automatically on boot and stop automatically on shut-down.

[Communication Suite 6 Start and Stop Scripts \(Linux\)](#)

## Known Issues and Limitations

- LDAP instances are not inherited from the top level organization to the suborganization.
- Calendar Server library path being used in preference of system library path causing applications such as Mozilla Firefox to fail to start due to library conflicts.

Bug #6758080 - "Calendar server on Linux should not use ldconfig"

Workaround: Comment out the following three lines in the start-cal script:

```
if [ $OSNAME = Linux ]; then
  /sbin/ldconfig $SERVERROOT/lib
fi
```

For more information about known issues, see [Communications Suite 6 Update 1 Release Notes](#).

# Communication Suite 6 Start and Stop Scripts (Linux)

## Communication Suite 6 Start and Stop Scripts (Linux)

- Communication Suite 6 Start and Stop Scripts (Linux)
  - Background
  - Service Scripts
    - Sun Directory Server
    - Sun Messaging Server
    - Sun Calendar Server
    - Sun Application Server
    - Sun Instant Messaging Server
  - Sample boot.log output

### Background

The products that make up Communication Suite 6 need to be started in a specific order to ensure that any pre-requisite services are enabled prior to the product starting. This ordering is especially important when starting the products when booting the server.

The ordering of the product start-up is as follows:

1. Directory Server (relies on networking being started)
- 2a. Messaging Server (relies on Directory Server for user-group information)
- 2b. Calendar Server (relies on Directory Server for user-group information)
3. Application Server (relies on Directory, Messaging and Calendar server being available)
4. Instant Messaging Server (relies on Access Manager being available, provided by Application Server)

When the server is shut-down, the ordering is reversed.

Red Hat Linux provides the `chkconfig` utility to control the ordering of the product start-up and shut-down. A good explanation of the Red Hat Linux `chkconfig` functionality is available here:

<http://www.linuxjournal.com/article/4445>

The logs of each product being started/stopped during of the boot-up and shut-down is stored in `/var/log/boot.log` file on the server.

### Service Scripts

Each product requires a service script to start and stop the processes correctly. The following service scripts are designed to be used with a Communication Suite 6 system that has been installed and configured as per the [Sun Java Communications Suite 6 on a Single Host \(Linux\) Guide](#).



#### Note

The scripts will need to be modified as appropriate if the products were not installed in the default locations.

### Sun Directory Server

The following is the service script for Sun Directory Server.

## /etc/init.d/Sun\_DirSrv

```
#!/bin/sh
#
# Sun_DirSrv - boot script to start/stop Sun Java System Directory
Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 80 05
# description: starts and stops Sun Java System Directory Server
instance
#   in /var/opt/sun/directory/dsins1
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
instance_path="/var/opt/sun/directory/dsins1"
deploy_path="/opt/sun/directory/"

# See how we were called.
case "$1" in
  start)
    echo "Starting Sun Java System Directory Server instance in
$instance_path :"
    $deploy_path/ds6/bin/dsadm start $instance_path

# this line necessary for Red Hat 6.x
    touch /var/lock/subsys/$me
    echo
    ;;

  stop)
    echo "Stopping Sun Java System Directory Server instance in
$instance_path :"
    $deploy_path/ds6/bin/dsadm stop $instance_path

# this line necessary for Red Hat 6.x
    rm -f /var/lock/subsys/$me
    echo
    ;;

  *)
    echo "Usage: $me { start | stop }"
    exit 1
    ;;
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure

that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_DirSrv
chmod 0744 /etc/init.d/Sun_DirSrv
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_DirSrv
```

## Sun Messaging Server

Messaging Server provides a suitable script that can be put into place by running the following commands:

```
cp /opt/sun/comms/messaging/lib/Sun_MsgSvr /etc/init.d/

chown root:sys /etc/init.d/Sun_MsgSvr
chmod 0744 /etc/init.d/Sun_MsgSvr
```

Red Hat Linux doesn't apply the open-file-handle limits specified in the `/etc/security/limits.conf` file to service scripts therefore it is necessary to hard-code a greater limit into the service script by adding the following lines just below initial comments in the `/etc/init.d/Sun_MsgSvr` script:

```
# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384
```

If you have not made the above modification you will see the following error in the Messaging Server http log file after the system is rebooted:

```
[11/Sep/2008:06:06:54 +1000] server httpd[4660]: General Critical: Not
enough file descriptors to support
6000 sessions per process; Recommend ulimit -n 12851 or 87 sessions per
process.
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_MsgSvr
```

## Sun Calendar Server

When Calendar Server is initially configured, the configuration process places a script in `/etc/init.d`. As this script isn't appropriate we will disable it use the script defined in this guide.

```
rm /etc/rc?.d/???calendar
```

The following is the replacement service script for Sun Calendar Server.

## /etc/init.d/Sun\_CalSrv

```
#!/bin/sh
#
# Sun_CalSrv - boot script to start/stop Sun Java System Calendar Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 92 08
# description: starts and stops Sun Java System Calendar Server
#    in /opt/sun/comms/calendar
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
deploy_path="/opt/sun/comms/calendar"

# See how we were called.
case "$1" in
  start)
    echo "Starting Sun Java System Calendar Server in $deploy_path"
    :
    $deploy_path/calendar/sbin/start-cal 2>/dev/null

# this line necessary for Red Hat 6.x
    touch /var/lock/subsys/$me
    echo
    ;;

  stop)
    echo "Stopping Sun Java System Calendar Server in $deploy_path"
    :
    $deploy_path/calendar/sbin/stop-cal 2>/dev/null

# this line necessary for Red Hat 6.x
    rm -f /var/lock/subsys/$me
    echo
    ;;

  *)
    echo "Usage: $me { start | stop }"
    exit 1
    ;;
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_CalSrv
chmod 0744 /etc/init.d/Sun_CalSrv
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_CalSrv
```

## Sun Application Server

Sun Application Server will by default prompt the user for a `master password` when it is started. This prevents automated start-up on boot. Sun Application Server provides a mechanism to hard-code the `master password` in a password file.

For this guide, create the following password file. The `adminpass` value in the file should match the `master password` which is usually provided when starting Sun Application Server.

```
/opt/sun/appserver/config/aspaswd
```

```
AS_ADMIN_MASTERPASSWORD=adminpass
```

Change the permissions on the password file to be read-only by the root user for security.

```
chown root:sys /opt/sun/appserver/config/.aspaswd
chmod 400 /opt/sun/appserver/config/.aspaswd
```

The following is the service script for Sun Application Server.

## /etc/init.d/Sun\_AppSrv

```
#!/bin/sh
#
# Sun_AppSrv - boot script to start/stop Sun Application Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 93 12
# description: starts and stops Sun Application Server in
#   in /opt/sun/appserver/
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
deploy_path="/opt/sun/appserver/"
passwd_file="/opt/sun/appserver/config/.aspasswd"

# See how we were called.
case "$1" in
  start)
    echo "Starting Sun Application Server in $deploy_path :"
    $deploy_path/bin/asadmin start-domain --passwordfile
    $passwd_file

# this line necessary for Red Hat 6.x
    touch /var/lock/subsys/$me
    echo
    ;;

  stop)
    echo "Stopping Sun Application Server in $deploy_path :"
    $deploy_path/bin/asadmin stop-domain

# this line necessary for Red Hat 6.x
    rm -f /var/lock/subsys/$me
    echo
    ;;

  *)
    echo "Usage: $me { start | stop }"

    exit 1
    ;;
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_AppSrv
chmod 0744 /etc/init.d/Sun_AppSrv
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_AppSrv
```

### **Sun Instant Messaging Server**

When Instant Messaging Server is configured, the configuration process places a script in `/etc/init.d`. In this case this script isn't appropriate and we will disable it use the script defined in this guide.

```
rm /etc/rc?.d/???soim
```

The following is the replacement service script for Sun Instant Messaging Server.

## /etc/init.d/Sun\_IMSrv

```
#!/bin/sh
#
# Sun_IMSrv - boot script to start/stop Sun Instant Messaging Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 95 15
# description: starts and stops Sun Instant Messaging Server
#    in /opt/sun/comms/im
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
deploy_path="/opt/sun/comms/im"

# See how we were called.
case "$1" in
  start)
    echo "Starting Sun Instant Messaging Server in $deploy_path :"
    $deploy_path/sbin/imadmin start 2>/dev/null

# this line necessary for Red Hat 6.x
    touch /var/lock/subsys/$me
    echo
    ;;

  stop)
    echo "Stopping Sun Instant Messaging Server in $deploy_path :"
    $deploy_path/sbin/imadmin stop 2>/dev/null

# this line necessary for Red Hat 6.x
    rm -f /var/lock/subsys/$me
    echo
    ;;

  *)
    echo "Usage: $me { start | stop }"
    exit 1
    ;;
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_IMSrv
chmod 0744 /etc/init.d/Sun_IMSrv
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_IMSrv
```

## Sample boot.log output

The following is a sample of the output from the `/var/log/boot.log` file once the scripts in this guide have been successfully created and enabled.

```
Oct  3 14:09:19 demo Sun_DirSrv: Starting Sun Java System Directory
Server instance in
/var/opt/sun/directory/dsins1 :
Oct  3 14:09:23 demo Sun_DirSrv: Directory Server instance
'/var/opt/sun/directory/dsins1' started:
pid=4629
Oct  3 14:09:23 demo Sun_DirSrv:
Oct  3 14:09:23 demo rc: Starting Sun_DirSrv:  succeeded
Oct  3 14:09:27 demo Sun_CalSrv: Starting Sun Java System Calendar
Server in /opt/sun/comms/calendar :
Oct  3 14:09:34 demo Sun_CalSrv:
Oct  3 14:09:34 demo rc: Starting Sun_CalSrv:  succeeded
Oct  3 14:09:34 demo Sun_MsgSvr: Starting Sun Java System Messaging
Server in /opt/sun/comms/messaging :
Oct  3 14:09:34 demo Sun_MsgSvr: Connecting to watcher ...
Oct  3 14:09:34 demo Sun_MsgSvr: Launching watcher ...
Oct  3 14:09:35 demo Sun_MsgSvr: 4770
Oct  3 14:09:35 demo Sun_MsgSvr: Starting store server ...
Oct  3 14:09:35 demo Sun_MsgSvr: .
Oct  3 14:09:35 demo Sun_MsgSvr: 4771
Oct  3 14:09:35 demo Sun_MsgSvr: Checking store server status ...
Oct  3 14:09:36 demo Sun_MsgSvr:  ready
Oct  3 14:09:36 demo Sun_MsgSvr: Starting purge server ...
Oct  3 14:09:36 demo Sun_MsgSvr: .
Oct  3 14:09:36 demo Sun_MsgSvr: 4773
Oct  3 14:09:36 demo Sun_MsgSvr: Starting imap server ....
Oct  3 14:09:36 demo Sun_MsgSvr: 4777
Oct  3 14:09:36 demo Sun_MsgSvr: Starting pop server ....
Oct  3 14:09:37 demo Sun_MsgSvr: 4781
Oct  3 14:09:37 demo Sun_MsgSvr: Starting http server ...
Oct  3 14:09:37 demo Sun_MsgSvr: .
Oct  3 14:09:37 demo Sun_MsgSvr: 4786
Oct  3 14:09:37 demo Sun_MsgSvr: Starting sched server ... 4789
Oct  3 14:09:37 demo Sun_MsgSvr: Starting dispatcher server ...
Oct  3 14:09:37 demo Sun_MsgSvr: .
Oct  3 14:09:38 demo Sun_MsgSvr: 4791
Oct  3 14:09:38 demo Sun_MsgSvr: Starting job_controller server ...
Oct  3 14:09:38 demo Sun_MsgSvr: .
Oct  3 14:09:38 demo Sun_MsgSvr: 4804
Oct  3 14:09:38 demo Sun_MsgSvr:
Oct  3 14:09:38 demo rc: Starting Sun_MsgSvr:  succeeded
Oct  3 14:09:39 demo Sun_AppSrv: Starting Sun Application Server in
/opt/sun/appserver/ :
Oct  3 14:09:40 demo Sun_AppSrv: Starting Domain domain1, please wait.
```

```

Oct  3 14:09:40 demo Sun_AppSrv:
Oct  3 14:09:40 demo Sun_AppSrv: Log redirected to
/opt/sun/appserver/domains/domain1/logs/server.log.
Oct  3 14:09:43 demo Sun_AppSrv: Redirecting output to
/opt/sun/appserver/domains/domain1/logs/server.log
Oct  3 14:09:43 demo Sun_AppSrv:
Oct  3 14:10:58 demo Sun_AppSrv: Domain domain1 started.
Oct  3 14:10:58 demo Sun_AppSrv:
Oct  3 14:10:58 demo Sun_AppSrv: Domain [domain1] is running [Sun Java
System Application Server 9.1_01
(build b09d-fcs)] with its configuration and logs at:
[/opt/sun/appserver/domains].
Oct  3 14:10:58 demo Sun_AppSrv:
Oct  3 14:10:58 demo Sun_AppSrv: Admin Console is available at
[https://localhost:4848].
Oct  3 14:10:58 demo Sun_AppSrv: Use the same port [4848] for "asadmin"
commands.
Oct  3 14:10:58 demo Sun_AppSrv: User web applications are available at
these URLs:
Oct  3 14:10:58 demo Sun_AppSrv: [http://localhost:80
https://localhost:443 ].
Oct  3 14:10:58 demo Sun_AppSrv: Following web-contexts are available:
Oct  3 14:10:58 demo Sun_AppSrv: [/web1 /__wstx-services amserver
ampassword amcommon amconsole dscc
/da /commcli /uwc /im /iwc ].
Oct  3 14:10:58 demo Sun_AppSrv: Standard JMX Clients (like JConsole)
can connect to JMXServiceURL:
Oct  3 14:10:58 demo Sun_AppSrv:
[service:jmx:rmi:///jndi/rmi://melkor.aus.sun.com:8686/jmxrmi] for
domain
management purposes.
Oct  3 14:10:58 demo Sun_AppSrv: Domain listens on at least following
ports for connections:
Oct  3 14:10:58 demo Sun_AppSrv: [80 443 4848 3700 3820 3920 8686 ].
Oct  3 14:10:58 demo Sun_AppSrv: Domain supports application server
clusters and other standalone instances.
Oct  3 14:10:58 demo Sun_AppSrv:
Oct  3 14:10:58 demo Sun_AppSrv:
Oct  3 14:10:58 demo rc: Starting Sun_AppSrv:  succeeded
Oct  3 14:10:59 demo Sun_IMSrv: Starting Sun Instant Messaging Server in
/opt/sun/comms/im :
Oct  3 14:11:03 demo Sun_IMSrv: Starting Watchdog
Oct  3 14:11:08 demo Sun_IMSrv: [OK]

```

```
Oct 3 14:11:08 demo Sun_IMSrv:  
Oct 3 14:11:09 demo rc: Starting Sun_IMSrv: succeeded
```

# Chapter 29. Sun Java System Connector for Microsoft Outlook Installation Guide

---

## Sun Java System Connector for Microsoft Outlook Installation Guide

This guide describes how to install the Sun Java System Connector for Microsoft Outlook. This guide includes the following topics:

- [Installing the Desktop Deployment Toolkit](#)

For upgrade information, refer to [Connector for Microsoft Outlook Upgrade Guide](#) .

# Installing the Desktop Deployment Toolkit

## Installing the Desktop Deployment Toolkit

This book describes installing and upgrading the administrator's Desktop Deployment Toolkit for the Sun Java System Connector for Microsoft Outlook. The InstallShield Wizard installs all of the components of Sun's Deployment Toolkit:

- **Deployment Configuration Program:** Sun's tool that lets system administrators create bundled, customized installation packages for end users.
- **Sun Java System Connector Setup Wizard:** Sun's tool that lets end users install the Sun Java System Connector software, configure its operations and features, and convert existing Outlook data files ( .pst files) associated with Exchange into a form that the Sun Java System Connector can use.
- **Sun's Install kit (MSI) for the Sun Java System Connector:** Sun's installation utility for the per-desktop software that facilitates ongoing, permanent communications between Microsoft Outlook and the Sun Java System server.
- **Special Kits for using Microsoft System Management Services (SMS) to install the Sun Java System Connector:** Sun utilities that support the "push" functionality of Microsoft's SMS to let a system administrator distribute and install the Sun Java System Connector desktop components to user desktops with minimal or no user involvement.

These components are described in more detail in [Deploying Outlook Connector](#) and the [Administration Guide](#). This Installation Guide describes only the installation of this Deployment Toolkit, and is organized into the following sections:

- [Installation Overview](#)
- [Installing the Administrator's Software](#)
- [What's Next?](#)

Prerequisites to installing Sun Java System Connector for Microsoft Outlook is that you have a general understanding of the following:

- The Internet and the World Wide Web
- Messaging Server and Calendar Server protocols
- System Administration and Networking on the following platforms:
  - Microsoft Windows Vista
  - Microsoft Windows XP
  - Microsoft Windows 2000
- Microsoft Outlook
- General Deployment Architectures

## Installation Overview

If the most recent version of the administrator's Deployment Toolkit for the Sun Java System Connector for Microsoft Outlook is not already installed on your computer, you must install it before you can create end-user installation packages.

Before you install, you should verify that the systems on which you plan to install the software meet the minimum product requirements. It is also a good idea to plan how you want to deploy and configure the software components before you begin the installation process. See [Outlook Connector Deployment](#) for information about deploying Connector for Microsoft Outlook to user desktops. And see the [Communications Suite Release Notes](#) for hardware and software requirements and supported versions.

**Note -**

If you are upgrading from an earlier version of the Desktop Deployment Toolkit: This InstallShield Wizard will simply overwrite the earlier version with this new version, and leave only a single program entry in the Add/Remove Programs applet in Windows' Control Panel. There is no separate procedure or special accommodation for a version upgrade versus a first-time installation.

## Installing the Administrator's Software

Follow the steps below to install the administrator's Desktop Deployment Toolkit.

### To Install the Desktop Deployment Toolkit

1. Locate the Sun Java System Connector for Microsoft Outlook setup file, `Setup.exe`, that you have downloaded or otherwise copied to your computer.  
Double-click the filename to start the program. You are prompted to select your preferred language.  
The InstallShield Wizard then welcomes you to the process and prompts you to click **Next** to continue, as shown in [Figure 1-1](#).  
**Figure 1-1 The InstallShield Wizard Welcome Screen**  
Unable to render embedded object: File (welcome\_screen.PNG) not found.
2. Accept the license agreement.  
Read the license agreement for Connector for Microsoft Outlook, as shown in [Figure 1-2](#) and select the option to accept the license agreement terms.  
Click **Next** to continue.  
**Figure 1-2 InstallShield Wizard: License Agreement**  
Unable to render embedded object: File (license\_info.PNG) not found.
3. Enter your customer information.  
Enter your user name and organization, as shown in [Figure 1-3](#), and choose whether you want the Deployment Configuration Program software to be available to all users of this computer, or only to your user name.  
Click **Next** to continue.  
**Figure 1-3 InstallShield Wizard: Customer Information**  
Unable to render embedded object: File (customer\_info.PNG) not found.
4. Select or confirm the destination folder where the Deployment Configuration Program is installed.  
The Destination Folder window, as shown in [Figure 1-4](#), prompts you to confirm or change the location where the Deployment Configuration Program is installed.  
**Figure 1-4 InstallShield Wizard: Destination Folder**  
Unable to render embedded object: File (Select\_destination.PNG) not found.  
To change the location, click **Change**. In the Change Current Destination Folder window, set the desired folder, as shown in [Figure 1-5](#).  
**Figure 1-5 InstallShield Wizard: Change Current Destination Folder**  
Unable to render embedded object: File (change\_destination.PNG) not found.  
Once the destination folder is set, click **Next** in the Destination Folder window.
5. Install the software.  
The InstallShield Wizard then announces that it is ready to begin the actual installation, and prompts you to click **Next** to begin.
6. Wait for the installation to proceed and conclude.  
A progress meter appears in the window while you are waiting. The Installation Complete window, as shown in [Figure 1-6](#), notifies you that the process is complete, and prompts you to click **Finish**.

### Figure 1-6 InstallShield Wizard: Installation Complete

Unable to render embedded object: File (finish\_screen.PNG) not found.

7. Click the Launch the Sun Java System Connector for Microsoft Outlook Deployment Configuration Program checkbox.
8. Click **Finish**.

The Sun Java System Connector for Microsoft Outlook Deployment Configuration Program icon appears on the desktop.

As the InstallShield Wizard exits, it opens a browser window with links to the Sun web site where you can access Outlook Connector documentation.

The Desktop Deployment Toolkit has now been installed to the location you specified in the Destination Folder window. The default folder is:

```
C:\Program Files\Sun\Deployment Configuration Program\
```

A new shortcut icon for the administrator's Deployment Configuration program (`Admin.exe`) appears on your desktop.

## What's Next?

Planning and foresight are critical to a smooth deployment, so you should have already prepared a comprehensive Deployment Plan before installing the administrator software as described in this chapter. If you haven't yet prepared a Deployment Plan, do it now, before you attempt to create your first desktop deployment kit. The process of developing a comprehensive Deployment Plan is a valuable exercise that will lead you to consider and accommodate all of the factors likely to influence your organization's migration. [Outlook Connector Deployment Guide](#) explains important migration concepts, prerequisites, and strategic choices, and explains how to develop a Deployment Plan that will guide you through your migration. Every administrator should therefore read [Outlook Connector Deployment Guide](#) and prepare a comprehensive Deployment Plan.

After you have prepared your Deployment Plan and installed the administrator software, you can:

**Configure an end-user package.** The [Administration Guide](#) explains how to use the Deployment Configuration Program to create customized packages for Outlook end users. These packages can be configured to install the necessary software on user desktops, or to convert users' existing Outlook and Exchange data files for use with the new software, or both, depending on your circumstances.

**Deploy each end-user package.** Once you have created an installation package for your users, you must tell them where to find it and how to use it. Many administrators simply copy the package and the [User's Guide](#) to a shared folder, and then provide links to the installation package and documentation in an announcement email to users.

If your migration strategy calls for two or more different installation packages for different users or user groups, repeat these two steps for each package until all users have been migrated.

# Chapter 30. Calendar Server 6.3 Release Notes

---

## Sun Java System Calendar Server 6.3 Release Notes

These Release Notes contain important information available at the time of the general release of Sun Java System Calendar Server 6.3 including:

- [About Calendar Server 6.3](#)
- [What's New in This Release of Calendar Server](#)
- [Deprecated and Removed Features for Calendar Server 6.3](#)
- [Requirements for Calendar Server 6.3](#)
- [Important Upgrade Patch Information for Calendar Server 6.3](#)
- [Calendar Server Installation Notes](#)
- [Calendar Server Documentation Updates](#)
- [Calendar Server Compatibility Issues](#)
- [Problems Fixed in This Release of Calendar Server](#)
- [Known Issues and Limitations in Calendar Server](#)
- [Redistributable Files for Calendar Server](#)

### About Calendar Server 6.3

Calendar Server is a scalable, web-based solution for centralized calendaring and scheduling for enterprises and service providers. Calendar Server supports user calendars for both events and tasks as well as calendars for resources, such as conference rooms and equipment.

Calendar Server offers two graphical user interfaces, Convergence and Communications Express. It also offers customers the flexibility to use the Web Calendar Access Protocol (WCAP) to access calendar data directly in either `text/calendar` or `text/xml` format.

### What's New in This Release of Calendar Server

For details, see the [What's New document](#).

### Deprecated and Removed Features for Calendar Server 6.3

For Sun Java System Calendar Server 6.3, the following features have been deprecated:

- The Calendar Express graphical user interface (GUI) has been deprecated and will be removed from the distribution in the the next major feature release.
- The WCAP `attachments` parameter, used by both `storeevents` and `storetodo`, has been deprecated. For backward compatibility, this parameter is still honored. But in a future release this parameter will no longer be recognized. Change any scripts you have using this parameter.
- The `cstool` utility that you use for monitoring Calendar Server activity has been removed in the Calendar Server 6.3 release.
- Calendar Server software is no longer available for Windows and HP-UX platforms.

### Requirements for Calendar Server 6.3

See [Requirements for Communications Suite 6](#).

## Important Upgrade Patch Information for Calendar Server 6.3

The Calendar Server 6.3 in Communications Suite 6 Update 1 is the equivalent of the following patches:

**Table 3-1 Calendar Server 6.3 Upgrade Patches (for Communications Suite 6 Update 1)**

| Platform          | Patch Number (English and Localized Languages) |
|-------------------|------------------------------------------------|
| Solaris OS, SPARC | 121657-32                                      |
| x86               | 121658-32                                      |
| Linux             | 121659-32                                      |

The most recent Calendar Server patch version can be found on: [Communications Suite Component Patches](#).

You can get the most current product patches at Sun Solve. For how to get patches from Sun Solve, use the following procedure:

### How to Get Patches on SunSolve

1. For the current list of required patches for Sun Java System Calendar Server, go to: <http://sunsolve.sun.com>
2. Select either "Patches" or "Patch Portal".
3. Follow the Sun Java System Calendar Server links.  
As operating system patch requirements change and patches to Java Enterprise System components become available, updates will be made available on SunSolve, initially in the form of recommended patch clusters.

## Calendar Server Installation Notes

This section contains information you should know before you install Calendar Server 6.3. This section contains the following subsections:

- [Default Calendar Server Installation Directories on Solaris and Linux Platforms](#)
- [OS Patches](#)
- [Required Privileges](#)
- [Upgrading From an Earlier Version of Calendar Server 6](#)
- [Upgrading Your Calendar Database](#)
- [Upgrading to Calendar Server 6.3 Patch 121658-20 or Later on Solaris x86 Platforms](#)
- [Calendar Server Postinstallation Configuration](#)
- [Automatic Base 64 Encoding of Passwords](#)
- [Where to Find Calendar Server Data and Program Files](#)
- [Tuning Directory Server Performance for Calendar Server](#)



### Caution

Calendar Server does not support Network File System (NFS) mounted partitions. Do not install or create any part of Calendar Server, including executable, database, configuration, data, temporary, or log files, on an NFS-mounted partition.

## Default Calendar Server Installation Directories on Solaris and Linux Platforms

The following table shows the default installation directory paths for Solaris and Linux:

**Table 3-2 Default Calendar Server Installation Directories**

### Solaris Default Directories

`cal-svr-base=/opt/sun/comms/calendar/`

`/etc/cal-svr-base/SUNWics5/config`

`/var/cal-svr-base/SUNWics5`

### Linux Default Directories

`cal-svr-base=/opt/sun/comms/calendar/`

`/etc/cal-svr-base/config`

`/var/cal-svr-base/`



#### Tip

In the documentation, the default installation directory for Calendar Server is referred to as `cal-svr-base`.

## OS Patches

You must apply the required operating system patches before installing Calendar Server. The Communications Suite installer checks for required platform patches. You must install all required patches or the installation process does not continue.

## Required Privileges

To run the Communications Suite 6 installer or the Calendar Server 6.3 configuration program on a Solaris OS system, log in as or become the superuser (`root`).

## Upgrading From an Earlier Version of Calendar Server 6

Upgrade to the latest Calendar Server 6.3 patch by using `patchadd` process.

For more information about upgrading to Calendar Server 6.3 from previous Calendar Server versions, see [Sun Java Communications Suite 5 Upgrade Guide](#).

## Upgrading Your Calendar Database

If you are upgrading from a Calendar Server version prior to 6.3 to the current 6.3 version, you must upgrade your databases also, using various database tools named in this section. More information about the migration tools can be found in the [Sun Java System Calendar Server 6.3 Administration Guide](#).

### Upgrading from an Earlier Version of Calendar Server

If the version of your previous Calendar Server software predates version 5.1.1, first call Sun Support Services for assistance in migrating your databases to be Calendar Server 5.1.1 compatible. You can not migrate directly to any of the Calendar Server version 6 releases. In the process recommended by Sun Support Services, you are required to install Calendar Server 5.1.1. After your database files are Calendar Server 5.1.1 compatible, install Calendar Server 6.3 and run the following database tools in the order listed.

**cs5migrate**

Run this utility to upgrade your databases from version 5.1.1 to version 6.2 level. This is an intermediate step that is required before you run the `csmigrate` utility to bring it up to version 6.3 level. The `cs5migrate` utility can be found in the `sbin` directory after you install Calendar Server 6.3.

You must specify the `-r` option. The `cs5migrate` utility then creates master and exception records for all recurring events and tasks. Going forward these records will be automatically generated by Calendar Server.

This utility performs the following changes to your databases:

- Migrates your Calendar Server 5.1.1 LDAP database to be Calendar Server 6.2 compatible
- Migrates your Berkeley Data Base to version 4.2
- Writes the migration status to `csmigrate.log` log file
- Writes errors to `csmigrateerror.log` log file

### **csmig**

Run this utility so the LDAP CLD plug-in works properly.

### **csvdmig**

Run this utility to convert your non-domain calendar databases to single domain databases compatible with a multiple domain environment.

### **csmigrate**

Now that your Calendar Server Databases are in version 6.2 mode, run the `csmigrate` utility to migrate your Calendar Server 6.2 databases to be compatible with Calendar Server version 6.3.

You can find the `csmigrate` utility, along with other administrative tools, in the `sbin` directory of your newly installed Calendar Server 6.3 software. For more information on `csmigrate`, see [Sun Java System Calendar Server 6.3 Administration Guide](#).



#### **Caution**

If you are upgrading from a much older version of Calendar Server that was configured for limited virtual domain mode or has multiple instances of Calendar Server on the same machine, contact your Sun Microsystems, Inc. sales account representative for an evaluation of your migration requirements and to ensure that you have the specific migration utility that supports those requirements.

**And, as always, never migrate your database without first performing a full backup.**

## **Upgrading Your Calendar Server Version 6.0, 6.1, or 6.2 Databases to be Calendar Server Version 6.3 Compatible**

Run `csmigrate` to upgrade your calendar databases to version 6.3 level.

You can find the `csmigrate` utility, along with other administrative tools, in the `sbin` directory of your newly installed Calendar Server 6.3 software. For more information on `csmigrate`, see [Sun Java System Calendar Server 6.3 Administration Guide](#).

**Caution**

If you already have a Calendar Server 6.3 installation and you just upgraded to the latest patch, no migration utilities need to be run.

## Upgrading to Calendar Server 6.3 Patch 121658-20 or Later on Solaris x86 Platforms

**Data created in the Solaris x86 version of Calendar Server 6.3 patch 121658-19 or earlier is corrupted when you upgrade to patch 121658-20 or later. This issue occurs on Solaris x86 platforms only (CR 6642958).**

With patch 121658-20 and later, Calendar Server uses the new Berkeley Database library, which is incompatible with the database created by earlier versions. In order to use the database created by patch 121658-19 (or prior) with this patch, you must update the database.

Follow this procedure:

1. Make sure the Calendar Server installation is patch 121658-19 or prior.
2. Important: Take a copy of the current database.
3. Check to make sure the database is in good condition by running `db_verify` and `csdb check`.
4. Dump the data using `db_dump`.
  - a. Set `LD_LIBRARY_PATH` to `cal-svr-base/SUNWics5/cal/lib`.  
For example: `./db_dump -r -f /var/opt/SUNWics5/dump/ics50alarms.db.txt /var/opt/SUNWics5/csdb/ics50alarms.db`
  - b. Do the same for all the databases.  
This dumps the `ics50alarms.db` to `ics50alarms.db.txt` (text file) and is placed in the "dump" directory.
5. Apply this patch (121658-24 or later).
6. Load the data dumped in the preceding step to the database files using the `cs_dbload` utility provided in this patch.
  - a. Set `LD_LIBRARY_PATH` to `cal-svr-base/SUNWics5/cal/lib`.
  - b. Run `cs_dbload` to load files dumped in step 4.  
For example: `./cs_dbload -f /var/opt/SUNWics5/dump/ics50alarms.db.txt /var/opt/SUNWics5/dbload/ics50alarms.db`
  - c. Do the same for all the databases.  
This loads the records present in `ics50alarms.db.txt` to the `ics50alarms.db` in the "dbload" directory. A new "dbload" directory is chosen in order not to overwrite the original database.
7. Run `csdb check` or `csdb rebuild` on the database files created in the preceding step.

### FAQ: Solaris x86 Upgrade to Calendar Server 6.3 Patch 121658-20 or Later.

**Question:** Is this a problem only for Solaris x86?

**Answer:** Yes, this is problem only for Solaris x86. SPARC and Linux platforms are not affected.

**Question:** Do you have to perform this task for every patch? Or only one time?

**Answer:** This is a one-time only task. Once you convert the database to work with this patch, you do not have to repeat these steps for future patches. You can just perform a `patchadd`.

**Question:** If I have patch -17 or -18, what should I do?

**Answer:** Follow the [previous procedure](#).

**Question:** If I have patch -21, -22, or -23, and I have not previously done a dump/load, what should I do?

**Answer:** We don't expect Calendar Server to run without crashes on these patch levels if the dump/load

procedure is not performed. If you have these patches installed and do not see any issue, then please contact technical support on how to move forward with the patches.

**Question:** If I have already applied patch -24, and I've already done a dump/load, and I want patch -25 or the Communications Suite 6 software, what should I do?

**Answer:** Perform a `patchadd` of patch -25. No additional steps are required.

**Question:** If I have Communications Suite 5 (Calendar Server 6.3) and I want to be a Beta customer, what should I do?

**Answer:** If you want to move data from your existing database to the new database, you will have to perform the dump/load procedure described in patch -24.

## Calendar Server Postinstallation Configuration

After installing or upgrading to Calendar Server 6.3 and before you can use Calendar Server, you must configure it according to the instructions in [Calendar Server 6.3 Initial Configuration](#).

### Automatic Base 64 Encoding of Passwords

In the past, the Calendar Server configuration file stored some passwords in clear text. Though the `ics.conf` file has read permission restrictions, the passwords could be visible to someone else when the administrator edits the configuration file. In Calendar Server 6.3, the passwords have been moved to another file and obfuscated by base 64 encoding them. The base 64 encoding prevents someone from accidentally seeing the passwords. You must still protect the file with read permission restrictions, and keep the file secure so that no unauthorized user can get to it, to keep the passwords secure.

If you are installing Calendar Server for the first time, the configuration program encodes the passwords that you create during the configuration process, and stores them in a separate password configuration file.

If you are upgrading your existing Calendar Server software to the Calendar Server 6.3 version, the configuration program encodes the existing passwords found in the `ics.conf` file, and moves them to the password configuration file.

In both cases, the configuration program also adds a new `ics.conf` parameter to indicate the location of the password file, as shown in the following example:

```
local.passwordfile="/etc/opt/SUNWics5/config/icspassword.conf"
```

Do not change this configuration parameter.

Due to this change, the following configuration parameters have been moved out of the `ics.conf` file:

- `local.authldapbindcred`
- `local.enduseradmincred`
- `local.lookupldapbindcred`
- `service.siteadmin.cred`



#### Note

The LDAP bind passwords that are generated by the configurator are re-generated each time you run the configurator, once they are moved out of the `ics.conf` file.

## Where to Find Calendar Server Data and Program Files

The following table shows where to find various files and programs referred to in the documentation for both the Solaris and Linux platforms:

**Table 3-4 Location of Calendar Server Files**

| File Names                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Solaris Locations                                                                                                                                                                                                                                                                                                                                                                                                                                  | Linux Locations                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Administrator utilities: <code>start-cal</code>, <code>stop-cal</code>, <code>csattribute</code>, <code>csbackup</code>, <code>cscal</code>, <code>cscomponents</code>, <code>csdb</code>, <code>csdomain</code>, <code>csexport</code>, <code>csimport</code>, <code>csmonitor</code>, <code>csplugin</code>, <code>cspurge</code>, <code>csrename</code>, <code>csresource</code>, <code>csrestore</code>, <code>csschedule</code>, <code>csstats</code>, <code>cstool</code>, and <code>csuser</code></p> | <p><code>cal-svr-base</code><br/><code>/SUNWics5/cal/lsbin</code></p>                                                                                                                                                                                                                                                                                                                                                                              | <p><code>cal-svr-base/sbin</code></p>                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>Migration utilities: <code>csmig</code> and <code>csvdmig</code></p>                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p><code>cal-svr-base</code><br/><code>/SUNWics5/cal/sbin</code></p>                                                                                                                                                                                                                                                                                                                                                                               | <p><code>cal-svr-base/sbin</code></p>                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>Configuration files: <code>ics.conf</code>, <code>version.conf</code>, <code>counter.conf</code>, and <code>sslpassword.conf</code></p>                                                                                                                                                                                                                                                                                                                                                                      | <p>After installation, files are located at: <code>cal-svr-base</code><br/><code>/SUNWics5/cal/lib/config-template</code></p> <p>During configuration, the various files from the above directory are moved to the locations specified by the configuration options you choose. The default location is:<br/><code>/etc/cal-svr-base</code><br/><code>/SUNWics5/config</code></p>                                                                  | <p>After installation, the files are located at:<br/><code>cal-svr-base/lib/lib/config-template</code></p> <p>During configuration, the various files from the above directory are moved to the locations specified by the configuration options you choose. The default location is:<br/><code>/etc/cal-svr-base</code><br/><code>/config</code></p>                                                                 |
| <p>Mail formatting (<code>*.fmt</code>) files</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>After installation, the files are located at: <code>cal-svr-base</code><br/><code>/SUNWics5/cal/lib/config-template</code></p> <p>After configuration, the files are located at: <code>/etc/cal-svr-base</code><br/><code>/SUNWics5/config/language</code></p> <p>where <i>language</i> is <code>en</code>, <code>de</code>, <code>es</code>, <code>fr</code>, <code>ja</code>, <code>ko</code>, <code>zh-TW</code>, or <code>zh-CN</code>.</p> | <p>After installation, the files are located at<br/><code>cal-svr-base/lib/lib/config-template</code></p> <p>After configuration, the files are located at:<br/><code>/etc/cal-svr-base</code><br/><code>/config/language</code></p> <p>where <i>language</i> is <code>en</code>, <code>de</code>, <code>es</code>, <code>fr</code>, <code>ja</code>, <code>ko</code>, <code>zh-TW</code>, or <code>zh-CN</code>.</p> |
| <p>Library (<code>.so</code>) files</p> <p>SSL utilities: <code>certutil</code> and <code>modutil</code></p>                                                                                                                                                                                                                                                                                                                                                                                                    | <p><code>/var/cal-svr-base</code><br/><code>/SUNWics5/cal/lib/</code></p>                                                                                                                                                                                                                                                                                                                                                                          | <p><code>cal-svr-base/lib</code></p>                                                                                                                                                                                                                                                                                                                                                                                  |
| <p>Session database</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p><code>/var/cal-svr-base</code><br/><code>/SUNWics5/data/http</code></p>                                                                                                                                                                                                                                                                                                                                                                         | <p><code>/var/cal-svr-base</code><br/><code>/data/http</code></p>                                                                                                                                                                                                                                                                                                                                                     |
| <p>Counter statistics files: <code>counter</code> and <code>counter.dbstat</code></p>                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><code>cal-svr-base</code><br/><code>/SUNWics5/cal/lib/counter</code></p>                                                                                                                                                                                                                                                                                                                                                                        | <p><code>cal-svr-base</code><br/><code>/lib/counter</code></p>                                                                                                                                                                                                                                                                                                                                                        |
| <p><code>timezones.ics</code> file</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p><code>/etc/cal-svr-base</code><br/><code>/SUNWics5/config</code></p>                                                                                                                                                                                                                                                                                                                                                                            | <p><code>/etc/cal-svr-base</code><br/><code>/config</code></p>                                                                                                                                                                                                                                                                                                                                                        |

## Tuning Directory Server Performance for Calendar Server

To improve the performance of your LDAP directory server, especially if you are using calendar searches of the LDAP directory consider the following items:

### Indexing the LDAP Directory Server Attributes

To improve performance when Calendar Server accesses the LDAP directory server, add indexes to the LDAP configuration file for various attributes.

The configuration program, `comm_dssetup.pl`, will optionally do the indexing for you.



#### Tip

To see the performance difference indexing can give you, perform the following test:

1. Before indexing, time how long it takes to run the following LDAP command:

```
ldapsearch -b "base" "(&(icscalendarowned=*  
user*)(objectclass=icsCalendarUser))"
```

Where `base` is the LDAP base DN of the directory server where the user and resource data for Calendar Server is located, and `user` is the value that an end user can enter in the Calendar Search dialog.

2. Run indexing for `icsCalendarOwned`.
3. Again run the following LDAP command, and time it:

```
ldapsearch -b "base"  
"(&(icscalendarowned=*user*)(objectclass=icsCalendarUser))"
```

Where `base` is the LDAP base DN of the directory server where the user and resource data for Calendar Server is located, and `user` is the value that an end user can enter in the Calendar Search dialog.

4. Compare the times. There should be a measurable time difference.

### Checking and Setting the Size Limit and the Look Through Limit Parameters

To determine if the Look Through Limit (`nsslapd-lookthroughlimit`) and Size Limit (`nsslapd-sizelimit`) parameters are set to appropriate values, try the following command:

```
ldapsearch -b "base" "(&(icscalendarowned=*  
user ID*)  
(objectclass=icsCalendarUser))"
```

where `base` is the LDAP base DN of the directory server where the user and resource data for Calendar Server is located, and `user ID` is the value that an end user can enter in a calendar search dialog in Communications Express.

If the LDAP server returns an error, the `nsslapd-sizelimit` or the `nsslapd-lookthroughlimit` parameter might not be large enough. Follow these guidelines to set these parameters:

- Ensure that the value for the `nsslapd-sizelimit` parameter in the `slapd.conf` or equivalent file is

large enough to return all the desired results; otherwise, truncation can occur, and no results will be displayed.

- Ensure that the value for the `nsslapd-lookthroughlimit` parameter in the `slapd.ldbm.conf` or equivalent file is large enough to complete a search of all the users and resources in the LDAP directory. If possible set `nsslapd-lookthroughlimit` to `-1`, which causes no limit to be used.

## Using Schema 1 with Calendar Server and Communications Express

There are two issues with Schema 1 in Communications Express:

- If you are running Communications Express with Sun LDAP Schema 1, before running the Communications Express configuration program, you must add the DC root node to your LDAP using `ldapmodify`. The entry should look like this:

```
dn: o=internet
objectClass: organization
o: internet
description: Root level node in the Domain Component (DC) tree
```

- The Calendar Server utility used to provision users in Schema 1, `csuser`, was designed for Calendar Express and does not enable a user for Address Book service as is needed for Communications Express.

## Calendar Server Provisioning Tools

There are two tools for provisioning users, groups and domains for Calendar Server: The Delegated Administrator and Calendar Server utilities. Delegated Administrator has two user interfaces: the Console, a graphical user interface, and the Utility, a command-line interface. For information on Delegated Administrator, see the [Sun Java System Delegated Administrator 6.4 Administration Guide](#). Instructions on use of the Console can be found in the Delegated Administrator Console online help.

For information on the Calendar Server utilities, see the [Sun Java System Calendar Server 6.3 Administration Guide](#).



### Caution

Do not attempt to provision users through the Access Manager Console. Though it is possible to create users and assign them a calendar service, do not use this method as results will be unpredictable and will negatively impact your deployment.

## Calendar Server Documentation Updates

### Restoring Backups

As of Calendar Server 6.0, you can restore a specific calendar using `csrestore` from any backup including backups saved with Hot Backup or Archival Backup. To do so, issue the following command:

```
csrestore -c <usercal> calendar <backupdir>
```

### *csversion* command

The `csversion` command was introduced in Calendar Server 6.3 in Communications Suite 5 and

replaces the `cscal version` command that was present in earlier releases. It outputs the version information of Calendar Server. There are no additional arguments required.

Example:

```
# ./csversion
Sun Java(tm) System Calendar Server 6.3-12.01 (built Jan 12 2009)
SunOS siroe 5.10 Generic_118833-36 sun4u sparcsunw,A70
#
```

**6544548**

The Sun StorEdge Enterprise Backup software (formerly Solstice Backup) and Legato Networker (`legbackup.sh` and `legrestore.sh`) are no longer distributed with Calendar Server 6.3. The [Sun Java System Calendar Server 6.3 Administration Guide](#) still documents these utilities in section "17.3 Using Sun StorEdge Enterprise Backup or Legato Networker," in "Chapter 17: Backing Up and Restoring Calendar Server Data." Ignore this information, as it is out of date.

## Calendar Server Compatibility Issues

The following table lists the known incompatibilities between Calendar Server 6.3 and earlier versions.

**Table 3-5 Calendar Server Incompatibilities**

Incompatibility || Impact || Comments ||

|                                                                                                                |                                                                                                                                                                                                                                      |                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Access Manager now has two install types: Legacy and Realm.                                                    | At installation, you must choose Legacy as the install type on the following panel:<br><br>Access Manager: Administration (1 of 6)                                                                                                   | If the wrong Access Manager is installed, you will not be able to run Delegated Administrator.                 |
| The Directory Preparation Tool ( <code>comm_dssetup.pl</code> ) under <code>/opt/SUNWics5</code> doesn't work. | <code>comm_dssetup.pl</code> is now in its own package installed in <code>/opt/SUNWcomds</code> for Solaris, and <code>/opt/sun/comms/dssetup</code> for Linux<br><br>Existing scripts that specify the old path need to be updated. | To install the package, be sure the Directory Preparation Tool is selected in the appropriate installer panel. |
| The configuration program for the Delegated Administrator has changed.                                         | Install Delegated Administrator and run the configuration program. The current program is located at: for Solaris,<br><code>/opt/SUNWcomm/sbin/config-commda</code><br><br>for Linux<br><code>/opt/sun/comms/config-commda</code>    | Upgrade to the new Delegated Administrator when installing this version of Calendar Server.                    |
| This release of Communications Express is incompatible with the previous version of Calendar Server.           | If you upgrade Communications Express, you must also upgrade Calendar Server.                                                                                                                                                        | This also applies to Messaging Server.                                                                         |

|                                                                                                                                     |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Due to a change in the way packaging is done, Calendar Express must do string substitution at runtime.</p>                       | <p>Significant Performance Degradation</p>                                                                                            | <p>Call technical support to receive a script you can run before starting Calendar Server operations. The script performs all the required string substitutions.</p> <p>Calendar Express is deprecated and will not be included in a future release of Calendar Server. This problem will not be fixed.</p>                                                                                 |
| <p>Due to a program code change in SSL processing, the following parameter no longer works:</p> <p>service.http.ssl.certdb.path</p> | <p>Scripts and configuration files still using the old parameter to point to the SSL directory will not work. SSL is not enabled.</p> | <p>A new parameter was added to the ics.conf [file:\\] local.ssldbpath = "/etc/opt/SUNWics5/config"</p>                                                                                                                                                                                                                                                                                     |
| <p>Password to certificate database is no longer held in ics.conf parameter:</p> <p>service.http.ssl.certdb.password</p>            | <p>SSL password can't be found. Error message:</p> <p>General Error: http_ssl_init(): SSL initialization failed.</p>                  | <p>Password to certificate database is now found in the following file located in the config directory:</p> <p>sslpassword.conf</p> <p>Format of password is:</p> <p>Internal (Software) Token:<br/><i>password</i></p>                                                                                                                                                                     |
| <p>Non-domain environments no longer allowed.</p>                                                                                   | <p>Scripts that modify LDAP entries must now include a default domain.</p>                                                            | <p>When Calendar Server is installed and configured, it runs a silent conversion program on all LDAP entries to add the default domain you specified.</p> <p>Requests that come in (WCAP commands) without the domain will be automatically assumed to be for the default domain.</p> <p>But any scripts you run that directly modify LDAP entries must include the new default domain.</p> |
| <p>The service.admin.calmaster.userid and service.admin.calmaster.cred parameters in the ics.conf file are not used anymore.</p>    | <p>You cannot set the Calendar user preferences and credentials using these old parameters.</p>                                       | <p>The service.admin.calmaster.userid parameter is changed to service.siteadmin.userid and service.admin.calmaster.cred parameter is changed to service.siteadmin.cred. In case of an upgrade these parameters are migrated by the patch scripts.</p>                                                                                                                                       |

|                                                                        |                                                                                                              |                                                                                                                                                                                      |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows and HP-UX versions of Calendar Server are no longer available. | The only operating system platforms supported by server-side Calendar Server software are Solaris and Linux. | This does not effect client-side software, such as the Connector for Microsoft Outlook. See the individual client component Release Notes for a list of supported operating systems. |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Problems Fixed in This Release of Calendar Server

The list that follows are problems reported fixed for this patch of Calendar Server 6.3:

### 6697835

**A "freebusy" failure should not cause http error to be returned for XML/JSON output**  
Calendar Server returns http error 404 when doing a "freebusy" lookup on a non-existing calendar.

### 6683707

**get\_freebusy.wcap crashes cshttpd**

### 6681812

**csdb rebuild should not change the modified timestamp**

### 6680028

**cshttpd crashes when a "freebusy" lookup is done on ldapgroup**

### 6677838

**Unauthorized WCAP request should return response with http code 401-Unauthorized for JSON payload**

### 6676306

**Time zone names are wrong for daylight times in Australia**

### 6674186

**Implement handling of SMS reminders**

### 6673980

**Calendar Server fails to stay running in Sun Cluster HA when configured in read-only mode**

### 6662778

**Event Accepted Notification emails are not sent if multiple calendar ID's are invited**

### 6662417

**Integration of localization files into core patch for Communications Suite 5 and 6**

### 6659624

**JSON syntax error returned when "freebusylist" is empty in `getfreebusy.wcap`**

**6657860**

**JSON format error returned in `get_freebusy.wcap`**

**6657246**

**There is a memory leak for every login if the authentication filter is configured**

**6657242**

**There is a memory leak when fetching a multivalued attribute from ldap**

**6656154**

**Calendar Server needs to implement the Communications Suite Installer upgrade interfaces**

**6651348**

**SMF needs to have unique names for Messaging Server and Calendar Server watcher services**

**6650915**

**Can't start Calendar Server using SMF**

**6650391**

**SMF: watcher fails to start (path to binaries is incorrect in `calexe`)**

**6650270**

**SMF : `watcher.xml` references Messaging Server**

**6649304**

**Passwords are put back (twice in the `ics.conf` with empty value after using removing the latest cs631 patch**

**6649300**

**`patchadd` produces error "cannot access `/opt/SUNWics5/cal/lib/com.sun.cmm.cs.xml.new`**

**6649297**

**Linux only: Old password related fields left in `ics.conf`**

**6646891**

**Calendar Express cannot modify time format if `service.http.numprocesses` is greater than 1**

**6642958**

**Bad data representation with patch 121658-19 for the x86 version of Calendar Server 6.3**

**6642312**

The `csversion` utility is missing on Linux

**6642081**

Anonymous login to calendar is not working

**6731764**

Anonymous access occurs when login screen should appear (when login timeout occurs or URL with old session is used)

**6641750**

`fetchattachment.wcap` returns incorrect mime output

**6640527**

`csadmin` crashes when accessing an attachment with an encoded file size that is an exact multiple of the page size

**6640009**

There is no SMF support in the Calendar Server build

**6635743**

Configuring CS fails with a java exception error

**6629318**

`cspassword` reveals passwords to all

**6626685**

There is a memory leak every time an attachment is fetched

**6626674**

There is a `cshttpd` memory leak under stress

**6626006**

`csdb rebuild` and `csrestore` from backup fails due to `sbin` directory ownership issue

**6625765**

Calendar Server import process causes attachments to be truncated

**6624889**

Calendar Server encoding session id makes Outlook Connector unstable\*

**6624747**

`cshttp` thread lock issue in `ASock_Recv`

**6623038**

Build failure with Sun Studio 12

**6622866**

`PROPFIND` causes a denial of service of the Calendar Server

**6622081**

`csexport` should have the ability to export events including the attachment data

**6622015**

`get_calprops.wcap` not sending the correct response if `calid` parameter is of a calendar group

**6621290**

JSON syntax error: `storeevents.wcap` with `{{alarmpop`

**6621234**

JSON syntax error: `list_subscribed.wcap`

**6621213**

JSON syntax error: `list.wcap`

**6621128**

JSON syntax error: `get_freebusy.wcap`

**6620937**

Calendar Server is returning incorrect ICAL output when an event contains an attachment

**6620263 \***

`cscomponent` command is missing for the Communications Suite 5 Linux installation

**6620139**

JSON syntax error: `set_userprefs.wcap`

**6620122**

JSON syntax error: `get_userprefs.wcap`

**6620046**

JSON syntax error: `search_calprops.wcap`

**6619357**

**{{cshttpd{{ crashes with memory corruption**

**6618932**

**patchadd error message**

**6618247**

**patchrm error message**

**6618196**

**JSON syntax error: storeevents.wcap with timezone ID**

**6617799**

**JSON syntax error: get\_all\_timezones.wcap**

**6617787**

**JSON syntax error: deletecomponents\_by\_range.wcap**

**6617784**

**JSON syntax error: deletetodos\_by\_range.wcap**

**6617782**

**JSON: deletetodos\_by\_id.wcap syntax error**

**6616433**

**config-servicetags exits abnormally on Linux**

**6615480**

**JSON output has syntax errors**

**6615475**

**Calendar Server needs to locate correct product path when the Communications installer is used with altroot**

**6615440**

**Calendar Server needs to create /var/opt/sun/install on Linux**

**6612742**

**There is a cshttpd crash in print\_event\_detail**

**6612651**

**nswcalCALID should be removed from Calendar Server 6.3 LDAP update code**

**6611728**

**While creating an event if you invite a resource, it shows the RSVP status as "Accepted" if autoaccept is enabled**

**6609386**

**config-mfwk and config-servicetag scripts are needed for Uniformity in Documentation for Calendar Server and Messaging Server\***

**6607940**

**New calendar creation mail feature causes functional test failures**

**6607478**

**com.sun.cmm.cs.xml has hard-coded values**

**6605715**

**Update timezones.ics file with the Venezuela time zone change**

**6604662**

**You cannot add more invitees to an event when another existing user is removed from LDAP**

**6603427**

**Calendar Server emits malformed XML if an event contains an attachment\***

**6602903**

**csrename causes a core dump while renaming the calendars**

**6597809**

**Double-booking restrictions are ignored when importing an event**

**6596706**

**The cshttpd process is crashes when you try to update the attachment information for a recurring series**

**6596628**

**Implement getVersion for Calendar Server**

**6592804**

**The cshttpd process crashes in the DWP setup due to memory corruption when fetching the attachment\***

**6592448**

**A cshttpd crash occurred in loginincorrect\_negative**

**6591407**

The `cshttpd` process crashes if the master copy of the recurring event is missing\*

**6590680**

`cshttpd` may crash in attachment-related functions for the events created with patch-17 in DWP setup\*

**6589856**

`cshttpd` is crashing in `shtml_command` when `browser.cache.enabled` is set to "yes"

**6588744**

Inviting resources to an event shows wrong RSVP status if `autoaccept` is enabled

**6588737**

Calendar Server emits broken XML if the email field contains quotes

**6588557**

Error 81 is returned when an attendee is removed from a single instance of a recurring event

**6585886**

Recurring events are not shown in Outlook Connector after running `csrename`

**6583657**

Change output from "error" to "debug" for `caldb_pvt_ScanDeleteLog: Resurrected entry`

**6580129**

`fetchcomponents_by_id.wcap` could cause `cshttpd` to crash when it returns error 81

**6578849**

Emit calendar data in JSON format

**6577773**

Sun Java Enterprise System Monitoring Framework product identifying tag needs to be fixed

**6572538**

There is no `jqmclient` bundled in Calendar Server 6.3.1 on Linux

**6571479**

`admin.log` shows confusing log message for `jqmInit`

**6569278**

**Creating an event by inviting a resource calendar fails with "Unknown Error 80"**

**6568622**

**httpd does not start with Message Queue 3.7 on Linux**

**6567265**

**Make number of Berkeley database locks configurable**

**6565532**

**csdwpd crashes if there are any errors while reading the calendar properties**

**6564744**

**cshttpd crashes with fetchcomponents.wcap when run under libumem**

**6563558**

**The cshttpd process memory grows very quickly if many events or to do's are fetched in a single request**

**6563284**

**dbstore\_is\_archivebackup\_enabled contains an incorrect return value**

**6561930**

**Update timezones.ics file with the new DST changes in New Zealand**

**6559166**

**hotbackup and archive should copy all .db files\***

**6558709**

**\*The front-end system receives a "backup failed" error email even when archive and hotbackup are disabled.**

**6555671**

**The copyright for Calendar Express is still 2006**

**6554012**

**httpd crash on freebusy query uses mail if redirect is on**

**6548178**

**Alarm retry feature may result in thousands of event reminders**

**6546804**

**The icsSubscribed attribute is not removed from LDAP by csca1 when deleting a calendar**

**created by Communications Express**

**6546620**

**fetchattachment.wcap over DWP may return a corrupted file**

**6546549**

**A memory leak occurs when an event with attachment is saved**

**6546541**

**Uploaded files are not getting deleted after the attachment is saved**

**6546535**

**The cshttpd process crashes in ac\_fetchattachment() if the event in the database does not have an attachid**

**6546532**

**csimport crashes when you try to import an event with an attachment**

**6545488**

**There is a crash in wcap\_login on Linux**

**6545035**

**attachid is missing in fetchcomponents\_by\_.wcap in DWP setup\***

**6542989**

**csconfigurator.sh creates an invalid DWP configuration**

**6541912**

**fetchcomponents returns a malformed WCAP response for calendar events having an LDAP group as an attendee**

**6541320**

**The Calendar Express window title shows incorrect version 6 5**

**6540503**

**Attachment store needs to open with a hash flag to maintain only a single copy for each back end**

**6538972**

- Notification and reminder timings are off by an hour with the new DST dates\*

**6537923 \**

**The copy file utility function fails silently with large files**

**6537359**

**In Calendar Server 2005Q4, the `timezones.ics` file does not account for 2007 DST differences in Mexico**

**6531658**

**`csrename` returns a segmentation fault and crashes in `csadm_rename_in_ldap()`**

**6530207**

**`csrestore` is unable to restore a calendar from the backup database. It cannot connect to the watcher process.**

**6525791**

**`csrename` stops abruptly without renaming the LDAP database**

**6524804**

**Calendar creation begins to degrade as the number of calendars increases for a single user when using bulk load**

**6522147**

**Users can log in with `icsstatus=inactive`**

**6520001**

**Hide passwords**

**6516438**

**You cannot login to Calendar Server after an upgrade. You will see "Backend Host Unresolvable" on the login page**

**6509780**

**Follow new versioning policy**

**6505280**

**Introduce daylight savings for Western Australia**

**6500444**

**\*There is an HTTP Request Smuggling security issue in `cshttpd`**

**6498903 There is a `cshttpd` crash in `caldb_pvt_ReadLinkedComponent()`\***

**6498212**

**The configurator throws a java exception when you choose which server to use as a back end in DWP setup**

**6497774**

**csmigrate should create the target directory with the owner icsuser:icsgroup if it is run by root**

**6497116**

**The configurator window's title shows Sun Java System Calendar Server Version 6 5**

**6496627**

**Changing the calendar event case in Calendar Express with no spaces added or removed fails the first time**

**6496601**

**Deleting the secondary calendar does not remove it from the database**

**6496586**

**When switching from December to January using the monthly view, Calendar Express displays January of current year**

**6496353**

**There are memory leaks in cshttpd**

**6494811**

**admind dumps core when JMQ is enabled**

**6494557**

**There is a WCAP problem replacing X-properties on recurring components**

**6494514**

**All-day events are shifted by one day after importing a .ics file\***

**6489729**

**Calendar Server's HTTP server crashes while accepting invitations**

**6486422**

**Calendar Express does not display all-day events in some views (Day/Overview)**

**6480935**

**Recovery function for databases failed**

**6479810**

**There are session database issues**

**6475187**

**WCAP deleteevents\_by\_id returns non-published iErr -5010**

**6475106**

**cshttpd uses too much memory**

**6474557**

**Database handles remain open during environment close**

**6472348**

**The csadmin process is spinning and using 100% CPU**

**6461762**

**Change the absolute path to relative path in the post install script**

**6456901**

**watcher.log date/time stamp diverge from the standard used in other log files**

**6442769**

**Calendar Server should add the X-Sun-calendar-msg: *ITIP Method* in calendar notifications**

**6442476**

**User calendars automatically created at login have auto-provisioning turned off resulting in calendars not being created on the server**

**6422917**

**Notification of an event contains garbled multi-byte characters**

**6407790**

**Use the output "This command is not valid for schema 2" message for csattribute, csuser, and csdomain with any option**

**6406628**

**JMQ notifications are not triggered for advanced options**

**6391858**

**csstats is no longer reporting authentication, alarm, disk, or response statistics\***

**6378975**

**Online Help is not available for new panels in the Calendar Server configurator**

**6331404**

**Exception invitations do not show up in Outlook using the connector**

**6289810**

**By default, invitations should be "Accepted" for resource calendars**

**6282134**

**Some strings need to be translated in event notifications in zh-CN and zh-TW versions of Communications Express**

**6280808**

\*The title of the tasks List in the Spanish version is corrupted.

**6280710**

**Month names should begin with lower case letters in the Spanish version**

**6279597**

**The text for introducing the time in the new-task dialog in the Spanish version is incorrect**

**6279591**

The initials for the days in the Calendar Server web client are incorrect in the German, Spanish, and possibly the French versions\*

**6278714**

**There is an unnecessary tilde in the message warning about deletion of repeating tasks**

**6278698**

**The copyright year 2003 on the Calendar Express login page is incorrect**

**6275914**

**The Calendar Server configurator online help is out of sync with the Spanish GUI**

**6236637**

**The version of the administration tools displays the wrong build date**

**6214765**

**The string in the Spanish versio of the "Create Group" window is corrupted**

**5109953**

**The `createcalendar.wcap` command writes errors to the directory server logs**

**5069988**

**`cscomponents -e date` removes all tasks after the end date**

4924536

HTML is not rendered under the "Preview" tab of "Edit Event" dialog

## Known Issues and Limitations in Calendar Server

This section contains known issues at the time of this Calendar Server 6.3 release:

- [Calendar Server Issues](#)
- [Documentation Issues in Calendar Server](#)

### Calendar Server Issues

#### Calendar Server Upgrade on x86 Platforms Using the Installer is Not Supported

Upgrading Calendar Server using Communications Suite 6 installer (specifically `commpkg upgrade`) is not supported on x86 platforms. Instead follow the manual steps to upgrade Calendar Server on x86 platforms.

6780694

There are missing apostrophes in the French OLH

6688858

\*There are some issues when upgrading Calendar Server HA and SC\_SCHA via the Communications Installer.\*

**Workaround:** After the upgrade, mount the config directory and run `csconfigurator.sh -nodisplay -noconsole -novalidate`.

6695856

**./csconfigurator fails to create the values from ics.conf to the cspassword file during upgrade from Calendar Server 6.2 to 6.3**

6568622

httpd does not start when running Message Queue 3.7 on Linux

**Calendar Server Doesn't Start After Patchadd Because New Parameters Are Added to ics.conf With value UNKNOWN (CR 6722736)**

At some sites, the calendar server might not start during a patch process. If this problem occurs, use the following procedure. This procedure needs to be performed only once.

1. Set the `configutil` parameters below to valid values in `ics.conf`. For example:

```
caldb.berkeleydb.archive.maxdays="6"  
caldb.berkeleydb.archive.mindays="3"  
caldb.berkeleydb.hotbackup.maxdays="6"  
caldb.berkeleydb.hotbackup.mindays="3"
```

2. Run the following:

```
./csconfigurator.sh -noconsole -nodisplay -novalidate
```

Contact regular support channels if this procedure does not solve the problem.

## Documentation Issues in Calendar Server

### Incorrect Description of `icsAllowedRights` Values

This issue occurs in the *Sun Java System Calendar Server 6.3 Administration Guide*, in the following section: [D.9.3.1 `icsAllowRights` Attribute: `csdomain` Utility](#).

This section describes the `icsAllowRights` attribute and properties that you can set with the `csdomain` utility. The following statement is incorrect:

"If a bit corresponding to a specific right is set (value=1), the right is not allowed. If the bit is not set (value=0), the right is allowed."

The correct statement is as follows:

"If a bit corresponding to a specific right is set (value=1), the right is explicitly allowed. If the bit is not set (value=0), the right is determined by the corresponding `ics.conf` parameter value."

In addition, in Table D-15, `icsAllowRights` LDAP Directory Attribute and Properties, the values documented for the individual attribute bits are incorrect.

For example, this statement is incorrect: "`allowCalendarCreation`: If set (bit 0=1), do not allow calendars to be created."

This statement should read as follows: "`allowCalendarCreation`: If set (bit 0=1), allow calendars to be created."

## Redistributable Files for Calendar Server

Sun Java System Calendar Server 6.3 contains the following set of files for which Sun Microsystems, Inc. grants you a non-exclusive, non-transferable, limited license to reproduce and distribute in binary form.

In addition, you may copy and use but not modify the listed header files and class libraries solely to cause your resulting binaries to be able to interface with Sun's software APIs.

Sample code is provided solely for reference purposes pursuant to creating the above mentioned binaries.

All the redistributable files for Calendar Server are for the plug-in API, known as CSAPI. The API is described in the *Sun Java System Calendar Server 6 2005Q4 Developer's Guide*.

In the following files, `cal-svr-base` is the directory into which Calendar Server was installed. The default for Solaris is `/opt/SUNWics5/cal`, for Linux it is `/opt/sun/calendar`

Redistributable files are found in various subdirectories of `cal-svr-base/csapi` :

- [authsdk Redistributable Files](#)
- [bin Redistributable Files](#)
- [classes Redistributable Files](#)
- [include Redistributable Files](#)
- [plugins Redistributable Files](#)
- [samples Redistributable Files](#)

## authsdk Redistributable Files

The following are the redistributable files in this subdirectory ( `cal-svr-base/csapi/authsdk/`):

```
cgiauth.c  
expapi.h  
login.html  
nsapiauth.c
```

## bin Redistributable Files

The following are the redistributable files in this subdirectory ( `cal-svr-base/csapi/bin/`):

```
libcsapi_xpcom10.so  
libicsexp10.so
```

## classes Redistributable Files

The following are the redistributable files in this subdirectory ( `cal-svr-base/csapi/classes/`):

```
ens.jar  
jms.jar
```

## include Redistributable Files

The following are the redistributable files in this subdirectory ( `cal-svr-base/csapi/include/`):

```
IIDS.h  
csIAccessControl.h  
csIAuthentication.h  
  
csICalendarDatabase.h  
csICalendarLookup.h  
csICalendarServer.h  
csIDBTranslator.h  
csIDataTranslator.h  
csIMalloc.hplugins  
csIPlugin.h  
csIQualifiedCalidLookup.h  
csIUserAttributes.h  
mozIClassRegistry.h  
mozIRegistry.h  
nsAgg.h  
nsCOMPtr.h  
nsCRT.h  
nsCom.h  
nsDebug.h  
nsError.h  
nsHashtable.h  
nsIAtom.h  
nsICaseConversion.h  
nsICollection.h  
nsID.h  
nsIEnumerator.h  
nsIEventQueueService.h  
nsIFactory.h  
nsIPtr.h  
nsIServiceManager.h  
nsIServiceProvider.h
```

nsISizeOfHandler.h  
nsISupports.h  
nsISupportsArray.h  
nsMacRepository.h  
nsProxyEvent.h  
nsRepository.h  
nsString.h  
nsTraceRefcnt.h  
nsVector.h  
nsUnicharUtilCIID.h  
nsXPComCIID.h  
nsXPComFactory.h  
nscore.h  
pasdisp.h  
publisher.h  
subscriber.h  
xcDll.h  
xcDllStore.h

## plugins Redistributable Files

This directory (`cal-svr-base/csapi/plugins/`) has redistributable files in the following subdirectories:

- [accesscontrol Redistributable Files](#)
- [authentication Redistributable Files](#)
- [datatranslator Redistributable Files](#)
- [userattributes Redistributable Files](#)

### accesscontrol Redistributable Files

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/plugins/accesscontrol/`):

`csAccessControl.cpp`  
`csAccessControl.h`  
`csAccessControlFactory.cpp`

### authentication Redistributable Files

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/plugins/authentication/`):

`csAuthentication.cpp`  
`csAuthentication.h`  
`csAuthenticationFactory.cpp`

### datatranslator Redistributable Files

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/plugins/datatranslator/`):

`csDataTranslator.cpp`  
`csDataTranslator.h`  
`csDataTranslatorFactory.cpp`

### userattributes Redistributable Files

The following redistributable files are found in this subdirectory (

```
cal-svr-base/csapi/plugins/userattributes/ ):
csUserAttributes.cpp
csUserAttributes.h
csUserAttributesFactory.cpp
```

## **samples Redistributable Files**

This directory (`cal-svr-base/csapi/samples/`) has redistributable files in the following subdirectories:

- [samples/authentication Redistributable Files](#)
- [samples/datatranslator Redistributable Files](#)
- [samples/ens Redistributable Files](#)
- [samples/userattributes Redistributable Files](#)

### **samples/authentication Redistributable Files**

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/samples/authentication/`):

```
authlogon.c
authlogon.h
authtest.c
csAuthenticationLocal.cpp
csAuthenticationLocal.h
csAuthenticationLocalFactory.cpp
```

### **samples/datatranslator Redistributable Files**

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/samples/datatranslator/`):

```
csDataTranslatorCSV.cpp
csDataTranslatorCSV.h
csDataTranslatorCSVFactory.cpp
```

### **samples/ens Redistributable Files**

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/samples/ens/`):

```
apub.c
asub.c
rpub.c
rsub.c
```

### **samples/userattributes Redistributable Files**

The following redistributable files are found in this subdirectory (`cal-svr-base/csapi/samples/userattributes/`):

```
csUserAttributesDB.cpp
csUserAttributesDB.h
csUserAttributesDBFactory.cpp
```

# Chapter 31. Communications Express 6.3 Release Notes

## Sun Java System Communications Express 6.3 Release Notes

The Release Notes document contains important information available at the time of the patch release of Sun Java System Communications Express 6.3 including:

- [What's New in This Release of Communications Express](#)
- [About Communications Express](#)
- [Deprecated and Removed Features for Communications Express](#)
- [Communications Express Browser Requirements](#)
- [Communications Express Compatibility Issues](#)
- [Problems Fixed in This Release of Communications Express](#)
- [Known Issues and Limitations in Communications Express](#)

Third-party URLs are referenced in this document and provide additional, related information.



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## What's New in This Release of Communications Express

See the [What's New](#) document.

## About Communications Express

Sun Java System Communications Express 6.3 provides an integrated web-based communication and collaboration client that consists of three client modules - Mail, Calendar, and Address Book. The Mail, Calendar, and Address Book client modules are deployed as a single application on any web container and are collectively referred to as Unified Web Client (UWC).

## Deprecated and Removed Features for Communications Express

Sun Java System Communications Express does not have any deprecated features or removed features to announce for this release.

Communications Express will only support use of Directory Server on Solaris and Linux; not on Windows or HP-UX or any other platform.

## Communications Express Browser Requirements

Communications Express 6.3 requires a JavaScript-enabled browser. See [Supported Browser Versions](#)

for [Communications Express Clients](#) for more information.

## Communications Express Compatibility Issues

The following table lists the known incompatibilities between Communications Express 6.3 and earlier versions

| Incompatibility                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Impact                                                                                                                                     | Comments                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The User Interface for creation of a new calendar event has been changed from earlier versions of Communications Express 6.3 release. In this release, when users create new calendar events, the Start Time, and End Time of the event has to be supplied. In previous releases, only the Start Time and Duration had to be supplied (6305790).                                                                                                                            |                                                                                                                                            | The change has been made only in the User Interface. The behavior of the way events are created is not affected.                                                                                                                                                                                                                               |
| Java Enterprise System (Java ES) 4 release of Communications Express is incompatible with Java ES3 version of Messaging Server Multiplexor (6328658).                                                                                                                                                                                                                                                                                                                       | A HTTP 502 error is displayed when users log in with valid credentials when Communications Express is upgraded with the Java ES 4 version. | If you upgrade Communications Express to Java ES 4, you must also upgrade Messaging Server Multiplexor to Java ES 4.                                                                                                                                                                                                                           |
| Java ES 4 release of Communications Express is not compatible with the Communications Suite version 5 version of Messaging Server. This incompatibility is seen in a setup containing a Java ES 4 version of Messaging Server, Communications Express, Calendar Server, and Access Manager are installed on the same machine, if only Messaging Server is upgraded to the Communications Suite 5 version, some functionality in Communications Express is broken (6395931). | Some of the Communications Express functionality such as compose mail, search, and folder management do not work.                          | If Messaging Server is on one machine and Webmail, Messaging MultiPlexor, and UWC are on different machines, Messaging Server can be upgraded to Communications Suite 5 version. If you upgrade only Webmail and Messaging Multiplexor without upgrading Communications Express, some of the Communications Express functionality do not work. |

## Problems Fixed in This Release of Communications Express

This list describes problems fixed in Communications Express 6.3.

### 6639632

**Some of the rich text icons are not working.**

### 6640775

**Delete, Save, Cancel and Help buttons are not displaying in Default Calendar window.**

### 6652350

**Communications Express configuration tool displays the AS9.1EE Administration password on console as well as in the log.**

**6682153**

**Not able to subscribe a folder due to missing drop-down(All shared and searched shared folders).**

**6690663**

**mshttp server crashes when we attach a file with size 7 MB: Solaris SPARC Only.**

**6690745**

**Cannot move a file to the subscribed folder having read and write permissions.**

**6691836**

**Copyright still shows 2007 in the login page and version link page.**

**5008104**

**Fully Qualified Host Name Required in URL Even When the User is Authenticated.**

**6282382**

**Java ES 3:Messaging Server 6.2: Incorrect page header for logout user from MS, connected via multiplexor**

**6263554**

**Invalid Path Information Provided in config-uwcc Configuration File on Linux.**

**5086083**

**Calendar Does Not Allow Users to Select Any Year Beyond 2006 in All the Views.**

**6233746**

**Cannot View Calendars with Availability or Invite Permissions Only.**

**6306958**

**Error Displayed when Trying to Get Options for Calendar Server.**

**6260646**

**Communications Express Mail Tab Not Visible When User has mailAllowedServiceAccess: +ALL:  
\***

**6217929**

**Forwarded Message Saved as Draft Appears to Lose the Forwarded Attachment.**

**6314465**

**New Content Shown Twice When Forwarding Messages.**

**6264555**

**Text in the New Message Text Area is Replaced by the String “undefined” When Editing Messages in Plain Text on Mozilla Browser on Solaris.**

6315048

**Dynamic Migration of Personal Address Book Does Not Work.**

6295293

**UWC/Webmail Need the Ability to Change the Source Encoding from the Browser**



**Note**

For more information on how to enable character encoding, refer to [Chapter Chapter 9, Localizing Communications Express](#), in *Sun Java System Communications Express 6.3 Customization Guide* in *Sun Java System Communications Express 6.3 Customization Guide*.

## Known Issues and Limitations in Communications Express

This section contains a list of the known issues with Communications Express 6.3. The following product areas are covered:

- [Generic Issues](#)
- [Configurator Tool Issues](#)
- [Calendar Issues for Communications Express](#)
- [Mail Issues for Communications Express](#)
- [Address Book Issues](#)
- [Options Issues](#)
- [Localization Issues for Communications Express](#)
- [SMIME](#)
- [Documentation Updates](#)

### Generic Issues

6398159

**Communications Express Login Screen Does Not Honor CSS Definition in `themes.properties`**

The `login.jsp` file in Communications Express has hard-coded style— sheet information. As a result of this, new skin-definitions cannot be applied for the style-sheets used with the login page.

6773528

**Cannot Install Communications Express on Linux (x86) if the Target Directory Already Exists**

When you install Communications Express on a Linux (x86) machine in the directory where Communications Express was previously installed, the following error message is displayed:

```
Installation of Communications Express failed.
```

**6691303**

**View Group Details link does not work properly**

When you create a new group and click the View Group Details link, you are directed to the same page instead of the Group Details page.

**6272426**

**UWCAuth Servlet Throws a NullPointerException**

In a deployment scenario where the dependent components of Communications Express (deployed on Sun Java System Application Server) are deployed across multiple nodes, the Communications Express UWCAuth Servlet throws a NullPointerException.

**Workaround:** Restart the Application Server.

**6527879**

**Communications Suite Installer Does Not Permit Installation in a Local Zone**

An attempt to install Communications Express with and Access Manager using the Communications Installer 14a into a sparse zone results in the following message regarding shared components:

```
Unsupported components in zone.
```

```
Following components required by the selected components, are not supported in local zone and they can not be installed directly into the local zone. Please install these components from the global zone before proceeding this installation.
```

**Workaround:** Install the shared components in the global zone using the `pkgadd` command. This allows the installation to proceed without any problems.

**6482226**

**Communications Express Online Help Contains JavaScript Error.**

When accessing to Communications Express Online Help using Internet Explorer 6.0, JavaScript errors are displayed.

## 6517599

### **Java ES 5-B14a: Linux RH4.0: Unable to load Communications Express Login Page in a Multi-tiered Deployment**

The login page fails to load even if the user logs in with valid credentials in a Multi-tiered deployment topology. This issue is seen in the following scenario:

- Communications Express and webmail host are installed on one node
- Directory Server, Calendar Server on separate nodes
- Calendar Server, Messaging Server, and Communications Express configured with SSO
- Access Manager is enabled in the `uwcauth.properties` by setting the property `auth.identity.enabled` to `true`

The web container logs a series of exceptions indicating a problem with Access Manager when Communications Express tries to execute code that makes calls to Access Manager SDK. This happens when a user tries to log on to Communications Express.

## 6717711

### **Communications Express Online Help Window Titles Do Not Show Correct Information.**

The Communications Express Online Help windows display incorrect title information.

## 6728756

## zh\_TW and zh\_CN UI is in English after freshly installing Communications Express through the Communications Suite 6 Installer for Linux.

This is a known issue with zh\_TW and zh\_CN locales for Linux customers who choose to do a fresh installation using the Communications Suite 6 Installer.

On a fresh install on Linux using the Communications Suite 6 Installer, the directory name changed to `/opt/sun/comms/ce` from the older `/opt/sun/uwc`. This causes the links to break for these locals. The workaround is to manually create the links.

After installation, you **must** create the following symbolic links **prior** to configuring Communications Express. Otherwise, the UI displays English instead of Chinese.

1. Change to the Communications Express base installation directory, for example:

```
cd /opt/sun/comms/ce
```

2. Change to the `help` directory.
3. Run the following commands to create the symbolic links.

```
ln -s zh-CN zh
ln -s zh-TW zh-tw
```

4. Change to the `ce-base-dir/lib/config-templates/WEB-INF/domain/defaultps/` directory.
5. Run the following commands to create the symbolic links.

```
ln -s dictionary-zh.xml dictionary-zh-CN.xml
ln -s dictionary-zh.xml dictionary-zh-cn.xml
ln -s dictionary-zh-TW.xml dictionary-zh-tw.xml
```

6. Change to the `ce-base-dir/lib/config-templates/WEB-INF/domain/` directory.
7. Run the following commands to create the symbolic links.

```
ln -s zh-CN zh
ln -s zh-TW zh-tw
```

8. Change to the `ce-base-dir/lib/config-templates/WEB-INF/ui/html/abs/`.
9. Run the following commands to create the symbolic links.

```
ln -s dictionary-zh.xml dictionary-zh-CN.xml
ln -s dictionary-zh.xml dictionary-zh-cn.xml
ln -s dictionary-zh-TW.xml dictionary-zh-tw.xml
```

10. Change to the `ce-base-dir/lib/locale/resources/` directory.
11. Run the following commands to create the symbolic links.

```
*{{ln -s UwcCfgResources_zh_CN.properties
UwcCfgResources_zh-CN.properties}}*
*{{ln -s UwcCfgResources_zh_TW.properties
UwcCfgResources_zh-tw.properties}}*
```

## Configurator Tool Issues

This section contains a list of known issues in the Configurator tool for Communications Express.

### 6688505

#### Communications Express uwc-config failed when set up with Messaging Server 7.0

When configuring Communications Express 6.3 for Messaging Server 7.0, you can receive the following message:

```
Unable to connect to the Webmail Server "XXXX" This may result in an
incomplete configuration, if you accept the current Webmail Server host
and port details. Select Accept if you want to continue configuration
using the current values.
```

**Workaround:** You can safely ignore this message. The Communications Express 6.3 configuration will be completed correctly.

### 6415155

#### Communications Express Does Not Allow Users to Log in After a Patch is Backed Out

Communications Express brings back the login page when users try to log on to Communications Express with valid credentials, after a patch is backed out. This issue is seen when users upgrade Communications Express by installing a patch using the `patch-config` and `install-newconfig` commands but later run the `backout-newconfig` to back out of a patch. The `backout-newconfig` utility does not warn users that some of the JSP files may have been cached by the web container.

**Workaround:** Remove the ClassCache directory for your web container and restart the web container on which Communications Express is deployed. The ClassCache directories for Web Server and Application Server are:

**Web Server:** `/opt/SUNWwbsvr/https- <servername>/ClassCache/https- <servername>`, where `<servername>` is the domain on which Communications Express is deployed.

**Application Server:**

`/var/opt/SUNWappserver/domains/domain1/generated/jsp/j2ee-modules/ <uwc_module_name>`, where `<uwc_module_name>` is the name of the module deployed on the Application Server.

### 5104756

#### Configurator Tool for Communications Express Does Not Support the 'Unconfigure' Option

The Communications Express Configurator does not allow you to undeploy, remove files at the time of configuration, and remove files created during runtime.

**Workaround:** To Unconfigure Communications Express:

1. Remove the Communications Express package. For example on Solaris type:

```
pkgrm SUNWuwc
```

2. Remove the deploy directories.
3. Remove the WEBAPP entry from Web Server or Application Server `server.xml` file.

**6774656**

### **Configurator Tool for Communications Express is Unable to Locate Java**

When you configure Communications Express on a fresh installation of Red Hat Linux 4, the following error message is displayed:

```
[root@melkor sbin]# ./config-uwcc
./config-uwcc: line 61: /usr/j2se/bin/java: No such file or directory\
```

**Workaround:** Specify the `JAVA_HOME` path. For example:

```
JAVA_HOME=/usr ./config-uwcc
```

**5028906**

### **Communications Express Configurator: devinstall Dumps Core for Unresolved Host Aliases**

Communications Express configuration wizard fails to complete the configuration process if your system is not configured for host name aliases.

**Workaround:** Ensure that you have configured one or more host name aliases for your system.

To configure one or more host name aliases on UNIX systems:

1. Provide the configuration for the `hosts` in `/etc/nsswitch.conf` file:  
`hosts: files dns nis`

This configuration indicates to the name service the lookup order it should use to resolve host names and host aliases. The name service lookup order is: `files`, `dns`, and `nis`.

2. Ensure that the `/etc/hosts` file contains two or more host names defined against your machine's IP address.

For example, if your system IP address is `129.158.230.64`, then in `/etc/hosts` file, you can configure the IP address as:

```
129.158.230.64 budgie.siroe.varrius.com budgie
or
```

```
129.158.230.64 budgie.siroe.varrius.com budgie loghost
```

Example of an incorrect IP address:

```
129.158.230.64 budgie
```

**4996723**

### **GUI Configuration Input Fields are Truncated because Input Fields are Right Aligned**

The field names and browser buttons are truncated or not visible when the configuration wizard is invoked in a language other than English.

**Workaround:** Resize the configuration panels to view its contents properly.

4982590

### The Components for Communications Express are Shown to be Zero Bytes

The configurator tool for Communications Express shows the component size as 0 bytes while displaying the Mail and Calendar components for Communications Express.

6283991

### Java Exception on Web Server Startup after Configuration of Communications Express

In an installation scenario where Communications Express and Access Manager are installed and configured on separate nodes, the Web Server installed on the node containing Communications Express throws a Java exception on restart. This is due to the incorrect settings in the Web Server's classpath (on the node where Communications Express is installed).

**Workaround:** Edit the *web-svr-base /config/server.xml* file on the Web Server instance of the node where Communications Express is installed, and ensure that the following entries are available in the Web Server's classpath:

```
opt/SUNWam/lib:/opt/SUNWam/locale:/etc/opt/SUNWam/config:  
/opt/SUNWam/lib/am_sdk.jar:/opt/SUNWam/lib/am_services.jar:  
/opt/SUNWam/lib/am_logging.jar
```

6298931

### Communications Express Configurator Fails to Validate Application Server Port and as a Result the Configuration Hangs

The Communications Express configurator does not validate the Application Server port during configuration and thus the configuration hangs if a wrong Application Server port number is specified.

6264589

### Configuration of Communications Express Hangs if Web Server is Running

The configuration of Communications Express hangs when the Web Server is running. This is due to an `UnsatisfiedLinkError` error.

**Workaround:** Gracefully shutdown the Web Server by executing the command */web-svr-base/web-svr-domain\_name /stop*. This will allow the Communications Express configuration to proceed.

## Calendar Issues for Communications Express

6723521

### Cannot Create an Event That Spans More Than Two Years.

When you create an event in the Calendar that spans more than two years, the following error is displayed:

```
The server encountered an internal error that prevented it from  
fulfilling this request.
```

**6199523**

**Cannot Edit Imported Events and Tasks in Calendar.**

If you create calendars A and B and provide permissions to edit both of them, and try importing events and tasks to one of these calendars, the Edit button is not displayed restricting you from editing the events.

**5039728**

**The View and Edit Tasks Show Notes and Reminder Messages That Span Multiple Lines in a Single Line.**

While adding Task notes and Remainder messages in a calendar, the notes or messages are displayed in a single line even if the user intends to have them in multiple lines.

**6199523**

**Cannot Edit Imported Events and Tasks in Calendar**

Communications Express does not allow editing of Events and Tasks that are imported from one calendar to the other (with allow . . . permissions set on both), for the same calendar owner.

**6528031**

**Communications Express Calendar Web Exception When Searching Calendar Groups for an Event**

The Communications Express calendar client displays an exception if a user searches a calendar group consisting of owned and subscribed calendars for events of interest. If a user creates a calendar group and wants to search this group for a particular event, the Communications Express client returns with an error that the page cannot be displayed. As a result, a user cannot search the calendar group for an event and will need to search each calendar individually.

This problem depends on the alphabetical ordering of the event names. If the event in the owner's calendar is alphabetically before the event in the subscribed calendar, the problem may not occur. This problem occurs when the event in the subscribed calendar begins with a letter that is alphabetically before the event in the owner's calendar.

**Mail Issues for Communications Express**

**6783943**

**Cannot Create or Rename Non-English Mail Folders in Safari**

Using Safari browser, when you create or rename a mail folder, an error message is displayed in the following locales: Simplified Chinese (zh-CN ), Traditional chinese (zh-TW), Japanese(JA), Korean(KO). The mail folders get garbled in the following locales: French (FR), Spanish (ES), German(DE).

**Workaround:** Use a browser other than Safari.

**6783369**

**First-Time Login to Communications Express in Non-English Locale Displays Error (Safari Only)**

Using Safari browser, when you login for the first-time to Communications Express in any Non-English locale, the following error message is displayed:

Mailbox Already Exists

**Workaround:** Use supported browsers like Firefox.

**6695436**

**Message Body is Lost When You Reply or Reply All to a Message From a Non-Default Sent Folder**

When a user reply to a message from a folder that the user creates, the message body gets lost.

**Workaround:** Log out and log in back to reply to the message leaving the message body intact.

**6425114**

**Direct Delivery of Mails to a Multi-byte Shared Folder Corrupts the Recipients Email Address**

When mails are sent to a multi-byte shared folder, the recipient's email address is corrupted and the mail is not delivered to the multi-byte shared folder, instead it is delivered to the inbox of the user where the multi-byte shared folder is created. It only works if the recipient's shared folder is created using IMAP-MUTF 7

**Workaround:** Disable the popup blocker for this URL in your browser.

**6691269**

**Multi-byte data becomes garbled for Folder names and in Search field in Mail tab(Safari only)**

Case1: While being logged in as Non-English user, when you create a new folder in the Mail tab, the Non-English folder name gets garbled.

Case2: When you enter Non-English search text in the Search field in the Mail tab, the characters get garbled.

**Workaround:** None.

**6691274**

**Cannot open or share "Sent" folders in Non-English versions**

While being logged in as Non-English user, when you try to open (by clicking) or share a "Sent" folder in the Mail tab, an error "Folder does not exist" is displayed.

**Workaround:** None.

6329862

### Communications Express Does Not Behave as Desired when Popup Blockers are Enabled in Browsers

When users enable the pop-up blocker feature in their browsers, the Compose, Reply, Reply All, Forward, and Forward Inline windows of Communications Express are not displayed even though they are valid pop-ups with respect to the application. Communications Express does not let the browsers know that this is a valid pop—up.

6501841

### When User Logs in Through a Domain Specific URL Without Providing @virtualdomain.com, the Mail Tab is Missing

This bug is seen when users log on to Communications Express that is configured with hosted domain support. In a hosted domain scenario, users should log on using the uid along with the virtual domain name. For example *uid@virtualdomain.com*. If the user logs on to Communications Express without specifying the hosted domain, the Mail tab does not appear.

*\*Workaround:* While logging on to the virtual domain, provide the virtual host URL on the browser, for example *<virtualdomain>.siroe.com*, and then log on to the virtual domain using *uid@virtualdomain.com* the mail tab is shown. Here:

- *<virtualdomain>* is the configured virtual domain name under the default domain (*siroe.com* in the example)
- *uid* is the user id of the user on the virtual domain

## Address Book Issues

6383327

### The Address Book Component of Communications Express Does Not Validate the Format of the File That is Being Imported

Communications Express does not validate the file formats when trying to import already exported address book contacts. As a result of this, if a file exported in one file format is imported as another file format, inappropriate error messages are displayed, and in certain cases incorrect contact data is imported.

- For example, if users try to import an LDIF file by selecting the Import Format as Microsoft CSV or Address book CSV type from the Import and Export Address Book window of the Address Book component, the following error message is displayed:

The file selected for import is empty or does not exist

The Address Book component does not validate the file format that is being imported.

- If an LDIF format type file is imported as a Thunderbird CSV format, Address book creates 10 contacts for the one contact exported.
- If a Microsoft CSV format type file is imported as a Thunderbird CSV format, Address book creates multiple contacts.

## 6355706

### **Communications Express Displays a Configuration Error When Users Try to Search in the Corporate Directory With a Valid Keyword**

Communications Express displays the following error message when users try to search the corporate directory with a valid keyword:

```
&#9;&#9;&#9;&#9;&#9;&#9;Your server is not configured properly or your  
search query has exceeded the limit.  
&#9;&#9;&#9;&#9;&#9;&#9;&#9;&#9;Please check server configuration
```

## 6514534

### **Some of the Fields Are Ignored When Exporting Communications Express Address Book**

When exporting the Communications Express Address Book using Mozilla Thunderbird CSV format, some of the fields are ignored.

For example, Middle Name, email(3), Pager, Work Street, Home Street, Calendar Address, Availability Address, Nickname (1), Nickname (2), Birthday, and Anniversary.

## 6337537

### **Compose Window is Not Displayed to the User When Popup Blocker is Enabled in the Browsers**

This issue is seen when users enable the popup blocker feature in their browser. On enabling popup blockers, when users click on the email address of their contacts in the Address Books, Communications Express does not open the mail compose window even when this is a valid pop up window.

**Workaround:** Disable the pop-up blocker feature for the domain.

## 4995472

### **The Address Book Name Cannot be Localized by defaulttps/dictionary-<lang>.xml for Every Session**

The address book name cannot be localized because the localized value which is based on the resolved session language and the domain specific defaulttps/dictionary-<lang>.xml is assigned when the address book is accessed for the first time.

The “Name” and “Description” entered in the Address Book Options page are also not displayed in the current Address Book drop-down list that appears on the Address Book tab page.

## 6540765

### **The Sequence of Phone Numbers Changes When The Exported File is Imported in Microsoft Outlook CSV Format**

When you import an exported file in Microsoft Outlook CSV format, the sequence of phone numbers changes.

**6308706**

### **Importing Data from Outlook CSV Format Creates Invalid Birthday and Anniversary.**

When users try to import Microsoft Outlook data in CSV format into Communications Express, the entries for Birthday and Anniversary are incorrectly set to 00/00/00.

## **Options Issues**

**6693973**

### **User Cannot Log In to Communications Express Immediately After Changing the Password.**

When you try to login to Communications Express after changing your password, the following error message is displayed:

```
Authentication Failed.  
Reenter your username and password.
```

**Workaround:** Wait for about 2minutes before you login again.

## **Localization Issues for Communications Express**

**6387130**

### **Users Unable to Localize Date Format in Event View and Check Availability View**

Communications Express allows users to define localized date and time formats. The localized date and time formats can be defined in the `i18n.properties` files. However, the localized date and time cannot be displayed for the following views and pages: There is no corresponding properties for these pages in the `i18n.properties` file.

- Event View
- Check Availability View
- Mini Calendar.

**6186520**

### **Importing CSV from Localized Microsoft Outlook Express Version 6.00.2800.1123 Does Not Work**

Communications Express cannot import CSV data from a localized Microsoft Outlook Express.

**6472240**

### **Communications Express Calendar, Multi-byte Attachment Filename will be Garbled when it is Opened in Internet Explorer 6.0.**

This bug is seen when users try to create a task or event in Communications Express using Internet Explorer 6.0. When users try to attach a file with a multi-byte name and save the attachment, the file name in the save dialog box is gets garbled.

**6480589**

### **Opposite First Name and Last Name Entry when Adding a Contact in Japanese**

Communications Express does not add contacts in Address book based on the locale. When users try to add a Japanese contact in Japanese locale, the contact is added as per the rules of English. The contacts are added in the order of First Name and Last Name. Japanese locale requires that the user's last name appears before the first name.

**6480593**

### **Cannot Add Proper Name to Address Book from 'Add Address' Button.**

When users try to add email address to address book using the 'Add Address' button from a received message, the view name is duplicated the contact does not get added properly.

**6494315**

### **Communications Express does not Handle Password Policies as Desired**

Communications Express has the following issues when setting up password policies:

- When a password lock is set on entering a wrong password, say for three consecutive tries, on the next correct entry, Communications Express displays a Server Error (500) Page instead of displaying an appropriate message.
- When users try to log in with an expired password, the following error is displayed.

```
Authentication Failed Reenter your username and password.
```

This message is ambiguous and is not correct.

- When users try to login to Communications Express with a policy 'Need to reset the password at the first login', the user is not prompted to reset his password.

## **SMIME**

**6225672**

### **Certification Revocation List Not Working**

Communications Express does not display any error message when encrypted messages are sent to users whose certificates have been revoked.

## **Documentation Updates**

Communications Express supports only UTF-8 encoded files for import and export of vCards in the Address Book. To configure Address Book to support import and export of files with other encoding: For importing, in the following file:

```
/var/opt/sun/comms/ce/WEB-INF/config/import/import.properties
```

change

```
import.vcard.encoding = utf-8 to import.vcard.encoding =  
<required-encoding>
```

For exporting, in the following file:

```
/var/opt/sun/comms/ce/WEB-INF/config/export/export-vcard.xml
```

change

```
<xsl:output method="text" encoding="UTF-8" omit-xml-declaration="yes"/>
```

to

```
<xsl:output method="text" encoding="<required-encoding">  
omit-xml-declaration="yes"/>
```

You must restart the container for the changes to take place. Currently, Communications Express does not support multiple encoding formats for vCard.



**Note:**

Both the settings are application wide, and will be enforced for all users in all locales. Changing from UTF-8 may not be suitable if different locales are to be supported.

# Chapter 32. Communications Suite 6 Release Notes Preface

---

## Preface

This book, *Sun Java Communications Suite 6 Release Notes*, contains important information available at the time of release of Sun Java Communications Suite 6 products. These Release Notes cover the following products:

- Sun Convergence 1.0
- Sun Java System Calendar Server 6.3
- Sun Java System Messaging Server 7.0
- Sun Java System Instant Messaging 7.3
- Sun Java System Delegated Administrator 6.4
- Sun Java System Communications Express 6.3
- Sun Java System Connector for Microsoft Outlook 7.3

New features and enhancements, known issues and limitations, and other information for each of the above listed products are addressed in this book. Please read the information before using any of the products.

## How This Guide Is Organized

This guide is organized into the following chapters:

- [Chapter 2, Common Release Information for Sun Java Communications Suite 6 Component Products](#)
- [Chapter 3, Sun Convergence 1.0 Release Notes](#)
- [Chapter 4, Sun Java System Calendar Server 6.4 Release Notes](#)
- [Chapter 5, Sun Java System Messaging Server 7.0 Release Notes](#)
- [Chapter 6, Sun Java System Instant Messaging 7.3 Release Notes](#)
- [Chapter 7, Sun Java System Delegated Administrator 6.5 Release Notes](#)
- [Chapter 8, Sun Java System Communications Express 6.4 Release Notes](#)
- [Chapter 9, Sun Java System Connector for Microsoft Outlook 7.3 Release Notes](#)

## Related Books

The <http://docs.sun.com> web site enables you to access Sun technical documentation online. You can browse the archive or search for a specific book title or subject.

For other server documentation related to deploying Communications Suite, go to the following:

- Access Manager documentation: <http://docs.sun.com/app/docs/coll/1292.2>
- Application Server documentation: <http://docs.sun.com/app/docs/coll/1343.4>
- Calendar Server documentation: <http://docs.sun.com/app/docs/coll/1313.2>
- Communications Express documentation: <http://docs.sun.com/app/docs/coll/1312.2>
- Directory Server documentation: <http://docs.sun.com/app/docs/coll/1224.2>
- Instant Messaging documentation: <http://docs.sun.com/app/docs/coll/1309.2>
- Messaging Server documentation: <http://docs.sun.com/app/docs/coll/1312.2>

## Accessibility Features for People With Disabilities

To obtain accessibility features that have been released since the publishing of this media, consult Section 508 product assessments available from Sun upon request to determine which versions are best suited for deploying accessible solutions. Updated versions of applications can be found at <http://sun.com/software/javaenterprisesystem/get.html>.

For information on Sun's commitment to accessibility, visit <http://sun.com/access>.

## Typographic Conventions

The following table describes the typographic changes that are used in this book.

**Table P-1 Typographic Conventions**

| Typeface         | Meaning                                                                     | Example                                                                                                                       |
|------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| AaBbCc123        | The names of commands, files, and directories, and onscreen computer output | Edit your <code>.login</code> file.<br>Use <code>ls -a</code> to list all files.<br><code>machine_name% you have mail.</code> |
| <b>AaBbCc123</b> | What you type, contrasted with onscreen computer output                     | <code>machine_name% su</code><br>Password:                                                                                    |
| <i>AaBbCc123</i> | A placeholder to be replaced with a real name or value                      | The command to remove a file is <b>rm filename</b> .                                                                          |

## Shell Prompts in Command Examples

The following table shows default system prompts and superuser prompts.

**Table P-2 Shell Prompts**

| Shell                                                           | Prompt                     |
|-----------------------------------------------------------------|----------------------------|
| C shell on UNIX and Linux systems                               | <code>machine_name%</code> |
| C shell superuser on UNIX and Linux systems                     | <code>machine_name#</code> |
| Bourne shell and Korn shell on UNIX and Linux systems           | <code>\$</code>            |
| Bourne shell and Korn shell superuser on UNIX and Linux systems | <code>#</code>             |
| Microsoft Windows command line                                  | <code>C:</code>            |

## Symbol Conventions

The following table explains symbols that might be used in this book.

**Table P-3 Symbol Conventions**

| Symbol | Description                                                  | Example                  | Meaning                                                                      |
|--------|--------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------|
| [ ]    | Contains optional arguments and command options.             | ls [-l]                  | The -l option is not required.                                               |
| { }    | Contains a set of choices for a required command option.     | -d {y n}                 | The -d option requires that you use either the y argument or the n argument. |
| \${}   | Indicates a variable reference.                              | \${com.sun.javaRoot}     | References the value of the com.sun.javaRoot variable.                       |
| -      | Joins simultaneous multiple keystrokes.                      | Control-A                | Press the Control key while you press the A key.                             |
| +      | Joins consecutive multiple keystrokes.                       | Ctrl+A+N                 | Press the Control key, release it, and then press the subsequent keys.       |
| ->     | Indicates menu item selection in a graphical user interface. | File -> New -> Templates | From the File menu, choose New. From the New submenu, choose Templates.      |

## Accessing Sun Resources Online

The docs.sun.com web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. Books are available as online files in PDF and HTML formats. Both formats are readable by assistive technologies for users with disabilities.

To access the following Sun resources, go to <http://www.sun.com>.

- Downloads of Sun products
- Services and solutions
- Support (including patches and updates)
- Training
- Research
- Communities (for example, Sun Developer Network)

## Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.



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# Chapter 33. Communications Suite 6 Update 1 Component Products Release Notes

---

## Common Release Information for Sun Java Communications Suite 6 Update 1 Component Products

These release notes contain important release information that is common for all component products of Sun Java Communications Suite 6 Update 1.

These release notes contain the following sections:

- [About Sun Java Communications Suite, Version 6 Update 1](#)
- [What's New in this Release of Sun Java Communications Suite](#)
- [Requirements for Communications Suite 6 Update 1](#)
- [Locating Patches for Sun Java Communications Suite Products](#)
- [Sun Java Communications Suite Installation and Upgrade Notes](#)
- [Communications Suite Compatibility Issues](#)
- [Problems Fixed in This Release of Communications Suite](#)
- [Known Issues in Sun Java Communications Suite](#)

Third-party URLs are referenced in this document and provide additional, related information.



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## About Sun Java Communications Suite, Version 6 Update 1

The Sun Java Communications Suite integrates a number of Sun server and client products to support distributed communication and collaboration applications.

The Sun Java Communications Suite 6 Update 1 release includes the following components:

- [Sun Convergence 1 Update 1 Release Notes](#)
- [Sun Java System Calendar Server 6.3 Release Notes](#)
- [Sun Java System Messaging Server 7 Update 1 Release Notes](#)
- [Sun Java System Instant Messaging 8 Release Notes](#)
- [Sun Java System Delegated Administrator 6.4 Release Notes](#)
- [Sun Java System Communications Express 6.3 Release Notes](#)
- [Sun Java System Connector for Microsoft Outlook 7.3 Release Notes](#)
- [Sun Java System Communications Sync 3.1](#)

The Release Notes for Sun Java System Communications Sync 3.1 can be found at <http://docs.sun.com/source/819-4706/index.html>.

## What's New in this Release of Sun Java Communications Suite

See the [Communications Suite 6 Update 1 What's New](#) document.

### Requirements for Communications Suite 6 Update 1

This section describes the operating system, patch, client software, and any additional software requirements for this release of Communications Suite. This section contains the following topics:

- [Product Version Compatibility Requirements](#)
- [Convergence 1 Update 1: Product Version Compatibility Requirements](#)
- [Memory and Disk Space Requirements](#)
- [Operating System Requirements](#)
- [System Virtualization Support](#)
- [Communications Suite Patches](#)
- [High Availability Support](#)
- [Browser Requirements for Communications Suite Clients](#)
- [Additional Software Requirements for Individual Communications Suite Components](#)

### Product Version Compatibility Requirements

This section answers the following questions:

- Which Sun Java System products are required to support the Communications Suite 6 Update 1 products? [Table 1-1](#) lists the Sun Java System product versions that are compatible with the Communications Suite 6 Update 1 products.
- To install a particular Communications Suite product, which other components do I need? [Table 1-2](#) lists the individual Communications Suite products and shows the components on which they depend, including other Communications Suite components.

#### **Table 1-1 Sun Java System Product Version Compatibility Requirements for Communications Suite 6 Update 1**

| Product                            | Version      | Required or Optional?                                                                                                                                                                                    |
|------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sun Java System Directory Server   | 5.x, 6.x     | Required. 6.3 or later recommended.                                                                                                                                                                      |
| Sun Java System Message Queue      | 3.7, 4.1p1   | Optional. Communications Suite installer automatically installs Message Queue as a shared component.                                                                                                     |
| Sun Java System Access Manager     | 7.1          | Optional.                                                                                                                                                                                                |
| Sun Java System Application Server | 9.1 Update 2 | 9.1 Update 2 is required as the web container for Sun Convergence 1 Update 1.                                                                                                                            |
| Sun Java System Web Server         | 7.0 Update 1 | Instant Messaging, Communications Express, and Delegated Administrator require a web container. Use either Web Server 7.0 Update 1, Application 8.2P2, or Application Server 9.1 Update 2 (recommended). |

For information about requirements for Directory Server, Access Manager, Web Server, and Application Server, see the current release notes for these products.

For installation instructions for Application Server 9.1 Update 2, see the [Sun Java System Application Server 9.1 Installation Guide](#).

For installation instructions for Directory Server Enterprise Edition 6.3, see the [Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide](#).

For installation instructions for the other components, see the [Sun Java Enterprise System 5 Update 1 Installation Guide](#).

**Table 1-2 Communications Suite 6 Update 1 Component Dependencies**

| Product Component                              | Dependencies                                                                                                                                        | Required or Optional?                                                                                       | Must Be on Local Host?                            |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Messaging Server 7 Update 1 (64-bit or 32-bit) | Directory Server 5.x, 6.x<br><br>Recommended: 6.3 or later                                                                                          | Required. To store user/group and domain information for authentication, authorization, and email delivery. | No                                                |
|                                                | Directory Server Setup Script (comm_dssetup.pl)<br><br>You must use the version that is bundled with the Communications Suite 6 Update 1 installer. | Required. To prepare the LDAP directory for Messaging Server.                                               | No. Must be on the same host as Directory Server. |

|                              |                                                                                                                                                     |                                                                                                                                                                                        |                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
|                              | Access Manager 7.1 (for SSO)                                                                                                                        | Optional. To provide single sign-on (SSO) authentication and authorization service. You can also use the Messaging Server Trusted Circle SSO.                                          | No                                                |
|                              | Delegated Administrator 6.4                                                                                                                         | Optional. To manage user and group data; to manage the directory schema.                                                                                                               | No                                                |
| Calendar Server 6.3          | Directory Server 5.x, 6.x<br><br>Recommended: 6.3 or later                                                                                          | Required. To store user/group and domain information for authentication, authorization, and calendar account provisioning.                                                             | No                                                |
|                              | Directory Server Setup Script (comm_dssetup.pl)<br><br>You must use the version that is bundled with the Communications Suite 6 Update 1 installer. | Required. To prepare the LDAP directory for Calendar Server.                                                                                                                           | No. Must be on the same host as Directory Server. |
|                              | Messaging Server 6.x, 7.0, 7 Update 1<br><br>Recommended: 7 Update 1                                                                                | Optional. To provide email notifications.                                                                                                                                              | No                                                |
|                              | Access Manager 7.1 (for SSO)                                                                                                                        | Optional. To provide single sign-on (SSO) authentication and authorization service. You can also use the Messaging Server Trusted Circle SSO (if you have installed Messaging Server). | No                                                |
|                              | Delegated Administrator 6.4                                                                                                                         | Optional. To provision users of calendar services; to manage the directory schema.                                                                                                     | No                                                |
| Instant Messaging 8 (Server) | Directory Server 5.x, 6.x<br><br>Recommended: 6.3 or later                                                                                          | Required. To store user, conference room, and news channel data.                                                                                                                       | No                                                |
|                              | Directory Server Setup Script (comm_dssetup.pl)<br><br>You must use the version that is bundled with the Communications Suite 6 Update 1 installer. | Required. To prepare the LDAP directory for Instant Messaging.                                                                                                                         | No. Must be on the same host as Directory Server. |

|                                                                                                                                        |                                                                                                                                           |                                                                                                                                                                                                                                                                                             |                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                        | Messaging Server 6.x, 7.0, 7 Update 1<br><br>Recommended: 7 Update 1                                                                      | Optional. To support offline delivery of instant messaging alerts and chat archives as email messages.                                                                                                                                                                                      | No                                                                                                                                                 |
|                                                                                                                                        | Calendar Server 6.x<br><br>Recommended: 6.3                                                                                               | Optional. To support Calendar Server event reminder notifications.                                                                                                                                                                                                                          | No                                                                                                                                                 |
|                                                                                                                                        | Access Manager 7.1 (for SSO)                                                                                                              | Optional. To provide authentication, authorization single sign-on (SSO), and policy services. You can use a local Access Manager client SDK, which provides access to a remote Access Manager Server; if you deploy the SDK, a remote Access Manager Server must be deployed to support it. | No. However, if you want IM to use a remote Access Manager, the Access Manager SDK must be installed on the host where the IM server is installed. |
|                                                                                                                                        | Web container, one of:<br><br>Application Server 9.1 U2<br>Application Server 8.x<br>Recommended: AS 9.1 U2<br><br>Web Server 7 or higher | Optional. To support distribution and downloading of the Instant Messenger Java client and to provide IMPS Gateway and HTTP Gateway functionality.                                                                                                                                          | Yes.<br>If you want the IM client to use SSO, the IM client must be deployed to the same web container as Access Manager.                          |
| Directory Server Setup Script ( <code>comm_dssetup.pl</code> )<br><br>(Version bundled with Communications Suite 6 Update 1 installer) | Directory Server 5.x, 6.x<br><br>Recommended: 6.3 or later                                                                                | Required. To set up the LDAP directory, which the <code>comm_dssetup.pl</code> script updates with Communications Suite components' schema.                                                                                                                                                 | Yes                                                                                                                                                |

|                                    |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                            |                                                          |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| <p>Delegated Administrator 6.4</p> | <p>Directory Server 5.x, 6.x</p> <p>Recommended: 6.3 or later</p> <p>To enforce unique values for mail attributes, you must install one of these releases:<br/> Directory Server 6.x<br/> Directory Server 5.2.5 or later<br/> Directory Server 5.2.4, and you must apply patch 5.2_Patch_4_6313027</p> | <p>Required. To store user, group, and domain data that Delegated Administrator provisions for the Communications Suite components.</p>                                                    | <p>No</p>                                                |
|                                    | <p>Directory Server Setup Script (comm_dssetup.pl)</p> <p>You must use the version that is bundled with the Communications Suite 6 Update 1 installer.</p>                                                                                                                                              | <p>Required. To prepare the LDAP directory for Delegated Administrator.</p>                                                                                                                | <p>No. Must be on the same host as Directory Server.</p> |
|                                    | <p>Access Manager 7.1</p>                                                                                                                                                                                                                                                                               | <p>Required. To provide authentication and authorization services when Delegated Administrator accesses the LDAP directory data.</p>                                                       | <p>Yes</p>                                               |
|                                    | <p>Web container, one of:</p> <p>Application Server 9.1 U2<br/> Application Server 8.x<br/> Recommended: AS 9.1 U2</p> <p>Web Server 7 or higher<br/> Web Server 6 (compatible with Delegated Administrator 6.4, although WS 6 is not available for new installation)</p>                               | <p>Required. Delegated Administrator must be deployed to one of these web containers. The Delegated Administrator server must be deployed to the web container used by Access Manager.</p> | <p>Yes</p>                                               |
|                                    | <p>Messaging Server 6.x, 7.0, 7 Update 1</p> <p>Recommended: 7 Update 1</p>                                                                                                                                                                                                                             | <p>Required to provide mail service for users and groups provisioned by Delegated Administrator. Not required if you do not provision mail users.</p>                                      | <p>No</p>                                                |

|                            |                                                                                                                                                     |                                                                                                                                                        |                                                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | Calendar Server 6.x<br>Recommended: 6.3                                                                                                             | Required to provide calendar service for users and groups provisioned by Delegated Administrator. Not required if you do not provision calendar users. | No                                                                                                                                                    |
| Convergence 1 Update 1     |                                                                                                                                                     | For details about Convergence dependencies, see <a href="#">Convergence 1 Update 1: Product Version Compatibility Requirements</a> .                   |                                                                                                                                                       |
| Communications Express 6.3 | Directory Server 5.x, 6.x<br>Recommended: 6.3 or later                                                                                              | Required. To store user/group data in the LDAP directory; to store address book data in the LDAP directory.                                            | No                                                                                                                                                    |
|                            | Directory Server Setup Script (comm_dssetup.pl)<br><br>You must use the version that is bundled with the Communications Suite 6 Update 1 installer. | Required. To prepare the LDAP directory for Communications Express.                                                                                    | No. Must be on the same host as Directory Server.                                                                                                     |
|                            | Access Manager 7.1                                                                                                                                  | Optional. To provide single sign-on (SSO) authentication and authorization services for Communications Express users.                                  | No                                                                                                                                                    |
|                            | Web container, one of:<br><br>Application Server 9.1 U2<br>Application Server 8.x<br>Recommended: AS 9.1 U2<br><br>Web Server 7 or higher           | Required. Communications Express must be deployed to one of these web containers.                                                                      | Yes                                                                                                                                                   |
|                            | Messaging Server 6.3, 7.0, 7 Update 1<br><br>Recommended: 7 Update 1                                                                                | Required to provide mail service for Communications Express users.                                                                                     | No. However, we recommend deploying the Webmail Server component of Messaging Server on the same host as Convergence for scalability and performance. |
|                            | Calendar Server 6.3<br>Recommended: 6.3                                                                                                             | Required to provide calendar service for Communications Express users.                                                                                 | No                                                                                                                                                    |

## NSS Requirements

Communications Suite 6 Update 1 requires the use of the shared security component NSS version 3.11.7.

For more details about product version dependencies, see [Shared Components Bundled With the Communications Suite Installer](#).

## Convergence 1 Update 1: Product Version Compatibility Requirements

The information in this section provides you with all the product requirements and minimum product versions to install Convergence in these deployments:

- A new Communications Suite 6 deployment (fresh installations)
- An existing Communications Suite deployment (a combination of upgrades and fresh installations)

In general, the requirements for operating system, memory and disk space, browsers, and most other software products are the same for Convergence as for other Communications Suite products.

However, Convergence has a few specific product and version dependencies. The Convergence client also depends on other Communications Suite products to provide services such as mail and calendar.

The following tables list the product requirements, dependencies, and compatibilities specific to Convergence:

- Sun Java System Product Requirements
- Communications Suite Component Requirements
- Compatibility with Communications Express and the Address Book Store

Note that some of this information repeats the information shown in Table 1-1.

**Table 1-3 Sun Java System Product Requirements for Convergence 1 Update 1**

| Product                                             | Version      | Required or Optional?                                                                                                                                                                                            | Must Be on Local Host? |
|-----------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Sun Java System Directory Server Enterprise Edition | 5.x, 6.x     | Required. 6.3 or later recommended. For the recommended version to download, see <a href="#">Get the Software</a> .                                                                                              | No                     |
| Sun Java System Application Server                  | 9.1 Update 2 | Required. For the recommended version to download, see <a href="#">Get the Software</a> .                                                                                                                        | Yes                    |
| Sun Java System Access Manager                      | 7.1          | Optional. Required only if you want to use Access Manager for authentication and/or SSO. Convergence supports both Access Manager Realm mode (the default) and Legacy mode for providing authentication and SSO. | No                     |

For information about requirements for Directory Server, Application Server, and Access Manager, see the current release notes for these products.

**Table 1-4 Communications Suite Component Requirements for Convergence 1 Update 1**

| Product                                                     | Version                                                                                      | Communications Suite Release                                       | Required or Optional?                                                                                                                     | Must Be on Local Host?                                                                                         |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Messaging Server - Webmail Server                           | 7.0, 7 Update 1                                                                              | 6 (for MS 7.0)<br>6 Update 1 (for MS 7 Update 1)                   | Required to provide mail service in Convergence.                                                                                          | No, but we recommend deploying Webmail Server on the same host as Convergence for scalability and performance. |
| Messaging Server - all other MS components                  | 6.3, 7.0, 7 Update 1                                                                         | 5 (for MS 6.3)<br>6 (for MS 7.0)<br>6 Update 1 (for MS 7 Update 1) | Required to provide mail service in Convergence.                                                                                          | No                                                                                                             |
| Calendar Server                                             | 6.3, patch level -28 or higher                                                               | 5 + apply patch level -28<br>6<br>6 Update 1                       | Required to provide calendar service in Convergence. To support Convergence, Calendar Server 6.3 must be at least at the -28 patch level. | No                                                                                                             |
| Instant Messaging                                           | 7.3, 8                                                                                       | 6 (for IM 7.3)<br>6 Update 1 (for IM 8)                            | Required to provide IM service in Convergence.                                                                                            | No                                                                                                             |
| Directory Server Setup script, <code>comm_dssetup.pl</code> | You must use the version that is bundled with the Communications Suite 6 Update 1 installer. | 6 Update 1                                                         | Required. You must run <code>comm_dssetup.pl</code> on the hosts where Directory Server is installed.                                     | No                                                                                                             |
| Delegated Administrator                                     | 6.4                                                                                          | 5, 6, or 6 Update 1                                                | Optional.                                                                                                                                 | No                                                                                                             |

**Note:** Messaging Server, Calendar Server, and Instant Messaging are required for Convergence *only* if you want to configure Convergence with the services they provide. For example, if you do not want IM service, you do not need Instant Messaging.

**Table 1-5 Convergence 1 Update 1 Compatibility with Communications Express, Connector for Microsoft Outlook, Address Book Store, and LDAP Schema**

| Product                | Version | Communications Suite Release | Required or Optional?                                                                                                                                                                                                                       |
|------------------------|---------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communications Express | 6.3     | 5, 6, or 6 Update 1          | Optional. You can deploy Communications Express with the same Messaging Server, Calendar Server, and Directory Server as Convergence 1 Update 1. You can configure end users to access Communications Suite services through either client. |

|                                 |                                                                                  |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connector for Microsoft Outlook | 7.3, 7.3 Update 1                                                                | 6 (for 7.3) 6 Update 1 (for 7.3 Update 1)                   | Optional. You can deploy Connector for Microsoft Outlook with the same Communications Suite products and Directory Server as Convergence 1 Update 1. End users of Outlook (configured via the Connector for Microsoft Outlook) can access the same Communications Suite services as those accessed via Convergence and Communications Express.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Personal Address Book store     | Can be configured by either Convergence 1 Update 1 or Communications Express 6.3 | N/A. (The Address Book store resides in an LDAP directory.) | <p>You can configure Convergence 1 Update 1, Communications Express 6.3, and Connector for Microsoft Outlook 7.3 to use the same Address Book store.</p> <p>Convergence end users can access and update an existing Address Book store configured on an existing Directory Server by using Communications Express. Conversely, you can configure Communications Express end users to access and update an Address Book store originally configured via Convergence 1 Update 1.</p> <p>Updates to the Address Book made in one client are visible and accessible on the other client.</p> <p>New Address Book features provided by Convergence do not invalidate Address Book LDAP entries originally configured by using Communications Express. From the perspective of the Communications Express client, the Address Book functions as it did before Convergence was installed.</p> <p><b>A Note About Corporate Address Books:</b></p> <p>Convergence can be configured to support one Corporate Address Book for each hosted domain. Users of Communications Express who use a single Corporate Address Book can also access and update that Address Book through Convergence.</p> <p><b>Caveat:</b> Communications Express users who access multiple Corporate Address Books (in their domain) can only use the first Corporate Address Book through Convergence. The others are not accessible through Convergence.</p> |

|             |                                                                                    |     |                                                                                                                                                                                                                                                                                                       |
|-------------|------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LDAP Schema | Schema 1 or 2<br><br>Schema 2 only if Access Manager is deployed with Convergence. | N/A | If you use Access Manager (Realm Mode or Legacy Mode) to provide Single Sign-on (SSO) for Convergence, you must use Schema 2.<br><br>If you use Delegated Administrator (DA) to provisions users, you must use Schema 2, because DA depends on Access Manager (Legacy Mode), which requires Schema 2. |
|-------------|------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Memory and Disk Space Requirements

**Table 1-6 Memory and Disk Space Requirements for Communications Suite 6**

| Product                           | Disk Space                                                                                                                                                                                                                                                                                  | RAM                                                                                                                                                                                                                                                                                           | Other                                                           |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Sun Java System Calendar Server   | Approximately 500 Mbytes of disk space for typical installation. For production systems, at least 1 Gbyte.                                                                                                                                                                                  | 128 Mbytes of RAM. For production systems, 256 Mbytes to 1 Gbyte for best performance.                                                                                                                                                                                                        | RAID storage for fast access (recommended for large databases). |
| Sun Convergence                   | Approximately 100 Mbytes of disk space for initial installation.                                                                                                                                                                                                                            | 1 Gbyte minimum.                                                                                                                                                                                                                                                                              |                                                                 |
| Sun Java System Messaging Server  | 1 Gbyte for production deployment or 500 Mbytes for evaluation installation. You also need adequate space for message store, database configuration directory, and log files, depending upon your site size.                                                                                | 1 Gbyte minimum.                                                                                                                                                                                                                                                                              |                                                                 |
| Sun Java System Instant Messaging | Approximately 300 Mbytes of free disk space for the software. Approximately 5 Kbytes of disk space for each user.                                                                                                                                                                           | At least 256 Mbytes of RAM. The amount of RAM needed depends on the number of concurrent client connections, and whether the server and multiplexor are deployed on the same host.                                                                                                            |                                                                 |
| Delegated Administrator           | The disk requirements for Delegated Administrator are the same as those of the Web container to which Delegated Administrator is deployed.<br><br>For information about the Web container's hardware requirements, see the current release notes for this Java Enterprise System component. | The memory requirements for Delegated Administrator are the same as those of the Web container to which Delegated Administrator is deployed.<br><br>For information about the Web container's hardware requirements, see the current release notes for this Java Enterprise System component. |                                                                 |
| Communications Express            | Approximately the same as Messaging Server/Calendar Server.                                                                                                                                                                                                                                 | 1 Gbyte minimum.                                                                                                                                                                                                                                                                              |                                                                 |

## Operating System Requirements

This release supports the following platforms:

**Table 1-7 Operating System and Platform Support**

| Operating System                                                                                                                   | CPU                   | Comments                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solaris OS 10                                                                                                                      | SPARC,<br>x86,<br>x64 |                                                                                                                                                                                                                                                    |
| Solaris OS 9                                                                                                                       | SPARC,<br>x86         |                                                                                                                                                                                                                                                    |
| Red Hat Enterprise Linux 4<br>Advanced Server (32-bit and 64-bit<br>versions)<br>Enterprise Server (32-bit and 64-bit<br>versions) | x86,<br>x64           | <ul style="list-style-type: none"><li>• Distinct 32-bit x86 and 64-bit AMD64/Intel EM64T distributions exist.</li><li>• Advanced Server and Enterprise Server provide identical functionality. Essentially ES limits CPU/memory support.</li></ul> |
| Red Hat Enterprise Linux 3<br>Advanced Server (32-bit and 64-bit<br>versions)<br>Enterprise Server (32-bit and 64-bit<br>versions) | x86,<br>x64           | <ul style="list-style-type: none"><li>• Distinct 32-bit x86 and 64-bit AMD64/Intel EM64T distributions exist.</li><li>• Advanced Server and Enterprise Server provide identical functionality. Essentially ES limits CPU/memory support.</li></ul> |
| Windows 2000 (SP 3 or higher); XP<br>(SP 1 or higher); 2003 Terminal<br>Server; Vista                                              | x86                   | For Sun Java System Connector for Outlook only.                                                                                                                                                                                                    |

### Notes:

- Messaging Server, Calendar Server, Instant Messaging, Communications Express, and Delegated Administrator are no longer supported on HP-UX or Windows platforms.
- The Communications Suite installer checks for required platform patches. You must install all required patches or the installation process does not continue.
- The performance of your Communications Suite deployment depends on many factors, including CPU power, available memory, disk space, file system performance, usage patterns, network bandwidth, and so on. For example, throughput is directly related to file system performance. If you have questions about sizing and performance, contact your Sun Java Communications Suite representative.

## System Virtualization Support

System virtualization is a technology that enables multiple operating system (OS) instances to execute independently on shared hardware. Functionally, software deployed to an OS hosted in a virtualized environment is generally unaware that the underlying platform has been virtualized. Sun performs testing of its Sun Java System products on select system virtualization and OS combinations. This testing helps validate that the Sun Java System products continue to function on properly sized and configured virtualized environments as they do on nonvirtualized systems.

Communications Suite supports the VMware container (VMware ESX Server 3). As support for such virtualization platforms as LDOMs and the xVM Server becomes available, this document will be

updated.

For information about Sun support for Sun Java System products in virtualized environments, see <http://docs.sun.com/doc/820-4651>.

## Communications Suite Patches

For the most current list of required patches for Sun Java Communications Suite, go to <http://sunsolve.sun.com> and select either Patches or Patch Portal. As operating system patch requirements change and patches to Communications Suite and Java Enterprise System components become available, updates will be distributed on the SunSolve database, initially in the form of recommended patch clusters.

At the time of general release of the Sun Java Communications Suite 6 Update 1, the following patches are available:

**Table 1-8 Sun Java Communications Suite 6 Component Patches**

| Component                   | Platform      | Patch Number (English) | Patch Number (Localized Languages)  |
|-----------------------------|---------------|------------------------|-------------------------------------|
| Calendar Server 6.3         | Solaris SPARC | 121657                 | Incorporated into the English patch |
|                             | x86           | 121658                 | Incorporated into the English patch |
|                             | Linux         | 121659                 | Incorporated into the English patch |
| Communications Express 6.3  | Solaris SPARC | 122793                 |                                     |
|                             | x86           | 122794                 |                                     |
|                             | Linux         | 122795                 |                                     |
| Delegated Administrator 6.4 | Solaris SPARC | 121581                 | Part of the English patch           |
|                             | x86           | 121582                 | Part of the English patch           |
|                             | Linux         | 121583                 | Part of the English patch           |

A fresh installation of Calendar Server 6.3, Communications Express 6.3, and Delegated Administrator 6.4, through the Communications Installer, puts you at the above patch levels for those products.

To deploy Calendar Server 6.3 with Convergence, Calendar Server must be at least at the -28 patch level.

## High Availability Support

**Table 1-9 Supported High-Availability Products**

| Product                     | Supported Versions                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Calendar Server 6.3         | <ul style="list-style-type: none"> <li>• Sun Cluster <ul style="list-style-type: none"> <li>• SPARC: 3.0, 3.1 Update 4, 3.2</li> <li>• x86: 3.1 Update 4, 3.2</li> <li>• Linux: Not Supported</li> </ul> </li> <li>• Veritas <ul style="list-style-type: none"> <li>• SPARC: Not Supported</li> <li>• x86: Not Supported</li> <li>• Linux: Not Supported</li> </ul> </li> </ul>        |
| Instant Messaging 8         | <ul style="list-style-type: none"> <li>• Sun Cluster <ul style="list-style-type: none"> <li>• SPARC: 3.1 Update 4, 3.2</li> <li>• x86: 3.1 Update 4, 3.2</li> <li>• Linux: Not Supported</li> </ul> </li> <li>• Veritas <ul style="list-style-type: none"> <li>• SPARC: Not Supported</li> <li>• x86: Not Supported</li> <li>• Linux: Not Supported</li> </ul> </li> </ul>             |
| Messaging Server 7 Update 1 | <ul style="list-style-type: none"> <li>• Sun Cluster <ul style="list-style-type: none"> <li>• SPARC: 3.0, 3.1 Update 4, 3.2</li> <li>• x86: 3.1 Update 4, 3.2 U1</li> <li>• Linux: Not Supported</li> </ul> </li> <li>• Veritas <ul style="list-style-type: none"> <li>• SPARC: 3.5, 4.0, 4.1, 5.0</li> <li>• x86: 3.5, 4.0, 4.1, 5.0</li> <li>• Linux: 4.1,5.0</li> </ul> </li> </ul> |

**Table 1-9a Compatibility Between Messaging Server and the MS High-Availability Agent Versions**

| MS High-Availability Agent Version | Compatible Messaging Server Versions                                                                    |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| MS_SCHA 7.0                        | Messaging Server 64-bit version 6.3 or later<br>Messaging Server 64-bit will not work with MS_SCHA 6.x. |
| MS_SCHA 7.0                        | Messaging Server 32-bit version 6.3-1.02 or later.                                                      |
| MS_SCHA 6.x                        | Messaging Server 32-bit version 6.3                                                                     |

## Browser Requirements for Communications Suite Clients

The following browsers are supported for Communications Suite clients.

**Table 1-10 Supported Browser Versions for Convergence Clients**

| Browser                     | Windows XP             | Windows 2000           | Windows Vista          | Solaris                | Red Hat Linux          | Mac OS 10.x            |
|-----------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Microsoft Internet Explorer | 7.x                    | N/A                    | 7.x                    | N/A                    | N/A                    | N/A                    |
| Firefox                     | 2.0.0.11 minimum 3.0.x |
| Safari                      | N/A                    | N/A                    | N/A                    | N/A                    | N/A                    | 3.1.x                  |

**Table 1-11 Supported Browser Versions for Communications Express Clients**

| Browser                     | Windows XP | Windows 2000 | Solaris | Red Hat Linux | Mac OS 10.x |
|-----------------------------|------------|--------------|---------|---------------|-------------|
| Microsoft Internet Explorer | 7.0        | 6.0 SP1      | N/A     | N/A           | N/A         |
| Safari                      | N/A        | N/A          | N/A     | N/A           | 3.0         |
| Firefox                     | 2.0        | 2.0          | 2.0     | 2.0           | 2.0         |

**Table 1-12 Supported Browser Versions for Delegated Administrator Clients**

| Browser                     | Windows XP      | Windows 2000    | Solaris      |
|-----------------------------|-----------------|-----------------|--------------|
| Microsoft Internet Explorer | 6.0 SP1 and 7.0 | 6.0 SP1 and 7.0 | N/A          |
| Firefox                     | 2.0             | 2.0             | 2.0          |
| Mozilla                     | 1.4 or later    | 1.4 or later    | 1.4 or later |
| Netscape Navigator          | 7.2             | 7.2             | 7.2          |

## Additional Software Requirements for Individual Communications Suite Components

- [Messaging Server](#)
- [Delegated Administrator](#)
- [Instant Messaging](#)
- [Connector for Outlook](#)

### Messaging Server

#### Recommended File Systems for Message Stores

The following file systems are recommended for message stores:

- LUFS (Logging UFS).
- VxFS (Veritas File System). Veritas File System provides good system performance if configured properly. If you use VxVM, the Veritas Volume Manager, you need to watch carefully that the volumes and the log file for the volumes are set to be regularly striped.
- HAStoragePlus File System for Sun Cluster installations. The HAStoragePlus File System provides better performance than the default Sun Cluster Global File System.
- NFS (Network File System). You can use NFS on MTA relay machines, for LMTP, for autoreply histories, and for message defragmentation. See the [Sun Java System Messaging Server 6.3](#)

[Administration Guide](#) for more information. In addition, NFS can be supported on BSD-style mailboxes (`/var/mail/`) as well as for message stores. The Sun StorEdge 53xx NAS have been certified for use with Messaging Server. See [Using Sun StorageTek 53xx NAS with Messaging Server Message Store](#) for more information.

- ZFS. As of Messaging Server 6.3, Messaging Server supports the ZFS file system. See [Messaging Server ZFS Support](#) for more information.

### Non-Supported File Systems for Messaging Server Deployments

Messaging Server must not be used on the EXT4 file system. Use on EXT4 file system will cause critical data loss.

### DNS Server and Messaging Server

A high-quality caching DNS server on the local network is a requirement for a production deployment of Messaging Server. Messaging Server depends heavily on the responsiveness and scalability of the DNS server.

Additionally, your DNS configuration needs to be clearly specified as to how to route to hosts that are not on the local subnet by ensuring the following:

- The `/etc/defaultrouter` file should contain the IP address of the gateway system. This address must be on a local subnet.
- The `/etc/resolv.conf` file exists and contains the proper entries for reachable DNS servers and domain suffixes.
- In the `/etc/nsswitch.conf` file, the `hosts:` line has the `files`, `dns`, and `nis` keywords added. The keyword `files` must precede `dns` and `nis`. For example, the lines should not look like this:

```
hosts:  nis dns files
ipnodes:  nis dns files
```

The lines should be changed to this:

```
hosts:  files nis dns
ipnodes:  files nis dns
```

- In the `/etc/hosts` file, the FQDN is the first host name.

For example, if your Internet host table in your `/etc/hosts` file should not look like this:

```
123.45.67.89 budgie.west.sesta.com
123.45.67.89 budgie loghost mailhost
```

Change the host table so that only one line is shown for the IP address of the host. Be sure that the first host name is a fully qualified domain name. For example:

```
123.45.67.89 budgie.west.sesta.com budgie loghost mailhost
```

**Note**

On Solaris OS 10 U3 and earlier platforms, you not only have to add the fully qualified domain name (FQDN) to the `/etc/hosts` file, but also to the `/etc/inet/ipnodes` file. Otherwise, you will receive an error indicating that your host name is not a fully qualified domain name. From Solaris OS 10 U4 onward, the contents of the `/etc/inet/ipnodes` and `/etc/hosts` files have been merged together into just the `/etc/hosts` file. Applying kernel patch 120011-14 on any Solaris 10 system also performs the merge, and subsequent removal of the `/etc/inet/ipnodes` file.

## Delegated Administrator

The following Java Enterprise System components, tools, and LDAP schema version are required for this release of Delegated Administrator:

- Directory Server 5.x or 6.x  
To enforce unique values for mail attributes, you must install one of these releases:
  - Directory Server 6.x
  - Directory Server 5.2.5 or later
  - Directory Server 5.2.4, and you must apply patch 5.2\_Patch\_4\_6313027
- Either Messaging Server 6 or Calendar Server 6, or both
- Java Enterprise System Web container. You must deploy Delegated Administrator to one of the following Web containers:
  - Sun Java System Web Server 6.1 or higher
  - Sun Java System Web Server 7 or higher
  - Sun Java System Application Server 7.x
  - Sun Java System Application Server 8.x
  - Sun Java System Application Server 9.1
- Directory Server Setup script, `comm_dssetup.pl`: Use the version that is bundled with the current version of the Communications Suite installer.
- LDAP Schema 2  
This release of Communications Suite Delegated Administrator is designed for provisioning users in an LDAP Schema 2 directory.

## Instant Messaging

### Instant Messaging Client Hardware Requirements

Instant Messenger uses between 50 and 70 Mbytes of memory on most platforms. You should estimate the memory requirement by including the requirements of other applications (including operating systems) used on the client machine. In most cases, at least 256 Mbytes RAM is recommended to run Instant Messenger and other applications comfortably. This number becomes higher when using memory-intensive operating systems.

### Instant Messaging Client Operating System Requirements

This release supports the following client platforms:

- Solaris OS 9, and 10
- Microsoft Windows 98, ME, NT (SP 6a), 2000, XP
- Mac OS X, minimum 10.1
- Red Hat Linux, minimum 7.2

On Windows, you can run Instant Messenger by using the browser's Java Plugin from the following browsers:

- Netscape, minimum 7.2
- Mozilla, minimum 1.7
- Mozilla Firefox, minimum 1.0
- Internet Explorer, minimum 6.0 SP 2

If the client machine has Java 1.5 minimum installed, there are no additional requirements to use either Java Plugin or Java Web Start. Netscape Navigator v7 as well as the recent versions of the Mozilla browser include Java v1.5 minimum. Internet Explorer does not include the latest version of Java. JDK 5.0 is included with Sun Java System Instant Messaging.

If the client machine does not have Java v1.5 minimum installed, you need to install Java Web Start. You can download and install Java v1.5 from the Java Technology website (<http://java.sun.com/j2se>).

You can download and install Java Web Start from the Java Web Start Technology website (<http://java.sun.com/products/javawebstart>).

HTML links can be exchanged over Instant Messenger and activated from the messenger by clicking them. When a link is activated, the messenger invokes a browser. The following table lists supported operating system and browser combinations.

**Table 1-13 Supported Client OS and Browser Combinations for Instant Messaging**

| Operating System         | Browser                                                                                               |
|--------------------------|-------------------------------------------------------------------------------------------------------|
| Solaris OS 10            | JDS Desktop Netscape Communicator, minimum 8.0, Mozilla minimum 1.7.12, Mozilla Firefox minimum 1.5.0 |
| Red Hat Linux Desktop    | Minimum 7.0 Netscape Communicator, minimum 8.0, Mozilla minimum 1.7.12, Mozilla Firefox minimum 1.5.0 |
| Red Hat Linux Desktop    | Minimum 9.0 Netscape Communicator, minimum 8.0, Mozilla minimum 1.7.12, Mozilla Firefox minimum 1.5.0 |
| Windows 98/ME/NT/2000/XP | No restrictions                                                                                       |
| Mac OS X                 | No restrictions                                                                                       |

## Connector for Outlook

This section describes the requirements and recommendations for Sun Java System Connector for Microsoft Outlook.

The following operating systems are supported:

- Microsoft Windows 2000 (Service Pack 3 or higher)
- Microsoft Windows XP
- Microsoft Windows 2003 Terminal Server
- Microsoft Vista

The following versions of Microsoft Outlook are supported:

- Outlook 2007
- Outlook 2003

**Table 1-14: Communications Suite Component Requirements for Sun Java System Connector for Microsoft Outlook 7.3**

| Product                | Version            | Communications Suite Release                            | Required or Optional?                                                                                                                                              |
|------------------------|--------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Messaging Server       | 6.3, 7.0           | 5 (for 6.3) or 6 (for 7.0)                              | Required to provide mail service.                                                                                                                                  |
| Calendar Server        | 6.3, 6.3.1         | 5                                                       | Required to provide calendar service.                                                                                                                              |
| Convergence            | 1.0                | 6                                                       | Optional (Recommended). Either Communications Express or Convergence can be used to provide address book service, mail filters and out of office message features. |
| Communications Express | 6.3                | 6                                                       | Optional.                                                                                                                                                          |
| Directory Server       | 5.2, 6.0 or higher | 4 (for 5.2), 5 (for 6.0 or higher) or 6 (6.3 or higher) | Required for GAL - corporate address book service.                                                                                                                 |



**Note**

Calendar Server customers who have deployed previous versions of Sun Java System Calendar Server need to engage with Sun Professional Services to enable their data to be converted and migrated to the new format. A Sun Professional Services offering is available. This migration is required for the use of Outlook, and is necessary because of the underlying changes in the storage and management of recurring events. No migration service is required for new customers of Calendar Server 6 2004Q2 minimum.

## Locating Patches for Sun Java Communications Suite Products

To locate patches for the Sun Java Communications Suite products, check the following table, which lists the keywords used for each Communications Suite product. You can use the specific keyword to search for relevant patches in the SunSolve database.

**Table 1-15 Patch Keywords for Communications Suite Products**

| Product                         | Keyword                  |
|---------------------------------|--------------------------|
| Calendar Server                 | "Calendar Server"        |
| Convergence                     | TBD                      |
| Communications Express          | "communications express" |
| Delegated Administrator         | commcli                  |
| Dssetup                         | comm_dssetup             |
| Instant Messaging               | "Instant Messaging"      |
| Messaging Server                | "Messaging Server"       |
| Connector for Microsoft Outlook | "Outlook Connector"      |



**Note**

The double quotes should be used to search for the text string and word space.

# Sun Java Communications Suite Installation and Upgrade Notes

## Default Installation Directories and Ports

The Communications Suite installer automatically installs product components in default directories unless you specify otherwise. In most cases, you can specify a custom location to override a default location when you are specifying configuration values during or after installation, with the following exceptions:

- **Sun Cluster components.** You cannot change the location of the installation directories.
- **Message Queue.** You cannot change the location of the installation directories.



### Note

Use the default installation directory when installing product components, if possible. If you specify an alternative installation directory, you are responsible for consistently pointing components to that installation directory during configuration.

The following table lists the default installation directories for the Communications Suite product components.

**Table 1-16 Default Installation Directories**

| Label and State File Parameter                       | Default Directory                                          | Comment                                                            |
|------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------|
| Access Manager<br>CMN_IS_INSTALLDIR                  | Solaris OS:<br>/opt/SUNWam<br><br>Linux: /opt/sun/identity |                                                                    |
| Application Server<br>CMN_AS_INSTALLDIR              | Solaris OS and Linux:<br>/opt/SUNWappserver                | Contains Application Server utilities, executables, and libraries. |
| Application Server Domains<br>CMN_AS_DOMAINSDIR      | Solaris OS and Linux:<br>/opt/SUNWappserver/<br>domains    | Default area under which administrative domains are created.       |
| Calendar Server<br>CMN_CS_INSTALLDIR                 | Solaris OS and Linux:<br>/opt/sun/comms/<br>calendar       |                                                                    |
| Convergence<br>CMN_IWC_INSTALLDIR                    | Solaris OS and Linux:<br>/opt/sun/comms/iwc                |                                                                    |
| Communications Express<br>CMN_UWC_INSTALLDIR         | Solaris OS and Linux:<br>/opt/sun/comms/ce                 |                                                                    |
| Delegated Administrator<br>CMN_COMMDA_INSTALLDIR     | Solaris OS and Linux:<br>/opt/sun/comms/commcli            |                                                                    |
| Directory Preparation Tool<br>CMN_DSSETUP_INSTALLDIR | Solaris OS and Linux:<br>/opt/sun/comms/<br>dssetup        |                                                                    |

|                                                          |                                                                                   |                                                                                                                                                      |
|----------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Directory Server Core<br>DSEE_BASE                       | Solaris OS:<br>/opt/SUNWdsee/<br>ds6<br><br>Linux: /opt/sun/ds6                   | Separately located subcomponents of Directory Server EE include Directory Server Core, Directory Service Control Center, and Directory Proxy Server. |
| Directory Service Control Center<br>DSEE_BASE            | Solaris OS:<br>/opt/SUNWdsee/<br>dsc<br><br>Linux: /opt/sun/dsc                   |                                                                                                                                                      |
| Directory Proxy Server<br>DSEE_BASE                      | Solaris OS:<br>/opt/SUNWdsee/<br>dps<br><br>Linux and HP-UX:<br>/opt/sun/<br>dps  |                                                                                                                                                      |
| Directory Server Instance Directory<br>DSEE_INSTANCE_DIR | Solaris OS:<br>/var/opt/SUNWdsee/<br>dsins1<br><br>Linux: /var/opt/sun/<br>dsins1 |                                                                                                                                                      |
| HADB<br>CMN_HADB_INSTALLDIR                              | Solaris OS:<br>/opt/SUNWhadb<br><br>Linux: /opt/SUNWhadb                          | HADB install locations are not relocatable in Communications Suite installation.                                                                     |
|                                                          | Solaris OS: /var/opt/<br>SUNWhadb<br><br>Linux: /var/opt/<br>SUNWhadb             | HADB Repository Data and Log location.                                                                                                               |
|                                                          | Solaris OS: /etc/opt/<br>SUNWhadb<br><br>Linux: /etc/opt/<br>SUNWhadb             | HADB Management Agent Config File                                                                                                                    |
|                                                          | Solaris OS:<br>/etc/init.d/ma-initd<br><br>Linux: /etc/init.d/<br>ma-initd        | HADB Management Agent Startup Script                                                                                                                 |
| Instant Messaging<br>CMN_IIM_INSTALLDIR                  | Solaris OS and Linux:<br>/opt/sun/comms/im                                        |                                                                                                                                                      |
| Instant Messaging Resource Directory<br>CMN_IIM_DOCSDIR  | Solaris OS and Linux:<br>/opt/sun/comms/im/html                                   |                                                                                                                                                      |

|                                                                                                                                      |                                                                                                       |                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Instant Messaging Online Help Directory<br>CMN_IIM_DOCSHELPPDIR                                                                      | Solaris OS and Linux:<br>/opt/sun/comms/im/html/en/imhelp                                             |                                                                                                                                                                                                                                                               |
| Message Queue<br><br>You cannot change the installation directories, so no field is in the installer or parameter in the state file. | Not applicable                                                                                        | Solaris OS:<br><br>/usr/bin<br><br>/usr/share/lib<br><br>/usr/share/lib/imq<br><br>/etc/imq<br><br>/var/imq<br><br>/usr/share/javadoc/imq<br><br>/usr/demo/imq<br><br>/opt/SUNWimq<br>Linux:<br><br>/opt/sun/mq<br><br>/etc/opt/sun/mq<br><br>/var/opt/sun/mq |
| Messaging Server<br>CMN_MS_INSTALLDIR                                                                                                | Solaris OS & Linux, 32 bit: /opt/sun/comms/messaging<br>Solaris OS 64-bit: /opt/sun/comms/messaging64 | Messaging Server also uses /var/opt/sun/comms/messaging and /var/opt/sun/comms/messaging64 as the read-write area for configuration, queue, log, store, and other miscellaneous data.                                                                         |
| Monitoring Console<br>CMN_MC_INSTALLDIR                                                                                              | Solaris OS:<br>/opt/SUNWjesmc<br><br>Linux: /opt/sun/jesmc                                            |                                                                                                                                                                                                                                                               |
| Sun Cluster<br><br>You cannot change the installation directories, so no is field in the installer or parameter in the state file.   | Not applicable                                                                                        | Sun Cluster software is installed in the following locations on Solaris OS:<br><br>/<br><br>/usr/opt<br><br>/usr/cluster                                                                                                                                      |
| Web Server<br>CMN_WS_INSTALLDIR                                                                                                      | Solaris OS: /opt/SUNWwbsvr7<br><br>Linux:<br>/opt/sun/webserver7                                      |                                                                                                                                                                                                                                                               |

|                                                     |                                                   |  |
|-----------------------------------------------------|---------------------------------------------------|--|
| Web Server Instance Directory<br>CMN_WS_INSTANCEDIR | Solaris OS: /var/opt/<br>SUNWwbsvr7<br><br>Linux: |  |
|-----------------------------------------------------|---------------------------------------------------|--|

## Default Port Numbers

When the Communications Suite installer requests that you enter a port number, the installer performs a runtime check on the ports in use and displays an appropriate default value. If the default port number is being used by another component or by another instance of the same product component, the installer presents an alternative value.

The following table lists the default Communications Suite product component port numbers and the purpose of each port.



### Note

Convergence, Access Manager, Communications Express, and Delegated Administrator are not listed in this table because they use the port numbers of the web container into which they are deployed.

**Table 1-17 Product Component Default Port Numbers**

| Product Component                                                 | Port  | Purpose                                              |
|-------------------------------------------------------------------|-------|------------------------------------------------------|
| Access Manager                                                    | 58946 | UNIX authentication helper                           |
|                                                                   | 58943 | Secure ID authentication helper (Solaris SPARC only) |
| Application Server                                                | 8080  | Standard HTTP port                                   |
|                                                                   | 3700  | Standard IIOp port                                   |
|                                                                   | 4848  | Administration Server port                           |
|                                                                   | 7676  | Standard Message Queue port                          |
|                                                                   | 8686  | JMX port                                             |
|                                                                   | 8181  | HTTPS port                                           |
| Calendar Server                                                   | 80    | Standard HTTP port                                   |
|                                                                   | 389   | LDAP port                                            |
|                                                                   | 57997 | ENS                                                  |
|                                                                   | 59779 | DWP                                                  |
| Common agent container                                            | 11162 | JMX port (TCP)                                       |
|                                                                   | 11161 | SNMP Adaptor port (UDP)                              |
|                                                                   | 11162 | SNMP Adaptor port for traps (UDP)                    |
|                                                                   | 11163 | Commandstream Adaptor port (TCP)                     |
|                                                                   | 11164 | RMI Connector port (TCP)                             |
| Common agent container for Sun Cluster and Sun Geographic Edition | 10162 | JMX port (TCP)                                       |

|                   |       |                                                                   |
|-------------------|-------|-------------------------------------------------------------------|
|                   | 10161 | SNMP Adaptor port (UDP)                                           |
|                   | 10162 | SNMP Adaptor port for traps (UDP)                                 |
|                   | 10163 | Commandstream Adaptor port (TCP)                                  |
|                   | 10164 | RMI Connector port (TCP)                                          |
| Directory Server  | 389   | Standard LDAP listener                                            |
|                   | 636   | LDAPS over SSL                                                    |
| HADB              | 1862  | Management Agent Port (JMX)                                       |
|                   | 15200 | Default Portbase                                                  |
| Instant Messaging | 5222  | Multiplexer port                                                  |
|                   | 5269  | Instant Messaging server-to-server port                           |
|                   | 45222 | Server port used for multiplexer communication                    |
| Message Queue     | 80    | Standard HTTP port                                                |
|                   | 7676  | Port Mapper                                                       |
|                   | 7674  | HTTPS Tunneling Servlet Port                                      |
|                   | 7675  | HTTP Tunneling Servlet Port                                       |
| Messaging Server  | 25    | Standard SMTP port or MMP SMTP Proxy <sup>Note 1</sup>            |
|                   | 110   | Standard POP3 port or MMP POP3 Proxy <sup>Note 1</sup>            |
|                   | 143   | Standard IMAP4 port or MMP IMAP Proxy <sup>Note 1</sup>           |
|                   | 225   | Default port for communications to back-end store through LMTP    |
|                   | 465   | SMTP/SUBMIT over SSL or MMP SMTP Proxy over SSL <sup>Note 1</sup> |
|                   | 587   | Standard Message Submission (SMTP SUBMIT) port                    |
|                   | 993   | IMAP over SSL or MMP IMAP Proxy over SSL <sup>Note 1</sup>        |
|                   | 995   | POP3 over SSL or MMP POP Proxy over SSL <sup>Note 1</sup>         |
|                   | 7997  | Event Notification Service port                                   |
|                   | 8990  | mshttpd daemon port                                               |
|                   | 8991  | mshttpd over SSL daemon port                                      |
|                   | 27442 | Used by Job Controller for product internal communication         |
|                   | 49994 | Used by the Watcher for internal product communication            |

|                    |       |                                                                                |
|--------------------|-------|--------------------------------------------------------------------------------|
| Monitoring Console | 6789  | Accessed through Sun Java Web Console                                          |
|                    | 8765  | Job Factories port for Master Agent Web Services Adaptor                       |
|                    | 11161 | SNMP port for Monitoring Framework                                             |
|                    | 11164 | RMI port for Monitoring Framework                                              |
|                    | 63837 | Used by MeterMaid for internal product communication                           |
|                    | 54320 | Multicast port for Monitoring Framework discovery protocol                     |
| Web Server         | 8800  | Admin HTTP port                                                                |
|                    | 8989  | Admin SSL port. For Admin Server, SSL port is required, HTTP port is optional. |
|                    | 80    | Instance HTTP port                                                             |

**Note 1 - Port Number Conflicts.** If these servers (such as the IMAP4 server and MMP IMAP Proxy) are installed on the same machine, you will encounter port number conflicts. If possible, install products with conflicting port numbers on separate hosts.

If you have installed two servers that are attempting to access the same port number, you need to change the port number of one of the conflicting products. To change port numbers for Messaging Server components, use the `configutil` utility. See the [Sun Java System Messaging Server 6.3 Administration Reference](#) for instructions.

The following example uses the `service.http.port configutil` parameter to change the standard HTTP port number to 8080:

```
configutil -o service.http.port -v 8080
```

## Communications Suite Compatibility Issues

For compatibility issues affecting Communications Suite products and dependent products and shared components, see

- [Communications Suite 6 Update 1 Compatibility Issues.](#)

## Problems Fixed in This Release of Communications Suite

This section lists problems fixed in this release of Sun Java Communications Suite.

### ***Uninstall prior Calendar Server localization packages before installing Communications Suite 6***

**(CI 6.0-0.02 and later, this issue does not exist on CI 6.0-0.01): You must uninstall the prior Calendar Server localization packages before installing Communications Suite 6. Otherwise (at least on Linux) the Calendar Server installation fails.**

**6669238**

**The Communications Express configuration process results in an error when you configure the Webmail host and port settings.**

You get the warning, "Unable to connect to the Webmail Server" while configuring Communications Express against Messaging Server 7.0.

## Known Issues in Sun Java Communications Suite

This section describes the known issues that exist in this release of Sun Java Communications Suite. Specifically, this section describes installation and upgrade issues.

### JDK upgrade may affect other products' upgrade

The JDK upgrade may affect the upgrade of other products. For details, see [Communications Suite 6 Update 1 Compatibility Issues](#).

### 6785668

**When you install `comm_dssetup` only, the Communications Suite installer does not install the SASL, NSS, and ICU shared components.**

The `comm_dssetup` script requires SASL because `ldapsearch` needs it.

This issue occurs only if you run the Communications Suite installer and select `comm_dssetup` without selecting any other Communications Suite products. This scenario may occur in a multi-host deployment, where `comm_dssetup` is installed with Directory Server on separate machines, and no Communications Suite products are installed on those machines.

The shared components *are* installed when you install Communications Suite products such as Messaging Server with `comm_dssetup` on the same machine.

Note: `comm_dssetup` is installed and run on machines where Directory Server is located. This issue occurs when you install Directory Server with the Directory Server zip file version, which does not install the SASL, NSS, and ICU shared components in the standard location. This installation method is recommended on the Communications Suite software download site.

If you install Directory Server with the Java ES installer (not recommended because it installs an older version of DSEE), these shared components are installed.

**Workaround:** When you run `commpkg install`, when you are prompted to select components to install, select `~1, 3`.

This selection directs the Communications Suite installer to install `comm_dssetup` (selection 3) and the shared components associated with Messaging Server (selection `~1`). It does not install the Messaging Server software.

The tilde (`{~}`) prefixed to a product selection directs the Communications Suite installer to install the shared components associated with a product, but not the product itself.

### 6766549

`comm_dssetup.pl` is unable to locate `ldapsearch`. `comm_dssetup.pl` may not be able to locate `ldapsearch` if you install it in an `altroot` location.

**Workaround:** Install `comm_dssetup.pl` in the default root location.

### `pkgadd` will fail on systems with greater than 2 TB of space.

Currently this issue occurs only on ZFS file systems that are available only on Solaris 10. This is due to Solaris bug 6514450, which is fixed in patch 119254-61(sparc)/119255-61(sol x86) or later.

**Workaround:** Download and apply the patch.

**6659438**

**The Communications Installer fails when a directory contains a space.**

The `commpkg` utility fails when the current directory has a space in its name.

**Workaround:** Do not use `commpkg` in a path that contains a space in its name.

**6653773**

**Access Manager 7.1 fails to start if it is deployed to a non-enterprise (EE) version of Application Server 9.1.**

For details, see [Communications Suite 6 Update 1 Compatibility Issues](#).

**No Localization Files for Communications Express**

**No localization files are available for Communications Express.**

You see only English in the Communications Express interface, even if you try to change the preferred language to another choice.

**`comm_dssetup` Utility**

**If you installed Directory Server Java ES (for example, Java ES 5 U1), the `comm_dssetup` utility is also installed. The Communications Installer comes with a newer version of `comm_dssetup` that you need to use.**

**Workaround:** To upgrade to the current version of `comm_dssetup`, run `commpkg upgrade` and select 3. If you are upgrading `comm_dssetup` only, see issue [6785668](#), above.

# Chapter 34. Communications Suite 6 Update 1 Compatibility Issues

## Communications Suite 6 Update 1 Compatibility Issues

This page describes compatibility issues affecting Communications Suite products and the products and shared components used by Communications Suite.

### The latest Common Agent Container (cacao) patch is not compatible with the JavaES 5 Update1 Installer. (6782178)

| Incompatibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Solution                                                                                                                                                                                                                                                                                                                                                                                 | Comments                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Issue:</b> If you install the latest cacao patch (123893-05 or 123896-05), the Java ES 5 Update 1 installer reports that the installation is completed. However, the log files indicate that the installer did not start cacao (bad lib path).</p> <p><b>Note:</b> The Java ES installer is needed to install Access Manager and Web Server, two products optionally used with Communications Suite products.</p> <p><b>Cause:</b> Patch 123893-05 or 123896-05 installs release 2.2.0.1 of cacao. The Java ES 5 Update 1 installer tries to downgrade to cacao release 2.1.0. But the release downgrade is not supported by cacao. The result is that cacao never starts.</p> | <p>In general, we recommend that you run the Communications Suite installer <i>after</i> running the Java ES installer to ensure that the latest versions of the Communications Suite shared components are installed. However, the Communications Suite installer does not install cacao; so this issue does not directly affect the installation of Communications Suite products.</p> | <p>This issue can affect the use of Communications Suite products if they are monitored with the Java Enterprise System Monitoring Framework (JESMF). Note also that this is not a compatibility issue with Communications Suite products. It is an incompatibility between the cacao patches and the Java ES installer.</p> |

### On Linux systems, upgrading to Java 6 (JDK 1.6u7) may affect dependent products that use earlier versions of Java. (6743356)

| Incompatibility                                                                                                                                                                                                                                                                                                                            | Solution                                                                                                                                                                                                                                                                                           | Comments                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Issue 1:</b> On Linux systems, when installing or upgrading to Communications Suite 6 Update 1, the Comms Suite installer checks if there is an existing version of Java on the machine and upgrades it to Java 6 (JDK 1.6u7). Some Sun Java products used by Communications Suite products, such as Access Manager, Web Server,</p> | <p><b>Solution for Issue 1:</b> Install or upgrade to a later version of the affected Sun Java product, which is compatible with Java 6. However, this approach does not apply to Access Manager 7.1, installed with the Java Enterprise 5 Update 1 installer, which is required for Delegated</p> | <p>On Linux, during an interactive install or upgrade, if the Comms Suite installer detects any existing Java version on the machine, it prompts you to choose whether to upgrade the Java</p> |

Directory Server, and Application Server, may not be compatible with Java 6.

On Linux, the Communications Suite installer replaces any previous Java version with Java 6. This is not an issue on Solaris; on Solaris, the Comms Suite installer upgrades Java side-by-side with the previous version. That is, the installer installs Java 6 and leaves the previous Java version on the system. This issue only affects dependent Sun Java products running on the same machine as the Communications Suite products.

**Cause:** On Linux systems, packages are not used to manage product versions. Without the version-management facility available with Solaris packages, the Comms Suite installer can only replace any existing Java version with the upgraded version.

**Issue 2:** Under some conditions, there is the potential for Sun Java products used by Communications Suite products to be unable to access the Java shared component. In most cases, the Comms Suite installer addresses and resolves this issue.

This issue might occur only if the Comms Suite installer upgrades the Java shared component to Java 6 under these conditions: on Linux systems, in silent mode, and when the dependent Sun Java product such as Access Manager, Web Server, Directory Server, or Application Server was installed with the Java ES 5 Update 1 installer.

**Cause:** When the Java ES installer installs the Java shared component, it creates a Sun Java Enterprise System (JES) `entsys symlink` to the Java files. The symlink is in the following location: `/usr/jdk/entsys-j2se`. On Linux, when the Comms Installer replaces the previous Java version with Java 6, the symlink to the old files is temporarily broken. However, the Comms Installer prompts you to fix this problem. See the **Solution for Issue 2**. In silent mode, the Comms Installer cannot prompt you to fix the broken symlink. Instead, you must use the

Administrator 6.4 and tested for compatibility with other Communications Suite products. See the **Note for Access Manager 7.1**, below.

**Note:** You could choose not to upgrade to Java 6 when you run `commpkg upgrade`, but in general we do not recommend this approach. Java 6 is recommended for Communications Suite 6 Update 1 products such as Convergence 1 Update 1. If Convergence is configured to use S/MIME, Java 6 is required on end users' client machines.

**Note for Access Manager 7.1:** The Java Enterprise 5 Update 1 (JES5u1) installer cannot successfully deploy Access Manager 7.1 if Java Development Kit (JDK) 1.6 or above is installed. Therefore, on a Linux machine where you are installing Access Manager 7.1, you need to downgrade to JDK 1.5. For instructions, see [Verifying the Correct JDK Version to Support Access Manager](#).

**Solution for Issue 2:** During interactive installations or upgrades, if the Comms Installer detects a broken sym link, it asks if you want to fix the broken link. Choose `y` to fix the link. The Comms Installer then changes the link to point to the upgraded Java 6 files.

Alternatively, use the `--fixEntsys y` option with the `commpkg install` or `commpkg upgrade` command. If you run `commpkg` in silent mode, you

component or not. Choose `y` to perform the upgrade. If you are performing a silent installation or upgrade, the default behavior is *not* to upgrade shared components, including Java. However, you can override the default setting, even in a silent installation or upgrade.

`--fixEntsys y` option in the command line when you run the `commpkg` command.

must enter this option in the command line with the `commpkg` command.

For more information, see [About Upgrading Shared Components](#).

# Chapter 35. Connector for Microsoft Outlook 7.3 Update 1 Release Notes

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## Sun Java System Connector for Microsoft Outlook 7.3 Update 1 Release Notes

These Release Notes contain important information available at the time of the general release of Sun Java System Connector for Microsoft Outlook 7.3 Update 1. These Release Notes contain the following sections:

- [About Connector for Microsoft Outlook 7.3 Update 1](#)
- [What's New in This Release of Connector for Microsoft Outlook](#)
- [Deprecated and Removed Features for Connector for Microsoft Outlook 7.3 Update 1](#)
- [Requirements for Connector for Microsoft Outlook 7.3 Update 1](#)
- [Connector for Microsoft Outlook Installation Notes](#)
- [Connector for Microsoft Outlook Compatibility Issues](#)
- [Problems Fixed in This Release of Connector for Microsoft Outlook](#)
- [Known Limitations and Issues in Connector for Microsoft Outlook](#)
- [Redistributable Files for Connector for Microsoft Outlook](#)

Third-party URLs are referenced in this document and provide additional, related information.



### Note

Sun is not responsible for the availability of third-party Web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused by or in connection with the use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

## About Connector for Microsoft Outlook 7.3 Update 1

Sun Java System Connector for Microsoft Outlook enables Outlook to be used as a desktop client with Sun Java Communications Suite.

Connector for Microsoft Outlook is an Outlook plug-in that must be installed on the end-user's desktop. Connector for Microsoft Outlook queries the Sun Java System Messaging Server for folder hierarchies and email messages. It converts the information into Messaging API (MAPI) properties that Outlook can display. Similarly, it uses WCAP to query the Sun Java System Calendar Server for events and tasks which are then converted into MAPI properties. With this model, Sun Java System Connector for Microsoft Outlook builds an end-user Outlook view from three separate information sources: mail from Messaging Server, calendar information from Calendar Server, and contacts from the address book server.

When users create and modify items through Outlook, Connector for Microsoft Outlook passes the new message along to the appropriate server depending on its message type. It sends new outgoing email to an SMTP mail server for delivery, and sends modified email messages back to the user's IMAP folder for storage. New calendar events and tasks are converted into a standard format to be stored in the Calendar Server database.

The address book service makes use of WABP and allows a user to have their personal address book accessible from both Outlook and Sun Java System Communications Express.



#### Note

Please note, the package that is Sun Java System Connector for Microsoft Outlook does not include any migration tools. You need those tools if you have users that are currently on Microsoft Exchange and would like to use Outlook with Sun Java Communications Suite. Sun provides a migration service to help move data and users from an existing Exchange deployment to Sun Java Communications Suite.

## What's New in This Release of Connector for Microsoft Outlook

See the [What's New](#) document.

## Deprecated and Removed Features for Connector for Microsoft Outlook 7.3 Update 1

1. Support for Microsoft Outlook 2000.
2. Support for Microsoft Outlook 2002/XP.

## Requirements for Connector for Microsoft Outlook 7.3 Update 1

See [Requirements for Communications Suite 6](#) and [Requirements for Connector for Outlook](#).

## Connector for Microsoft Outlook Installation Notes

Connector for Microsoft Outlook is an Outlook plug-in that requires installation on the end users' desktop. A deployment and configuration program is provided to aid the organization in deploying Connector for Microsoft Outlook.



#### Note

Before you install Sun Java System Connector for Microsoft Outlook, please check the [SunSolve website](http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage) (<http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage>) for the latest information about any required patches.

The installation and deployment is a three-step process.

### ***Installing Connector for Microsoft Outlook***

1. Install the administrator package.
2. Create an installation package for the end user.
3. Deploy the installation package.

The Connector for Microsoft Outlook packages ships an installer for the administrator package. The system administrator should prepare a special installation package called the Setup Wizard for the end user. The Setup Wizard installs and configures the Connector for Microsoft Outlook software on the end user's desktop. This installation package is designed to simplify and automate the installation process.

For installation, configuration, and deployment instructions please see the following:

- [Sun Java System Connector for Microsoft Outlook Installation Guide](#) describes how to install the administrator package. The steps to install Sun Java System Connector for

Microsoft Outlook 7.3 Update 1 is same as installing Sun Java System Connector for Microsoft Outlook 7.3.

- [Sun Java System Connector for Microsoft Outlook Administration Guide](#) describes how to create an installation package for the end user using the Deployment configuration Program.
- [Deploying Connector for Microsoft Outlook](#) describes the deployment of the Connector for Microsoft Outlook.

## Converting Data

One of the optional steps that can be performed during setup and configuration of Connector for Microsoft Outlook is the conversion of data that resides on the desktop. This conversion process is invoked only if the administrator checks the Convert existing profile option during the creation of the end user installation package. Please note, this conversion process is not intended to, nor does it replace the need for server-based migration. Sun provides a migration service to help move data and users from an existing Exchange deployment to Sun Java Communications Suite.

## LDAP Attributes

In order for Connector for Microsoft Outlook to function correctly, the following LDAP attributes in the Sun Java System Directory Server should be indexed for at least presence and equality to improve the overall performance:

- icsCalendar
- mail
- mailalternateaddress

For more information on these attributes, see the [Sun Java System Calendar Server 6.3 Administration Guide](#) and the [Sun Java System Messaging Server 6.3 Administration Guide](#).

## Connector for Microsoft Outlook Compatibility Issues

Please refer to the following Technical Notes for information about compatibility issues with Connector for Microsoft Outlook and other products or applications:

- [Configuring Calendar Server for Connector for Microsoft Outlook](#): describes specific configuration tasks and other considerations for Calendar Server to work with Connector for Microsoft Outlook.
- [Tuning Communications Express to Work With Connector for Microsoft Outlook](#): describes interoperability issues and tuning tips when using Communications Express with Connector for Microsoft Outlook.
- [Tuning LDAP to Improve Searches in Communications Services Clients](#): provides tips for improving searches in Communications Express and Connector for Microsoft Outlook.

## Problems Fixed in This Release of Connector for Microsoft Outlook

For a complete list of problems fixed in this release, see the README file delivered with the Connector for Microsoft Outlook core software patch.

## Known Limitations and Issues in Connector for Microsoft Outlook

This section describes the limitations and known issues that exist in this release of Sun Java System Connector for Microsoft Outlook.

### Limitations in Connector for Microsoft Outlook

Some limitations exist in this release of Sun Java System Connector for Microsoft Outlook. The key limitations are:

- Every distinct identity in the Directory Server (for example, users, resources, conference rooms) must have an email address.
- Rich text in the appointment and meeting description field is lost once the same calendar event is modified in the Communications Express client.
- Message recall functionality is not available.
- Description of events is not available when checking availability.
- Free/Busy lookup does not display TENTATIVE or OUT-OF-OFFICE color coding.
- The properties for Sun Java System Connector for Microsoft Outlook cannot be modified using the ToolsServices option from the Outlook menu. To modify the properties:
  1. Exit Outlook.
  2. Right click the Outlook icon and select Properties.

The Properties dialog appears.

3. Select Folders - < *your user name*>from the list of services.
  4. Click Properties.
- Free/busy lookup using SSL is not supported.
  - Installing Sun Java System Connector for Microsoft Outlook on Exchange servers is not supported.
  - Recurring tasks are not supported.
  - Offline limitations:
    - During an offline session, if any item in a Calendar, Task, mail, or Contact folder is modified using Outlook, and then another client on the server is used to modify the same item, the changes made offline are lost when the user returns to online mode in Outlook. The changes made by the other client on the server remain.
    - When creating a new event in offline mode, the invitation is saved to the user's Outbox. If, while still in offline mode, the user opens the invitation, the invitation disappears from the Outbox once it is closed.
  - Junk Mail Filter does not work for Outlook 2003 and Outlook 2007.

The Junk Email feature available in Outlook 2003 and Outlook 2007 (select ToolsOption) does not function with Connector for Microsoft Outlook. Senders that are set to be filtered using this tool are not filtered.

Because Outlook's Junk Email feature relies on the client to filter unwanted messages, Sun recommends using a server-side solution. In client filters, like the one Outlook utilizes, the messages arrive in the user's Inbox, which is then moved to the Junk folder. This could potentially create unnecessary network traffic and slower response time.

Users may use the ToolsMail Filter option, which utilizes the server-side filtering function. A more efficient solution would be to use a server-side virus or junk mail filter that is compatible with Sun Java System Messaging Server. Unsolicited email may be rejected at the MTA (message transfer agent) level and never arrive in the user's Inbox, saving resources and disk space. For a list of third-party partners, see <http://www.sun.com/software/products/communications/partner&#95;library/index.xml>

## Known Issues in Connector for Microsoft Outlook

This section describes the known issues at the time of this release of Sun Java System Connector for Microsoft Outlook. If known, IDs are included in parentheses.

The categories of issues discussed in this section are:

- [General Issues in Connector for Microsoft Outlook](#)
- [Installation and Upgrade Issues in Connector for Microsoft Outlook](#)
- [Calendar Issues in Connector for Microsoft Outlook](#)
- [Mail Issues in Connector for Microsoft Outlook](#)

- [Address Book Issues in Connector for Microsoft Outlook](#)
- [Localization Issues for Connector for Microsoft Outlook](#)
- [Communications Express Interoperability Issues for Connector for Microsoft Outlook](#)
- [Microsoft Exchange Interoperability Issues](#)
- [Microsoft Outlook Issues](#)

## General Issues in Connector for Microsoft Outlook

### 6550994 and 6766033

#### **Non Default Contacts Folder Not Getting Deleted in Communications Express and Convergence**

**Workaround:** Delete the contacts folder from the Deleted Items list in addition to deleting it from Outlook.

### 6689448

#### **Close button on Mail Filters Page Does Not Work in Mozilla Firefox**

**Workaround:** If the Close button on Mail Filters page or on the Out of Office Message page does not work in Mozilla Firefox browser, go to the `Program Files\Mozilla Firefox\greprefs` folder. Edit the `all.js` file by setting the value of the `dom.allow_scripts_to_close_windows` preference to true.

### 6570441

#### **Vista: Not able to create user profile using silent installation**

**Workaround:** Able to proceed with silent installation after enabling hidden administrator. With Administrator account, this issue is not reproducible. This is Windows Vista specific. This behavior is not seen in other flavors of Windows.

Steps to enable default administrator account in Vista:

1. Run the command `compmgmt.msc`.
2. Select Local Users and Groups from Left side Tree View.
3. Select Users. This will show all the users present on the machine.
4. Right click on "Administrator".
5. Click properties. Administrator Properties dialog box will be displayed.
6. Clear the option "Account is Disabled".(By default, this option is selected so the administrator account is disabled).

### 6604704

#### **Outlook 2007: Not able to create profile using installation package**

When you run the installation package to create a new profile, you get the following error and the profile is not created.

"Outlook is not installed on this machine. Please install Outlook 2000 with the Office 2000 Service Pack 3 or Outlook 2002 with the Office XP Service Pack 2, and then run this program again."

Issue is because of the missing registry sub-key.

HKEY\_CLASSES\_ROOT\Outlook.Application

You may experience this issue if you install a Microsoft Office 2003 program after the 2007 Microsoft Office system is installed. For example, you experience this issue in the following scenario:

1. You install the 2007 Office system.
2. You modify the 2007 Office system installation to remove Microsoft Office Word 2007.
3. You install Microsoft Office Word 2003.

**Workaround:**

1. Exit all 2007 Office programs.
2. Click Start, click Run, enter `appwiz.cpl` in the Open box, and then click OK.
3. In the Add or Remove Programs dialog box, click Microsoft Office Version 2007, and then click Change.
4. In the Microsoft Office Version 2007 dialog box, click Repair, and then click Continue.

For other details see:

<http://support.microsoft.com/kb/930010>



**Note**

Outlook 2000 and Outlook XP/2002 are not supported.

## Installation and Upgrade Issues in Connector for Microsoft Outlook

### 4930092

#### Unauthenticated Shared Drive Path Displays Warning.

For fields requiring a shared drive path, or UNC (Universal Naming Convention) be entered (for example, the shared path to the location for Microsoft Web Publishing Wizard on the Processes Tab of the Deployment Configuration Program), a validation warning is displayed that states the path does not exist if the user is not authenticated for the specified shared drive.

**Workaround:** The specified shared drive should be accessible by anonymous authentication, allowing anybody to access the shared drive.

#### No ID

#### Upgrade defaults to previous servers and ports.

When upgrading from the Connector for Microsoft Outlook 6 2004Q2 version to the Connector for Microsoft Outlook 7.2 version, if the server names and port numbers have changed, the upgrade only takes into consideration the old server names and port numbers.

**Workaround:** None.

### 6547273

## Error Message Is Displayed On Upgrade of Outlook Connector After Upgrading Microsoft Outlook

When you perform the following procedure:

1. Install Outlook 2003 with Outlook Connector 7.2.
2. Upgrade Outlook 2003 to Outlook 2007.
3. Upgrade to Outlook Connector 7.3.

The following error message appears:

Installation of Sun Java System MAPI Service Providers has failed

**Workaround:** Uninstall the existing version of Outlook Connector. Reinstall Outlook Connector whenever you upgrade Outlook.

## Calendar Issues in Connector for Microsoft Outlook

The following issues relate the calendar portion of Sun Java System Connector for Microsoft Outlook:

### 6589461

**Outlook 2007 Cannot Open the Internet Calendar (.ics) File When a Nondefault Calendar Is Shared Through Email.**

When you open an Internet Calendar email attachment in Outlook 2007, for example, `Sample.ics`, the following error message is displayed:

The file "Sample" is not a valid Internet Calendar file. You cannot create a new folder here.

**Workaround:** Perform the following steps:

1. Save the `Sample.ics` file from your email on your desktop.
2. From Outlook Connector File menu, select Import and Export.
3. Select the Import an iCalendar (.ics) or vCalendar file (.vcs) option from the actions list and click Next.
4. Click the `Sample.ics` file that you have saved on your desktop.  
The Do you want to open this calendar as a new calendar or import its items into your calendar? dialog box appears.
5. Click Import.  
The contents of the Internet Calendar file are imported to the default calendar folder.

### 6595737

#### **When a Resource is Double Booked, Outlook Incorrectly Shows The Second Event as Created.**

When a resource is booked for two recurring events in the same time slot, and the first instance of the recurring event is deleted, the event is not created in the Calendar Server. However, Outlook 2003 displays the event in the calendar.

The following error message is displayed:

Operation failed. Double Booking is not allowed.

**Workaround:** None.

### 5104189

#### **Creating a new calendar profile brings up the old calendar reminders.**

When logging in for the first time to a newly created calendar profile in Outlook that is set to your default Calendar Server, Outlook alarms pop up for old events as well as for future events. This applies only for recurring events where the entire series does not take place in the past.

**Workaround:** None.

### 6190293

#### **Names of subscribed calendars not visible in Calendar view.**

When you first subscribe to a calendar, the calendar name is labeled as "Calendar", not the name of the subscribed calendar.

**Workaround:**

To see the name of the subscribed calendar, log off Outlook and then log back into Outlook. The subscribed calendar's name should be displayed.

### 6292026

#### **Opening a shared calendar link does not hook into subscription (Outlook 2003).**

In Outlook 2003, clicking the calendar icon at the bottom of the left pane, displays the calendar view. Within that calendar view, clicking "Open a Shared Calendar" displays a dialog that allows the user to enter the user name of a shared calendar. When the user name of a known shared calendar is entered, the error "Unable to display the folder. Your profile is not configured to support this operation for this user." is displayed. This occurs also with contacts and tasks.

**Workaround:**

To view a shared calendar, select the shared calendar folder in the folders list.

## 6409671

### **Unable to remove attachment from an instance of a recurring event.**

If a user creates a recurring event that includes an attachment, then attempts to remove the attachment from a single instance of the recurring event, the attachment is not deleted because an attachment usually gets created for a series and not for a single occurrence.

**Workaround:** None.

## 6723948

### **Microsoft TNEF messages are sent when sending calendar attachments.**

Sending iTIP and iMIP calendar attachments are not supported.

**Workaround:** None.

## No ID

The following are additional issues related to the calendar portion of Connector for Microsoft Outlook that do not have IDs:

- If delegate accepts or declines an invitation from the organizer's Shared Inbox, the calendar event is added to delegate's calendar, but not to the organizer's calendar.
- All Day events may become a non-All Day events (one event scheduled from 12:00am until 12:00pm) if the desktop time zone is different from the Calendar Server calendar time zone.
- Changing permissions of a calendar requires restarting Outlook for the new permission setting to take effect for the Calendar folder in the Shared Calendar.
- Tasks displayed in Shared Calendars are the login user's tasks, not the subscribed user's tasks. The calendar view always shows the login user's tasks.
- If you create a recurring invitation in Outlook, but delete a single instance of that event, the recipients (attendees) will not see the deleted invitation if Calendar Server has not processed the initial recurring invitation before the deletion.

## Mail Issues in Connector for Microsoft Outlook

The following issues relate the mail portion of Sun Java System Connector for Microsoft Outlook only:

### 2142968 and 6482360

#### **Message recall does not work.**

When a sender attempts to recall a message that was sent, the recall attempt fails. The recalled message is not deleted from the receiver's mailbox.

**Workaround:** None

## Address Book Issues in Connector for Microsoft Outlook

The following issues relate to the Address Book portion of the Sun Java System Connector for Microsoft Outlook.

### 6225049

#### **Deleting a contact from Communications Express does not delete it from Outlook.**

The Communications Express configuration parameter `delete_perm` in the `db_config.properties` file needs to be set to false in order for Outlook to capture contact entries which have been deleted from Communications Express. The entry should be:

```
delete_perm=false
```

The default is true. The entry can be found at

```
/var/opt/SUNWuwc/WEB-INF/config/ldapstore/db_config.properties .
```

**Workaround:** Manually fix the entry.

**6752539**

**Cannot Delete a Contact Photo from Outlook Connector**

When you right-click the contact photo and select Remove Picture, the photo is not deleted from the contact.

**Workaround:** None.

**6228253**

**Login to Address Book Server Through Outlook Fails When Address Book is in SSL Mode.**

**Workaround:**

Open Communications Express or Convergence (depending on which address book server you have configured your profile) in Internet Explorer and permanently accept the self-signed certificate.

**6267180**

**Shared contact does not get removed from Address Book after you have unsubscribed.**

After you have unsubscribed to a shared contact, it is not removed from the "Show Names from the" list of the Address Book.

**Workaround:** There are two workarounds:

- If the subscribed contact has been added to the "Show Names from the" list of the Address Book, you should clear the "Show this folder as an email Address Book" option from the "Outlook Address Book" property page before you unsubscribe from the contact.
- Remove the contact directly from the address book properties.

**In Outlook 2003:**

Select Tools > Email accounts.

Choose "View or Change Existing Directories or Address Books" and select "Outlook Address Book" to change.

Select the item to remove from your address book.

**In Outlook 2007:**

Select Select Tools > Account Settings.

Click on Address Books.

Select "Outlook Address Book" from the list of services set up in your profile.

The Microsoft Outlook Address Book properties window is displayed.

Select the item to remove from your address book and click Close.

Note that user must logout and login again for the change to reflect.

**Localization Issues for Connector for Microsoft Outlook**

The following issues affect the localized versions of Sun Java System Connector for Microsoft Outlook:

**6767897**

**Cancel Button in the Edit Filter Window Does Not Work in the French Locale**

In the French locale, when you click Cancel in the Edit Filter window, the Cancel button does not work.

**Workaround:** Click the Close button to cancel the Edit operation.

**6648138**

**English Names Are Displayed For IMAP Folders in French Locale**

In the French locale, when you create a profile with Communications Express or Microsoft Outlook style folder mappings, folders such as Deleted Items, Sent Items, and Drafts are displayed in English. Only the Inbox folder name is displayed correctly.

**Workaround:** None.

**6777127**

### **Help Button Does Not Work in Korean Locale**

In Korean locale, when you click the Help button from Out of Office Message or Mail Filters window, the Help page is not displayed.

**Workaround:** To view the Help, go to the following location and click the required topic from the contents:

Help --> Sun Java System Connector for Microsoft Outlook Help

### **6306873**

#### **Cannot Enter Non-ASCII Characters In The Full Name Field In The Install Wizard in Korean Locale**

In the Korean Install wizard, when you enter non-ASCII characters in the Full Name field, the characters are displayed incorrectly.

**Workaround:** None.

### **6767893**

#### **Deplacer vers le haut (Move Up) Button in the Mail Filters Page is Not Displayed Correctly in French Locale**

**Workaround:** None.

### **6672540**

#### **Multibyte Shared Calendar Name is Displayed as Question Marks**

When you subscribe and query the multibyte shared calendar of another user, the calendar name is displayed as question marks.

**Workaround:** None.

### **6313321**

#### **Cannot convert IMAP profile name in Japanese.**

If an IMAP profile already exists, and this profile has never been used by Outlook, the conversion fails.

**Workaround:** None.

### **6541324**

#### **After Deploying Outlook Connector in Traditional Chinese, Folder Names in Outlook 2007 Do Not Display Correctly**

When you install Outlook Connector on a machine running Windows 2003 with Outlook 2007, the folder names are garbled.

**Workaround:** None.

### **6742345**

#### **Message Received in Simplified Chinese With HZ Encoding Is Garbled**

When you send a message in Simplified Chinese with HZ encoding, the message is garbled on receipt.

**Workaround:** Choose from the following outgoing message encoding options:

- Plain Text format – GB2312 or GB18030 combination
- HTML or RTF format – any combination

### **Communications Express Interoperability Issues for Connector for Microsoft Outlook**

The following issues relate to the interoperability between Sun Java System Connector for Microsoft Outlook and Sun Java System Communications Express:

**6752413**

**Contact Folder Named "Calendar" Created in Communications Express Replaces the Default Calendar in Outlook Connector**

When you create a contact folder named "Calendar" (case-sensitive) in Communications Express, it replaces the default calendar folder in Outlook Connector. Thus, all data in the calendar folder is lost.

**Workaround:** None.

**4949659**

**Address Change in From: header**

The name in the From: header changes if an attendee replies to an event invitation and attaches the `winmail.dat` calendar invitation. For example, Joe (using Outlook) sends an invitation to an event to Bob. Bob replies to Joe, using an email client that automatically sends the original `winmail.dat` calendar attachment back to Joe. When Joe opens the reply, the From: header is changed to Joe.

**Workaround:** None.

**4969029**

**Email ID is a must for Outlook.**

If a person with a calendar ID but no email ID is invited to an event in Communications Express, this person is not displayed as an attendee in Outlook. An email ID is required for Outlook.

**Workaround:** None.

**5032872**

**When you unsubscribe, the calendar does not get removed from the folder list.**

If you subscribe to or unsubscribe from a calendar in Communications Express, the information is updated in Outlook only after Outlook has been restarted. Additionally, if the LDAP configured for lookup is a replica, the subscription list is not updated until the replica is updated.

**Workaround:** None.

**6175103**

**Error generated when Outlook synchronizes with server.**

If a task is created (either in Outlook or Communications Express) while Outlook is synced with the server, then the task is deleted and the user attempts to switch to the Tasks folder in Outlook, an "Unable to display all cells due to low memory" error is generated.

**Workaround:** Switch to another folder and then back again to the Tasks folder.

**6229276**

**Configuration parameter needs to be set in order for address book server contacts to be properly synchronized.**

**Workaround:** The Communications Express configuration parameter `delete_perm` in the `db_config.properties` file needs to be set to `false` in order for Outlook to capture contact entries which have been deleted from Communications Express. The entry should be:

```
delete_perm=false
```

The default is `true`. The entry can be found at

```
/var/opt/SUNWuwc/WEB-INF/config/ldapstore/db_config.properties .
```

**6351914**

**Limitations in calendar alarms.**

Because of the difference in how Outlook and Communications Express handle alarms and reminders, changes in one interface are not reflected in the other. Outlook utilizes pop-up windows as alarms, while Communications Express (Calendar Server) sends email reminders. In order to not replicate alarms

when both interfaces are used (having both a pop-up and email reminder sent), Connector for Microsoft Outlook allows alarm synchronization upon creation of events in a single direction only. For example, when a new event is created using Communications Express, the alarm is copied to the Outlook event (as a pop-up). But when creating an Outlook event, the alarm is not set on the server.

**Workaround:** To allow the synchronization to work from Outlook to Communications Express, a registry value can be set in outlook: `HKEY_CURRENT_USER\Software\Sun Microsystems\Outlook Connector\Sync Cal`. To turn this on, set the value to 1, and to turn it off, set the value to 0 (or remove the key). Note that setting the registry value will only have effect when creating new events. Modifying existing events only affects the alarm type associated with the client performing the modification.

## No ID

The following are additional issues related to Communications Express interoperability that do not have IDs:

- **RTF formatting in Outlook is not preserved if the description text is edited using Communications Express.**
- **Differences exist in privacy classes between Outlook and Communications Express.**

Outlook has two privacy classes (Private and Public), while Communications Express has three classes (private, Date and Time only, and Public). In Outlook, a private event is created as a "Date and Time only" event in Communications Express. A public event in Outlook maps to the public event in Communications Express. Similarly, a Communications Express "Date and Time Only" event maps as a private event in Outlook, and a public event maps as a public event in Outlook. A Communications Express private event also maps to Outlook as a private event. To create a private event in Outlook so it appears as a private event in Communications Express, select "Free" from the "Show time as:" field. The Communications Express private event cannot be seen in a shared Calendar folder by another user.
- **There are differences in the way free/busy is implemented in Outlook and Communications Express.**

The default private event is free in Communications Express. If the event is to be included for free/busy lookup, then it should manually be set to busy. In Outlook the default events are busy for both private and public events.
- **If you export an event from Communications Express to a file in Outlook format, you cannot import the event from the same file into Outlook.**
- **Incompatibilities exist in how recurring tasks are implemented in Outlook and Communications Express.**

Recurring tasks in Outlook do not conform to RFC 2445 while Communications Express is specifically designed to work with RFC 2445-compliant information. This causes problems when recurring task information is passed between Outlook and Calendar Server. Information stored locally by Outlook does not always match information which is stored on the Calendar Server. Sun Java System Connector for Microsoft Outlook, for example, does not transfer any information dealing with the recurrence of a task to the Calendar Server. Any tasks created in Outlook (recurring or non-recurring) appears in Communications Express as single tasks. A task that is created in Communications Express only uses the recurring information from the Calendar Server when that task is written for the first time in the Outlook client and not during any modification of any existing task on Outlook.

For these reasons, recurring tasks viewed in Outlook and tasks viewed in Communications Express appear different in many cases. We recommend that users who work with recurring tasks choose either Outlook or Communications Express and not attempt to work with recurring tasks in both clients interchangeably.
- **If a message is sent from Outlook in Rich Text format, the message contains a plain text body with no formatting and a WINMAIL.DAT attachment.**

The WINMAIL.DAT attachment contains the Rich Text message along with any other attachments that may have been added. Because the format is Microsoft proprietary, only Outlook can read the WINMAIL.DAT attachment. Communications Express (and any other client) sees only the unformatted text message and a WINMAIL.DAT attachment. It is recommended that HTML format be used instead of Rich Text format to send messages.
- **If contacts groups in Outlook contain external SMTP mail recipients or other contacts groups, they are not seen by Communications Express.**

Communications Express and Convergence cannot send mail to these recipients.

- **Communications Express and Convergence cannot decode and display Microsoft TNEF format.**

Outlook saves calendar events and tasks (any calendar folder not under the Calendar folder tree), contacts (any contacts folder not under the Contacts folder tree), notes, and journals in the Messaging Server. Because the data is saved as Microsoft TNEF format, Communications Express and Convergence cannot decode and correctly display them.

## Microsoft Exchange Interoperability Issues

The following issues relate to the interoperability between Sun Java System Connector for Microsoft Outlook and Microsoft Exchange:

### 6174201

**Free Busy Proxy for Exchange does not return complete Free/Busy information.**

**Workaround:** None.

### 6255190

**Cannot recover deleted items.**

After selecting "Empty Deleted Items Folder," Connector for Microsoft Outlook does not allow for recovery of deleted items.

**Workaround:** None.

### No ID

**Receipt of a message with embedded OLE objects and HTML in RTF from Exchange (versions 5.5, 2000, and 2003) to Connector for Microsoft Outlook does not work.**

**Workaround:** None.

## Microsoft Outlook Issues

The following are issues with Microsoft Outlook:



### Note

These issues are general issues with Microsoft Outlook, and are not specific issues with Connector for Microsoft Outlook.

### 6365369

**Limitations for non-default calendars.**

Limitations exist when attempting to perform operations on a non-default calendar with Outlook:

- Free/Busy information is not displayed.
- Reminders cannot be set on an event.
- Attendee responses to invitations from non-default calendars are not tallied.

**Workaround:** None.

## Redistributable Files for Connector for Microsoft Outlook

Connector for Microsoft Outlook does not use any redistributable files.

# Chapter 36. Delegated Administrator 6.4 Release Notes

## Sun Java System Delegated Administrator 6.4 Release Notes



### A Note About This Release

Delegated Administrator 6.4 released with Communications Suite 6 is functionally the same version as the Delegated Administrator 6.4 released with Communications Suite 5. (However, bugs have been fixed since the Communications Suite 5 release.) These Communications Suite 6 Release Notes contain new information not included in [Sun Java System Delegated Administrator 6.4 Release Notes](#) in the *Communications Suite 5 Release Notes*.

These Release Notes contain important information available at the time of the general release of Sun Java System Delegated Administrator 6.4 including:

- [About Delegated Administrator 6.4](#)
- [What's New in This Release of Delegated Administrator](#)
- [Deprecated and Removed Features for Delegated Administrator 6.4](#)
- [Delegated Administrator Installation Notes](#)
- [Delegated Administrator Documentation Updates](#)
- [Delegated Administrator Compatibility Issues](#)
- [Problems Fixed in This Release of Delegated Administrator \(since Communications Suite 5\)](#)
- [Known Issues and Limitations in Delegated Administrator](#)
- [Redistributable Files for Delegated Administrator](#)
- [Requirements for Delegated Administrator](#)

## About Delegated Administrator 6.4

Delegated Administrator 6.4 enables you to provision organizations (domains), users, groups, and resources in an LDAP directory used by Communications Suite applications such as Messaging Server, Calendar Server, and Instant Messaging.

The Delegated Administrator has two user interfaces:

- A utility (a set of command-line tools) invoked with the `commadmin` command.
- A console (a graphical user interface) accessible through a Web browser.

Online help in the Delegated Administrator console describes how administrators can use the GUI to provision users in an LDAP directory.

With Delegated Administrator 6.4, you can provision users in an LDAP Schema 2 directory only. To provision Messaging Server users in an LDAP Schema 1 directory, you must use iPlanet Delegated Administrator, a deprecated tool.

For information about configuring and managing Delegated Administrator, see the [Sun Java System Delegated Administrator 6.4 Administration Guide](#). For a description of the Delegated Administrator `commadmin` command-line tools, see [Delegated Administrator Utility \(commadmin\) Reference](#).

## What's New in This Release of Delegated Administrator

See the [Communications Suite 6 What's New](#) document.

## Deprecated and Removed Features for Delegated Administrator 6.4

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### Deprecated Platforms: Version 3 of Red Hat Linux (effective in Communications Suite 6)

Support for Communications Suite (including Delegated Administrator) on the following versions of Red Hat Linux has been deprecated and may be removed in a future release:

- Red Hat Enterprise Linux Advanced Server (32– and 64–bit versions), version 3 (all updates)
- Red Hat Enterprise Linux Enterprise Server (32– and 64–bit versions), version 3 (all updates)

For information on currently supported versions of Red Hat Linux, see [Operating System Requirements](#).

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### iPlanet Delegated Administrator (effective in Communications Suite 5)

iPlanet Delegated Administrator has been deprecated in favor of the Communications Suite Delegated Administrator console and utility. Sun Microsystems, Inc. will announce an end-of-life time line for iPlanet Delegated Administrator at a future date.



#### Note

Although iPlanet Delegated Administrator has been deprecated, the iPlanet Delegated Administrator `imadmin user purge` command has been updated to be compatible with Messaging Server 6.3. For more information about the updated command, see [Purging Users with iPlanet Delegated Administrator and Messaging Server 6.3](#).

## Delegated Administrator Installation Notes

For a detailed steps required to install and configure Delegated Administrator, see “Chapter 2: Planning for Installation and Configuration” in the [Sun Java System Delegated Administrator 6.4 Administration Guide](#).

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### ACI Consolidation

For large-scale installations with Access Manager, Messaging Server, and an LDAP Schema 2 directory, you might want to consolidate the Access Control Instructions (ACIs) in your directory.

When you install Access Manager with Messaging Server, a large number of ACIs initially are installed in the directory. Many default ACIs are not needed or used by Messaging Server. You can improve the performance of Directory Server and, consequently, of Messaging Server look-ups, by consolidating and reducing the number of default ACIs in the directory.

For information about how to consolidate and discard unused ACIs, see [Consolidating ACIs for Directory Server Performance](#).

## Delegated Administrator Documentation Updates

In this release of Delegated Administrator, *Sun Java System Delegated Administrator Administration Guide* describes how to enforce unique values for mail attributes when running Directory Server 5.x. This task appears as a “Post-Configuration Task” after you run the Delegated Administrator configuration program.

If you are running Directory Server 6.x, you must follow the procedure described here to enforce unique mail attribute values:

### **To enforce the uniqueness of mail attributes when running Directory Server 6.x**

Messaging Server uses the following mail attributes to identify a user's email address and alternate email addresses:

- mail
- mailAlternateAddress
- mailEquivalentAddress

Each user's mail attributes should be unique across the directory.

1. Install the following Directory Server plug-in: 6.1\_PR\_6573440.

To install the plug-in, follow the instructions in the plug-in README file.

The plug-in is available with Directory Server 6.x patches on SunSolve.

This plug-in provides a hotfix patch to Directory Server to enforce mail attribute uniqueness. Although the plug-in is labeled “6.1”, it applies to other Directory Server 6.x releases such as Directory Server 6.0.

2. Create the plug-in for Delegated Administrator by using the Directory Server configuration utility, `dsconf`.

For example:

```
dsconf create-plugin -h host -p port
-H /opt/SUNWdsee/ds6/lib/uid-plugin.so -F NSUniqueAttrSet_Init
-Y preoperation -G
attributeset=mail,mailalternateaddress,mailequivalentaddress
-G "ugldapbasedn" "Uniqueness in Attribute Set"
```

where

*host* and *port* are the host name and port number of the machine where Directory Server is installed

`/opt/SUNWdsee/ds6/lib/uid-plugin.so` is an example of the library path where `uid-plugin.so` is located on Solaris. (For Linux platforms, use the appropriate Linux library path.)

*ugldapbasedn* is your root suffix. Uniqueness checking is performed on all entries underneath this suffix.

3. Enable the plug-in for Delegated Administrator.

For example:

```
dsconf enable-plugin -h host -p port "Uniqueness
in Attribute Set"
```

For more information about using the `dsconf` utility to enforce attribute value uniqueness, see the following chapter in the *Sun Java System Directory Server Enterprise Edition 6.3 Administration Guide*: [Directory Server Attribute Value Uniqueness](#).

4. Restart Directory Server.

## Delegated Administrator Compatibility Issues

The following table lists the known incompatibilities between Communications Suite Delegated Administrator 6.4 and earlier versions.

| Incompatibility                                                                                                                                                                                 | Impact                                                                                                                                     | Comments                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Access Manager in Realm Mode (version 7.x style)<br>Note: Access Manager has two install types: Realm Mode (version 7.x style) and Legacy Mode (version 6.x style). Legacy Mode is the default. | At installation, you must choose Legacy Mode as the install type on the following panel:<br><br>Access Manager:<br>Administration (1 of 6) | If the Realm Mode install type of Access Manager is installed, you will not be able to run Delegated Administrator.                                                                                                                              |
| Directory Server releases 5.2.4 and earlier                                                                                                                                                     | The Directory Server feature that enforces unique values for mail attributes is not available with versions earlier than 5.2.4.            | Solution: Upgrade to Directory Server 5.2.5 or later.<br><br>You also can install Directory Server 5.2.4, but you must apply patch 5.2_Patch_4_6313027. For detailed instructions, see <a href="#">Enforce Unique Values for Mail Attributes</a> |

## Problems Fixed in This Release of Delegated Administrator (since Communications Suite 5)

This list describes the issues fixed in Delegated Administrator.

### 6679372

Getting inconsistent results of organization searches for adding `icsExtendedDomainPreds` in DA console.

### 6587572

Delegated Administrator creates new mail groups with `mgrpBroadcasterPolicy=NO_REQUIREMENTS`

### 6587520

Delegated Administrator creates new users with `mailAutoReplyMode=echo`

**6553328**

There is no longer a Manager Field available in the Delegated Administrator tool like the one in iPlanet Delegated Administrator 1.2.

**6525830**

The Delegated Administrator online help for the Editing Group Properties page incorrectly documents the following UI fields: Add Header Field and Remove Header Field.

**6525829**

The Delegated Administrator online help incorrectly describes the Message Prefix Text field in the Create New Group wizard and Group Properties page.

**6512161**

The Delegated Administrator online help incorrectly defines the Attachment Quota value in the Create New Organization wizard and Organization Properties page.

**6507859**

Delegated Administrator online help erroneously states that you can use ">" and "<" signs when searching for organizations.

**6483254**

Delegated Administrator online help does not explain that the Login ID must be in ASCII characters.

**6454001**

Can not display `icsExtendedDomainPrefs` entry properly on Delegated Administrator console.

**6431459**

Although IMAPS is enabled for a service package, it shows "IMAP: disabled"

**6317850**

Attributes passed with the `-A` option of the `commadmin` command are ignored if the command also calls an input file containing attributes passed with `-A`.

**6314711**

An Organization Administrator (OA) can remove himself as an OA by modifying the organization Properties page.

**6218713**

Values in the `resource.properties` files are overwritten when Delegated Administrator is reconfigured with the `config-commda` program.

**5107441**

If the first part of the default organization name created in the Delegated Administrator configuration program (`config-commda`) matches the root suffix name, the organization cannot be created.

**4934768**

Cannot modify non-ASCII groups.

## Known Issues and Limitations in Delegated Administrator

This section describes known issues in Communications Suite Delegated Administrator. The section includes the following topics:

- [Delegated Administrator Installation, Upgrade, and Configuration Issues](#)
- [Delegated Administrator Console and Command-Line Utilities](#)
- [Delegated Administrator Localization and Globalization Issues](#)
- [Delegated Administrator Documentation](#)

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### Delegated Administrator Installation, Upgrade, and Configuration Issues

**6771475**

**After Delegated Administrator is upgraded with `commpkg upgrade`, the post-upgrade script always displays a success message, even when the upgrade failed.**

If a problem occurs during the Delegated Administrator upgrade, the post-upgrade script displays "All tasks PASSED." It does not point to the log files, which would provide information about the upgrade failure.

**6434047**

**You cannot upgrade Delegated Administrator from version 2004Q2 to version 6.4 (the current release) when Access Manager is deployed to an Application Server node agent.**

This issue occurs when Delegated Administrator is deployed to Application Server and you upgrade Application Server from version 7 to version 8.x. The `asupgrade` utility migrates the Application Server 7 `server1` instance into the Application Server 8.x `server1` target running under a `nodeagent`. However, `asupgrade` changes the value of the virtual server from `server1` in Application Server 7 to `server` in Application Server 8.x.

#### Workaround:

When you run the Delegated Administrator configuration program, `config-commda`, in the Application Server Preferences panel, specify these values for the target and virtual server:

- Target: `server1`
- Virtual Server: `server`

6376896, 6294603

**Upgrading to Access Manager 7.0 without upgrading Delegated Administrator to version 6.4 (the current release) will cause user creation to fail.**



**Note**

This issue occurs only if you are currently running Delegated Administrator 6 2005Q1 (Java ES Release 3) or earlier. If you have installed Delegated Administrator version 6 2005Q4 (Java ES Release 4) or have already upgraded Delegated Administrator to version 6.4, this issue does not occur.

When you upgrade to Java Enterprise System Release 5, if you upgrade Access Manager from version 6.x to 7.0 but do not upgrade Delegated Administrator to version 6.4, user creation with mail or calendar service will fail.

The recommended way to solve this issue is to upgrade Delegated Administrator to version 6.4. If you have a compelling reason not to upgrade Delegated Administrator, take the steps described in the following workaround.

**Workaround:**

1. Update the `UserCalendarService.xml` file, located by default in the following directory:

```
/opt/SUNWcomm/lib/services/UserCalendarService.xml
```

In the `UserCalendarService.xml` file, mark the `mail`, `icssubscribed`, and `icsfirstday` attributes as optional instead of required.

2. In Access Manager, remove the existing xml file by running the `amadmin` command, as in the following example:

```
amadmin -u amadmin -w netscape -r UserCalendarService
```

3. In Access Manager, add the updated xml file, as in the following example:

```
amadmin -u amadmin -w netscape  
-s /opt/SUNWcomm/lib/services/UserCalendarService.xml
```

4. Restart the Web container.

## 6310711

**The Delegated Administrator configuration program allows you to enter invalid values in the Domain Separator field.**

In the configuration program, `config-commda`, you can enter invalid characters such as `^` in the Domain Separator field. You cannot log into the Delegated Administrator console using a login ID with the invalid domain-separator character.

**Workaround:** Edit the value of the `commadminserver.domainseparator` property in the `daconfig.properties` file, located in the following default path:

```
/var/opt/SUNWcomm/da/WEB-INF/classes/  
com/sun/comm/da/resources/daconfig.properties
```

Use a valid value such as `@`, `-`, or `_`.

Redeploy the edited `daconfig.properties` file to the Web container used by the Delegated Administrator console.

Before the change can take effect, you must run the script that deploys the customized `daconfig.properties` file to your Web container.

For instructions on how to deploy a customized properties file to a particular Web container, see [To Deploy a Customized Configuration File in \*Delegated Administrator 6.4 Administration Guide\*](#).

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## Delegated Administrator Console and Command-Line Utilities

### 6760564

**In the Delegated Administrator console, the Calendar service Advanced Rights interface is missing the calendar group double-booking option.**

When the group calendar account functionality was added in Calendar Server 6.3, a new bit was added to the `icsAllowRights` LDAP attribute:

```
bit 15 : allowGroupDoubleBook : "Double booking of group calendars"
```

The Delegated Administrator console is missing a field to "Allow double booking for new group calendars" by setting bit 15 of the `icsAllowedRights` attribute. (The Advanced Rights fields are in the Calendar Service section of the Organization Properties page in the Delegated Administrator console.)

**Workaround:**

Use the `commadmin domain create -R` or `commadmin domain modify -R` command to set the advanced rights properties (bits) in the `icsAllowRights` attribute.

6677194

**Local Organization Administrators and Service Provider Administrators can change the disk space quota attribute of their domains when the service package assigned to the domains restricts the disk space quota.**

An Organization Administrator can use the Delegated Administrator console to change the value of the **Disk Space Quota** option for the domain, overriding the service package restrictions.

**Workaround:** Edit the `Security.properties` file, as follows:

1. To prohibit an organization administrator from editing the disk space quota field, add the following line to the `Security.properties` file:

```
OrganizationAdminRole.UserProperties.MailQuotaValue=NONEDITABLE
```

For a Service Provider Administrator, add the following line:

```
ProviderAdminRole.UserProperties.MailQuotaValue=NONEDITABLE
```

Be sure to update the `Security.properties` file in the Delegated Administrator configuration directory. For example:

```
/var/opt/sun/com/da/WEB-INF/classes/com/sun/comm/da/resources/Security.properties
```

**Note:** If you are running Communications Suite 5 version of Delegated Administrator 6.4, the default path on Solaris would be:

```
/var/opt/SUNWcomm/da/WEB-INF/classes/com/sun/comm/da/resources/Security.properties
```

2. You also must deploy the updated `Security.properties` file to the web container's configuration directory. For example, if you have deployed Delegated Administrator to Web Server 7.x, the default path would be:

```
/var/opt/SUNWwbsvr7/<https-Host_name>/web-app/<Host_name> \
/da/WEB-INF/classes/com/sun/comm/da/resources/Security.properties
```

3. Restart the web container.

## 6430018

**If service packages are displayed across multiple pages in the Delegated Administrator console, only changes to the last page are saved.**

This issue affects three functions:

- Allocating service packages to an organization.
- Changing the quantities of service packages allocated to an organization.
- Removing service packages from the list of service packages allocated to an organization.

### **Workaround:**

If the services packages are displayed on multiple pages, click the icon that displays multiple pages pointing to a single page.

This icon appears above *and* below the list of service packages. If you place your cursor over the icon, a message says: *Show Data in a Single Page*.

You must display all service packages on a single page to save your all of your changes. If the service packages are displayed on multiple pages, only the changes made to service packages on the last page are saved.

## 6300923

**When you add Dynamic members to a group In the Delegated Administrator console, you cannot test a manually constructed LDAP URL.**

When you create a new group and add dynamic members to the group, you can either manually construct an LDAP URL or use the fields available in the drop-down menus to construct the LDAP URL. If you use the drop-down menus, you can click the **Test LDAP URL** button. If you manually construct the LDAP URL, this feature is disabled.

## 6292610

**Using the browser or system controls in the Delegated Administrator console can generate unexpected results.**

**Workaround:** Navigate only by using the built-in Delegated Administrator controls, such as the tabs, buttons, and navigation links provided on the page itself. Do not use browser or system controls, such as your browser's Back button or the Close icon on dialog windows.

## 6234660

**No indication when a User, Organization, or Group list page has finished loading.**

If you click a button while a list page is loading, an error occurs.

**Workaround:** While the page is loading, a message asks you to wait. Do not click any buttons or links until the page is ready.

## 5094680

**The advanced search feature does not return correct results for organizations.**

This issue occurs if you perform the following steps:

1. Select the Advanced Search feature.
2. Select "Organizations" from the drop-down list.
3. Click the Match All or Match Any radio button.
4. Select an organization name from the drop-down list.
5. Enter valid values in the text field.
6. Click Search.

Instead of returning only the organizations that match the search criteria, Delegated Administrator displays all organizations.

**Workaround:** None.

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## Delegated Administrator Localization and Globalization Issues

This section describes Delegated Administrator localization problems. No localization issue exist for this release.

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## Delegated Administrator Documentation

This section describes errors or incomplete information in the Delegated Administrator books and online help.

### 6760559

**In the Delegated Administrator console, the Calendar service advanced rights (icsAllowRights) GUI interface can easily be misinterpreted.**

This issue is described in the following page: [Setting Calendar Server Advanced Rights with Delegated Administrator](#).

### 6693218

**The Delegated Administrator online help displays the current version as Communications Suite 5 Delegated Administrator instead of Delegated Administrator 6.4 or Communications Suite 6 Delegated Administrator.**

### 6607494

**The Delegated Administrator online help describes nested groups, although nested groups are not supported in Delegated Administrator.**

For example, the online help describes how to add a nested group (add a group as a member of an existing group) by choosing from a drop-down menu and searching/selecting a group. These options do not exist in the UI. You cannot added nested groups.

651216

## The Delegated Administrator online help incorrectly defines the Attachment Quota value in the Create New Organization wizard and Organization Properties page.

The online help describing the Mail Service Details panel in the Create New Organization wizard and the Mail Service section of the Organization Properties page states that the Attachment Quota field displays the “attachment size per message.” The online help tells the user to enter a maximum attachment quota size in kilobytes. This is incorrect.

The Attachment Quota sets the maximum number of attachments for each email message. For example, setting a value of 2 would allow users to attach no more than two files to a message. The size of each attachment is not affected by this attribute.

## Redistributable Files for Delegated Administrator

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## Requirements for Delegated Administrator

See [Requirements for Communications Suite 6](#) and [Requirements for Delegated Administrator](#).

This section describes the following platform, client product, and additional software requirements for this release of Delegated Administrator:

- [Important Patch Information for Delegated Administrator](#)
- [Delegated Administrator Operating System Requirements](#)
- [Sun Java System Software](#)
- [Delegated Administrator Hardware Requirements](#)
- [Supported Browsers for Delegated Administrator](#)

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## Important Patch Information for Delegated Administrator

At the time of general release of the Sun Java Communications Suite 6, the following Delegated Administrator 6.4 upgrade patches are available:

| Platform       | Patch Number (English) |
|----------------|------------------------|
| Solaris, SPARC | 121581–18              |
| x86            | 121582–18              |
| Linux          | 121583–18              |

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## Delegated Administrator Operating System Requirements

This release of the Communications Suite products, including Delegated Administrator, is supported on the following platforms:

- Solaris 10 Operating System (SPARC™ and x86 Platform Editions) including Zones Support
- Solaris 9 Operating System Update 2 (SPARC™ and x86 Platform Editions)

- Red Hat Enterprise Linux Advanced Server (32– and 64–bit versions), version 4 (all updates) and 5 (all updates)
- Red Hat Enterprise Linux Enterprise Server (32– and 64–bit versions), version 4(all updates) and 5 (all updates)



#### Note

Delegated Administrator is no longer supported on HP-UX or Windows platforms.

For detailed information about Solaris and Linux requirements, including required upgrade patches and kernel versions, see the *Sun Java Communications Suite Installation Guide* and *Sun Java Communications Suite Release Notes*.

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## Sun Java System Software

The following Sun Java System Software, tools, and LDAP schema version are required for this release of Delegated Administrator:

- Directory Server 5.x or 6  
To enforce unique values for mail attributes, you must install one of these releases:
  - Directory Server 6
  - Directory Server 5.2.5 or later
  - Directory Server 5.2.4, and you must apply patch 5.2\_Patch\_4\_6313027
- Access Manager 7.1
- Either Messaging Server 6 or Calendar Server 6, or both
- Java System Web container. You must deploy Delegated Administrator to one of the following Web containers:
  - Sun Java System Web Server 6.1 or higher
  - Sun Java System Web Server 7 or higher
  - Sun Java System Application Server 7.x
  - Sun Java System Application Server 8.x
  - Sun Java System Application Server 9.x
- Directory Server Preparation Tool (Setup script): `comm_dssetup.pl` version 6.4–0.03  
`comm-dssetup.pl` version {{6.4-2.01}} is provided in Communications Suite 6.
- LDAP Schema 2  
This release of Communications Suite Delegated Administrator is designed for provisioning users in an LDAP Schema 2 directory.

For information about requirements for Directory Server, Access Manager, Web Server, and Application Server, see the current release notes for these products.

For installation instructions for the Java Enterprise System components listed in this section, see the *Sun Java Enterprise System Installation Guide*.

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## Delegated Administrator Hardware Requirements

The memory and disk space requirements for Delegated Administrator are the same as those of the Web container to which Delegated Administrator is deployed.

For information about the Web container's hardware requirements, see the current release notes for this Java Enterprise System component.

## Supported Browsers for Delegated Administrator

See [Client Requirements](#) for more information.

# Chapter 37. Instant Messaging 8 Release Notes

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## Sun Java System Instant Messaging Software Version 8 Release Notes

This chapter contains important release information about Sun Java System Instant Messaging Software version 8. The release notes contain the following sections:

- [About Instant Messaging](#)
- [What's New in This Release of Instant Messaging](#)
- [Deprecated and Removed Features for Instant Messaging 8](#)
- [Requirements for Instant Messaging 8](#)
- [Instant Messaging Installation and Uninstallation Notes](#)
- [Instant Messaging Compatibility Issues](#)
- [Problems Fixed in Instant Messaging Version 8](#)
- [Known Issues and Limitations in Instant Messaging Version 8](#)
- [Performance, Scalability, and Sizing Considerations for Instant Messaging](#)
- [Redistributable Files for Instant Messaging](#)

### About Instant Messaging

Sun Java System Instant Messaging software delivers secure presence and extended real-time messaging, enabling user communities to communicate and collaborate instantly and securely. It combines the instant messaging capabilities with conferences, alerts, news, polling, and file transfer, to create a rich collaborative environment. It leverages an existing community that can be managed by using LDAP, Sun Java System Access Manager, or Sun Java System Portal Server.

### What's New in This Release of Instant Messaging

See the [What's New in Instant Messaging 8](#) document.

### Deprecated and Removed Features for Instant Messaging 8

Instant Messaging 8 does not have any deprecated features or removed features for this release.

### Requirements for Instant Messaging 8

See [Requirements for Communications Suite 6 Update 1](#) and [Requirements for Instant Messaging](#).

### Instant Messaging Installation and Uninstallation Notes

This section contains important information about installing and uninstalling Sun Java System Instant Messaging software. If you are using Sun Java System Access Manager with Instant Messaging, install the Legacy (version 6 style) Access Manager by using the Sun Java Enterprise System installer. This version of Instant Messaging is not compatible with the Realm (version 7 style) Access Manager. If you use Access Manager to store policies when configuring Instant Messaging, the following policies are created:

- Ability to administer Instant Messaging and Presence Services

- Ability to change your own Instant Messaging settings
- Ability to manage Instant Messaging Conference Rooms
- Ability to manage Instant Messaging news channels
- Ability to send Instant Messaging alerts
- Ability to watch changes on other Instant Messaging users
- Default Instant Messaging and presence access

## Instant Messaging Compatibility Issues

The following table lists the compatibilities issues in Instant Messaging 8.

Table 5-1 Instant Messaging 8 Compatibility Issues

| Incompatibility                                                                                                                                                                                                       | Impact                                                                                                                                                                                                                                                            | Comments                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Versions of Instant Messenger prior to Sun Java System Instant Messaging 7 2006Q1 do not support XMPP redirection.                                                                                                    |                                                                                                                                                                                                                                                                   | If you use a third-party client, ensure that the client supports XMPP redirection before deploying the Instant Messaging redirect server. |
| The Instant Messaging SDK Java packages are renamed in Sun Java System Instant Messaging software 7 2005Q4 to match the open source community naming conventions. For example, <code>org.netbeans.lib.collab</code> . | Instant Messaging will use the new naming scheme exclusively and deprecate the old scheme.                                                                                                                                                                        |                                                                                                                                           |
| Sun Java System Instant Messaging 8 is incompatible with Sun Java System Access Manager version 7 2005Q4.                                                                                                             | The supported version of Sun Java System Access Manager is version 7.1.                                                                                                                                                                                           |                                                                                                                                           |
| Sun Java System Instant Messaging 8 is incompatible with the 2004Q2 versions of Portal Server and Messaging Server.                                                                                                   | The supported version of Sun Java System Portal Server are versions 7.1 and 7.1 update 1. The supported version of Sun Java System Messaging Server is version 7.0 Update 1.                                                                                      |                                                                                                                                           |
| Due to a protocol change the Instant Messaging server version 8 cannot communicate with a server of a version older than 7.3 in federated deployments.                                                                | Instant Messaging federated deployment sites should upgrade all the servers. The existing deployments who do not wish to upgrade the server should explicitly set the property of collaboration session factory object to use the legacy protocol implementation. | Perform the upgrade to limit the length of time during which the servers cannot communicate with each other.                              |
| Client-Server Communication                                                                                                                                                                                           | Due to a protocol change the older versions of the client and server (2004Q2 and earlier) cannot communicate with the new versions of client and server.                                                                                                          | Upgrade both the client and server at the same time.                                                                                      |

|                                                                                                                                                       |                                                                                                                                                                                                                                                                 |                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sun Java System Instant Messaging 7 2005Q4 and 2006Q1 are incompatible with the shared components that ship with Sun Java System Instant Messaging 8. | Instant Messaging depends on the Instant Messaging SDK. The Instant Messaging SDK is installed with the shared components.                                                                                                                                      | Upgrade the shared components and then upgrade Instant Messaging. The Communication suite installer upgrades Instant Messaging SDK before installing Instant Messaging version 8.         |
| The Instant Messaging SDK implementation of the legacy Instant Messaging Presence protocol is now co-packaged.                                        | By default, the Instant Messaging SDK APIs use the implementation based on the XMPP protocol. Applications should explicitly set the property of the collaboration session factory object to use the legacy Instant Messaging Presence protocol implementation. |                                                                                                                                                                                           |
| The SDK component includes additional JAR files. The Instant Messaging SDK uses the JSO (JABBER Stream Objects) libraries.                            | To use the XMPP protocol effectively, modify the <code>classpath</code> parameter for older applications that use the Instant Messaging SDK.                                                                                                                    |                                                                                                                                                                                           |
| Sun Java System Instant Messaging 6 2004Q2 server is incompatible with the default behavior of the latest version of the SDK.                         | To use the Instant Messaging 6 2004Q2 server with the current Instant Messaging SDK, set the property of the collaboration session factory object to use the legacy protocol implementation.                                                                    |                                                                                                                                                                                           |
| Instant Messaging 8 Multiplexor might not work correctly with the older versions of the server.                                                       |                                                                                                                                                                                                                                                                 | Use Instant Messaging 8 for both the Multiplexor and server. Upgrade or patch systems on which the server is installed and then upgrade systems on which only the Multiplexor is enabled. |
| Instant Messaging 8 server might not work correctly with the previous versions of the Instant Messaging SDK.                                          |                                                                                                                                                                                                                                                                 | Use the 8 version of the server and the SDK.                                                                                                                                              |
| URL to the default codebase URL for Sun Java System Instant Messaging 8.                                                                              | The default URL for the codebase is <a href="http://server:port/im">http://server:port/im</a> .                                                                                                                                                                 |                                                                                                                                                                                           |
| Default port numbers for Sun Java System Instant Messaging 8                                                                                          | The default server port number is 45222 and the default Multiplexor port number is 5222.                                                                                                                                                                        |                                                                                                                                                                                           |
| Instant Messaging 8 server might not work correctly with Multiplexor version 7.3.                                                                     |                                                                                                                                                                                                                                                                 | Upgrade the Multiplexor to version 8.                                                                                                                                                     |

|                                                                                       |                                  |
|---------------------------------------------------------------------------------------|----------------------------------|
| Although the 7.3 client is supported on 8 server, all functionalities might not work. | Upgrade the client to version 8. |
|---------------------------------------------------------------------------------------|----------------------------------|

## Problems Fixed in Instant Messaging Version 8

This section contains a list of problems fixed in the Instant Messaging version 8 release.

### 6682522

During a voice chat, a user should have an option to change the user status to On the Phone.

### 6722661

User must have an option to disallow incoming voice calls.

### 6631440

A second `httpbind` request from the same Jabber ID (JID) or resource fails.

### 6669612

When the number of users connecting to the server crosses 5000, the server rejects new incoming users. The maximum rate of rejection is five users per second for a total count of 25000 users.

### 6683577

Cannot connect through IMPS with a mobile device that supports a four-way login.

### 6726238

In IMPS, users are unable to see messages that are sent to the conference room by other members.

### 6726323

In IMPS, a user with no `admin` privilege is able to create a group.

### 6738630

In IMPS, when a user with no `admin` privilege tries to create a room, the user is logged out of the Instant Messaging client.

### 6739012

Cannot connect to the MSN server if the host name or the IP address of the MSN server is not manually added to the `host` field in the `pysmsnt.xml` file.

### 6739339

The JID and password of the MSN gateway is not added to the `pysmsnt.xml` file if you choose the Enable local component option in the Configurator tool.

### 6740354

In IMPS, a `LeaveGroupResponse` message should be sent to the members of a room before the room is deleted.

**6740436**

In IMPS, users who are rejected from a conference are able to send messages to the conference.

**6742567**

The Configurator tool skips the MSN gateway configuration if you do not select the AIM gateway option.

**6748787**

Conference that users create is not saved in the conference list.

**6751533**

Unable to start the MSN gateway on a Red Hat Linux 32-bit operating system.

**6752548**

Installation of Instant Messaging by using the Communication Suite installer fails on a Red Hat Linux 32-bit operating system.

**6761760**

The remote host name text box does not appear during configuration if you select the Multiplexor-only option in the Network Access Point panel.

**6763126**

In a client-only configuration, the Configurator tool completes the configuration process even if you provide an incorrect port number for the HTTP port.

**6777845**

The Instant Messaging client should provide an option to enable and disable the SMS gateway feature.

## **Known Issues and Limitations in Instant Messaging Version 8**

This section contains a list of known issues at the time of release of Instant Messaging version 8.

### **Instant Messaging Agent Issues**

**6777467**

**Offline messages are not sent as an SMS to a user if the user has not logged in to the Instant Messaging client at least once.**

**Workaround:**

Log in by using the Sun Java System Instant Messaging client at least once.

**6724472**

**Offline SMS messages are sent to user even after you block messages from a particular user.**

**6745138**

Text formatting changes made in the AIM client do not appear in the Sun Instant Messaging client.

**6646700**

Sending an alert from the Instant Messaging client to a user in the MSN client results in an alert being delivered as a chat conversation. The delivery status of the alert is not updated correctly. For example, although the user of the MSN client has read the message, the status is not updated as read.

**6646702**

The subject of the alert sent from the Instant Messaging client to the MSN client is not displayed in the MSN client. Only the content of the alert message is displayed.

**6646704**

The Offline Alert functionality does not work when alerts are sent from the Sun Java System Instant Messaging client to users in the MSN and AIM clients.

**6646712**

In the Instant Messenger client, the MSN or AIM transport credentials that a user provides to log in are not displayed.

## **Instant Messaging Installation, Upgrade, and Uninstallation Issues**

**6758197**

If the server is reconfigured, the `iim.conf` file does not retain the previous configuration details.

**6768193**

The `propstore_migraton.conf` file does not exist when Instant Messaging is upgraded from version 7.2 to version 8.

**6643628**

The Configurator tool does not connect to the Sun Java System Directory Server SSL port number 636.

**Workaround:**

Manually add the SSL port number as 636 in the `iim.conf` file.

**6672605**

The Instant Messaging server takes the property store migration source from the `iim.conf` file even though the migration options are specified by using the command line.

6677138

**The Configurator tool should be able to handle a scenario where Instant Messaging server and web server run as different users.**

The Instant Messaging server defaults to running as `inetuser` and `inetgroup`. Web server defaults to running as `webserverd`. In this case, all the Instant Messaging configuration files that are generated by Configurator are readable only by `inetuser`. The Configurator tool must change the ownership of these files to the web server runtime user, so that they can be read by web applications.

6689151

**The `init-config` utility should provide an option to perform Calendar Agent integration with JMQ, ENS, and None.**

The Instant Messaging `init-config` utility provides the option to configure the Calendar Agent configuration settings. The Instant Messaging `configure` utility currently assumes that the integration with the Calendar Server uses the ENS (Event Notification Service) mechanism. As JMQ is also an option for notifications, it would be advantageous to provide the ability to configure JMQ during initial configuration.

Hence, the three options JMQ (preferred), ENS (legacy), and None with the defaults values for each mechanism should be provided during configuration.

**Workaround:**

Do not integrate the calendar agent during initial configuration. After the initial configuration process, manually configure the preferred mechanism, that is, ENS, JMQ, or None in the `im.conf` file.

6689323

**After upgrade, the `redeploy` command displays an error message even though the command is successful.**

6709951

**Deploying the client resources fails if the web server has multiple HTTP listeners configured for the same virtual server.**

6498428

**The Configurator tool fails if you specify a user ID and a group ID other than `root`.**

If you use any user ID or group ID other than `root` to install Instant Messaging, the user does not have permission to modify the `im.conf` file. In this situation, when you invoke the Configurator tool after installing the Instant Messaging components, the tool fails.

**Workaround:**

After installing and before starting the Instant Messaging components, manually set permissions for `imuser` and `imgroup`. To do this, type the following command:

```
chown -R imuser:imgroup /var/opt/sun/comms/im/default
chown -R imuser:imgroup /etc/opt/sun/comms/im/default
```

`imuser` and `imgroup` are the user and group that you use to install Instant Messaging.

6766504

**The LDAP bind password is in clear text in console when you configure the Instant Messaging server in the debug mode.**

**6197343**

The Configurator tool prompts for policies and SSO options even if the user does not select the Identity service.

**6444431**

The Configurator tool accepts values for Use Assess Manager for Policy and Use Assess Manager for SSO options and succeeds in configuration even when Sun Java System Access Manager is not installed.

## **Instant Messenger Issues**

This section contains a list of known issues at the time of release of Instant Messenger version 8.

### **Instant Messenger General and Usability Issues**

**6739173**

If the Alert if user status changes option is set for a MSN user, three alert messages are sent to other users when the status of the MSN user changes.

**6770412**

Status of the AIM users is not updated in the Sun Java System Instant Messaging client.

**6766505**

Conference history is not displayed in the Instant Messaging client if a user joins the conference before the owner of the conference.

**6751392**

The names of MSN and AIM Transport is not displayed consistently in the Instant Messaging Client File->Add Services menu.

**6750943**

MSN and AIM Transport users are not shown in roster on a Red Hat Linux platform.

**6750250**

Entering a conference room with a multibyte nickname sometimes fails.

**6649550**

A Status Unknown message is displayed when offline users relogin in a server-to-server setup.

**6626931**

Users with self-JID (Jabber ID) encounter authorization issues in the Instant Messaging client.

**6626943**

Subscribe news channel displays an `org.jabberstudio.jso.JIDFormatException` error in a Schema2 hosted domain setup.

**6486498**

If you send an alert containing an image of a URL and a text message, the recipient receives only the text message.

**6576575**

The Authorize Contact message is not sent when a user is added from the Alert and Chat windows.

**6727849**

In a server-to-server installation, the File->Import Contacts option does not work.

## **Instant Messaging Server Issues**

**6777818**

If you try to register a duplicate user in the domains that are blocked, a message `You have already been registered` is displayed.

**6744631**

Subscription does not work if the Sun Java System Identity Server is used for policy storage.

**6742973**

Only users who are recently added to the AIM client are synchronized with the Sun Java System Instant Messaging client. Users who are removed from the AIM client are not synchronized.

### **Workaround:**

If a user is deleted in the AIM client, manually delete the user in the Sun Java System Instant Messaging client.

**6742857**

SMS messages are not delivered if the SMS gateway is enabled on a single peer in a server pool.

### **Workaround:**

Enable the SMS gateway on all peers. For more details about the SMS gateway, see [SMS Gateway for Instant Messaging](#).

**6740782**

Private conference communication does not work between users who have the same user names but are on different domains.

### **Workaround:**

Users should log in with a different resource and start a chat session.

**6739701**

MSN and AIM gateways cannot connect to the Instant Messaging server in the SSL mode.

**6739134**

Restarting the Instant Messaging services removes the MSN Transport from the Instant Messaging client.

**6646034**

**The `imadmin assign_services` command fails if Instant Messaging interacts with the LDAP server in the SSL mode.**

**Workaround:**

Ensure that the Instant Messaging interacts with the LDAP server in the non-SSL mode. Invoke the `assign-services` command and change the interaction back to the SSL mode.

**6628423**

**In a server-to-server setup, users that log in through third-party messaging clients such as AIM and MSN are unable to search conferences.**

**6632080**

**In a server-to-server setup, users are unable to join the conference rooms on a server that has the TLS (Transport Layer Security) enabled.**

**6620273**

**Data migration fails for user IDs that contain uppercase characters.**

**6724468**

**The `migratepropstore` process does not migrate the `vcard-temp.xml` file from LDAP to a file property store.**

**6752716**

**Null pointer exception is seen in the `xmppd.log` file even if a MSN user is deleted from the Sun Java System Instant Messaging roster.**

**6599164**

**The Configurator tool should create the `im.war` and `httpbind.war` files if the web container used for Instant Messaging is not a supported web container.**

## **Instant Messaging Voice Issues**

**6678951**

**Voice chat fails if users do a side chat in a conference that has only two users.**

**6768190**

**If VoIP is enabled, the participant list option in the View menu of the Chat window does not work.**

**6730494**

**When `user1` and `user2` are in a voice chat, a third user `user3` is unable to start a voice chat with `user1` or `user2`.**

**6727794**

**Inconsistent issues with voice chat.**

6714770

If you use the Instant Messaging VoIP client to communicate with a remote peer that blocks the UDP (User Datagram Protocol) traffic due to a firewall, the VoIP connection is not established.

6689918

Voice chat does not work correctly on a Sun Ray machine.

6665839

Voice chat status displays as `Connected` even after the server shuts down.

6723424

User with `admin` privileges should be able to specify a default port range in the `jnlp` file.

6705989

In one-to-one conversation, the Voice Chat icon should be enabled by default.

## Instant Messaging Administration Issues

6763462

The `imadmin assign_services` and `migratepropstore` commands do not work if the primary LDAP server is down.

### Workaround:

Restart the primary LDAP server and rerun the `imadmin assign_services` and `migratepropstore` commands.

6719455

The `./iwadmin redeploy all` command does not redeploy IMPS.

### Workaround:

To redeploy IMPS, type the following command:  
`/opt/SUNWiim/sbin/iwadmin -v redeploy imps`

6740272

**ACL file behavior is different for identity and file-based policy management.**

If the policy is `identity`, the Manage Conferences and Manage News Channel options are not enabled by default. However, these options are enabled by default in file-based ACLs (Access Control List).

## Instant Messaging Archive Issues

6738078

The Disabling Archive option does not work during a chat session.

## Instant Messaging Interoperability Issues

6621474

Cannot kick the participants from a conference room.

## Other Known Issues

6742967

The status of AIM (AOL Instant Messaging) user is always shown as offline in the Sun Java System Instant Messaging client.

6740263

In IMPS, when a user sends a message, the message is not delivered. The XMPP log file shows an error but the IMPS log files states that the message is sent successfully.

6746794

In IMPS, a user in the virtual domain is not able to send messages to the user in the primary domain.

6738075

The Instant Messaging client does not display nicknames that have special characters.

6726738

In IMPS, an incorrect message is displayed when a user joins a conference with the duplicate nickname.

6687708

Unable to restart the server with the `-d64` option when Instant Messaging is used with Sun Java System Access Manager.

6673225

The `imadmin start` and `imadmin stop` commands do not invoke the SMF (Service Management Facility) command to start and stop the server or Multiplexor.

If you require the SMF, disable the SMF by typing the following command:

```
svccfg delete application/sunim
```

6671297

SMF does not support multiple Instant Messaging instances.

6641777

Selecting the Stop Moderating option in a conference room does not remove the moderate conference pane.

6635262

The `httpbind` parameters are not updated in the `iim.conf` and `httpbind.conf` files when the `httpbind` option is enabled in the Configurator tool.

6726335

In IMPS, a null pointer exception is displayed when a user with a nickname that has a special character leaves a group.

6726347

In IMPS, a mobile phone user is listed twice in the member list when the user leaves and joins the group with different nicknames.

## Performance, Scalability, and Sizing Considerations for Instant Messaging

This section describes how to enhance tuning and performance of Instant Messaging in the following topics:

- [Tuning Instant Messaging Server Memory](#)
- [Instant Messaging Thread Pooling and Service Port Configuration](#)
- [Service Port Configuration](#)
- [Sample Load Test of the Instant Messaging Server](#)

### Tuning Instant Messaging Server Memory

Use the J2SE (Java 2 Platform Standard Edition) platform, version 6 for running the Instant Messaging server, because of increased performance. The J2SE platform does not require command-line tuning as it supports ergonomic features.

For more information about the use of J2SE, see <http://java.sun.com/javase/6/docs/>

The Instant Messaging server uses the `iim.jvm.maxmemorysize` parameter in the `iim.conf` file to set the maximum size of the JVM (Java Virtual Machine) software heap to allocate. The default value of this parameter is 256 Mbytes. However, a large active deployment of Instant Messaging needs more memory. Determining the amount of memory to allocate for the Instant Messaging server depends on the number of concurrent active users that you need to support.

Additional load per user, use of additional Instant Messaging services like news or file transfer, and use of features such as message filters, archiving, or SSL require more memory. You should perform load profiling of typical user activity before deploying Instant Messaging into a production environment. Contact Sun Support Services for more information about load profiling an Instant Messaging deployment.

### Instant Messaging Thread Pooling and Service Port Configuration

Instant Messaging provides a set of configuration options to tailor the size and behavior of thread pools used to service client-to-server and server-to-server requests. These thread pools combined with the associated service ports can improve the throughput of an Instant Messaging server.

| Option Name                                       | Description                                                                                | Default Value                              |
|---------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|
| <code>iim_server.maxthreads</code>                | Maximum number of threads for the default thread pool                                      | 50                                         |
| <code>iim_server.threadpool</code>                | List of independent thread pools                                                           | All parameters use the default thread pool |
| <code>iim_server.threadpool.capacity</code>       | Capacity of the default thread pool                                                        | 10 * maxthreads                            |
| <code>iim_server.threadpool.aaa.maxthreads</code> | Maximum threads for the named thread pool <code>aaa</code> : <code>maxthreads (aaa)</code> | 4                                          |
| <code>iim_server.threadpool.aaa.capacity</code>   | Capacity of the named thread pool <code>aaa</code> .                                       | 10 * maxthreads <code>aaa</code>           |

The following table lists the defined thread pools for Sun Java Communications Suite

| Name                 | Use                                                                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>s2s-in</code>  | All server-to-server inbound communications. If the port allows server-to-server inbound communications, Instant Messaging uses this thread pool.   |
| <code>s2s-out</code> | All server-to-server outbound communications. If the port allows server-to-server outbound communications, Instant Messaging uses this thread pool. |
| <code>s2s</code>     | All server-to-server communications. The combination of <code>s2s-in</code> and <code>s2s-out</code> .                                              |

Defined thread pools can be specified and used with an associated server-only service port, as described in [Service Port Configuration](#). You can edit the thread and port configurations in the `iim.conf` file. You need to restart the server after making changes to the thread and port configurations.

## Service Port Configuration

The following are the service port configuration options.

| Option                                             | Definition                                                                                    | Default Value           |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------|
| <code>iim_server.useport</code>                    | Open normal ports (allow StartTLS)                                                            | true                    |
| <code>iim_server.usesslport</code>                 | Open SSL ports (non-negotiable TLS)                                                           | false                   |
| <code>iim_server.usemuxport</code>                 | Open Multiplexor ports                                                                        | true                    |
| <code>iim_server.port</code>                       | List of normal ports                                                                          | 5269                    |
| <code>iim_server.sslport</code>                    | List of SSL ports                                                                             | 5270                    |
| <code>iim_mux.serverport</code>                    | List of Multiplexor ports                                                                     | 45222                   |
| <code>iim_server.port.<i>port</i>.sndbuf</code>    | Socket send buffer size                                                                       | none                    |
| <code>iim_server.port.<i>port</i>.rcvbuf</code>    | Socket recv buffer size                                                                       | none                    |
| <code>iim_server.port.<i>port</i>.interface</code> | List of specific network interfaces to bind                                                   | none<br>(Indicates any) |
| <code>iim_server.port.<i>port</i>.protocol</code>  | List of protocols permitted on this port. The value can be client, server, component, or peer | all or any              |
| <code>iim_server.port.<i>port</i>.nodelay</code>   | Enables the Nagles algorithm                                                                  | false                   |

The throughput of a service port can be improved by adjusting the send or receive buffer of the port.

The following example shows the service ports configuration for Instant Messaging

```
iim_server.port = 5269, 45269, 15222
iim_server.port.5269.protocol = s2s
iim_server.port.45269.protocol = component
iim_server.port.45269.sndbuf= 512000
iim_server.port.45269.rcvbuf= 512000
iim_server.port.15222.protocol = c2s
```

## Sample Load Test of the Instant Messaging Server

The following table shows a sample load test of the Instant Messaging server.

| Platform Details                                                                                                        | System Configuration                             | Server Heap Size                       | No. of Users | No. of Concurrent Sessions | User Cache | Load Per 10 Seconds                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------|--------------|----------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Sun Fire T1000 Server</li> <li>• Solaris 10 OS</li> <li>• RAM 16 GB</li> </ul> | Server and Multiplexor installed in the same box | 1 GByte for Mux<br>5 GBytes for server | 100,000      | 60000                      | 128 count  | <ul style="list-style-type: none"> <li>• 50 users login to the server</li> <li>• 50 users logout</li> <li>• 1450 presence updates</li> <li>• 350 messages sent to offline destinations</li> <li>• 2400 messages sent to online destinations</li> <li>• 850 messages sent to random destinations</li> <li>• 50 roster additions</li> <li>• 50 roster rename</li> <li>• 50 roster removal</li> </ul> |

The above sample has the following configuration parameters in the `iim.conf` file.

```
iim.jvm.maxmemorysize = "4096"
iim_server.memory.user.cache_count="128"
iim_server.scratch_directory="/tmp/imscratch"
iim_ldap.maxconns=70
iim_server.maxthreads=50
iim_server.jvm.options="-d64"
iim_mux.jvm.options="-d64"
iim_mux.maxsessions="100000"
iim_server.maxsessions="150000"
```

where,

- `iim_server.memory.user.cache_count` specifies the memory user cache size. In the above sample, the value is set to 128 for a user base of 100,000. If the user base is more than 100,000, increase this value proportionately.
- `iim_server.scratch_directory` specifies the directory where the user cache is written to the disk. It is recommended to have the scratch directory on `tempfs`. For 100,000 user base in the Solaris 10 OS, around 500 to 600 MBytes of space is required on a filesystem and around 4 to

5 GBytes of space is required on `tempfs`.

- `iim_ldap.maxconns` specifies the LDAP context pool size. In case of more roster operations and in a server pool environment, increase this value appropriately.
- `iim_server.maxthreads` specifies the size of the thread pool. If you do not have sufficient memory to keep user cache in `tempfs`, you can increase the value of the thread pool.
- `iim_server.jvm.options` enables you to run the 64-bit JVM thereby enabling big heap sizes.
- `iim_mux.jvm.options` enables you start the multiplexor in the 64-bit mode.
- `iim_mux.maxsessions` specifies the maximum number of concurrent client connection a multiplexor can accept.
- `iim_server.maxsessions` specifies the number of sessions allowed through an instance of multiplexor connected to the server.



#### **Warning**

Disable the watchdog by setting the `iim_wd.enable` parameter to `false` in the `iim.conf` file.

## **Redistributable Files for Instant Messaging**

Sun Java System Instant Messaging software 8 does not contain any files that you can redistribute.

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# Chapter 38. Messaging Server 7 Update 1 Release Notes

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## Sun Java System Messaging Server 7 Update 1 Release Notes

These Release Notes contain important information available at the time of the general release of Sun Java System Messaging Server 7 Update 1 including:

- [About Messaging Server 7 Update 1](#)
- [What's New in This Release of Messaging Server](#)
- [Deprecated and Removed Features for Messaging Server](#)
- [Requirements for Messaging Server 7 Update 1](#)
- [Messaging Server Installation Notes](#)
- [Messaging Server Documentation Updates](#)
- [Messaging Server Compatibility Issues](#)
- [Problems Fixed in This Release of Messaging Server](#)
- [Known Issues and Limitations in Messaging Server](#)
- [Redistributable Files for Messaging Server](#)

### About Messaging Server 7 Update 1

Messaging Server is a high-performance, highly secure messaging platform that can scale from thousands to millions of users. It provides extensive security features that help ensure the integrity of communications through user authentication, session encryption, and the appropriate content filtering to reduce spam and viruses. With Messaging Server, enterprises and service providers can provide secure, reliable messaging services for entire communities of employees, partners, and customers.

Messaging Server provides a powerful and flexible solution to the email needs of enterprises and messaging hosts of all sizes by using open Internet standards.

### What's New in This Release of Messaging Server

See the [What's New](#) document.

### Deprecated and Removed Features for Messaging Server

Support for the following features may be eliminated in a future release, have already been removed in this release, or were removed in a previous release:

- [DIGEST-MD5](#)
- [imsimta refresh](#)
- [MMP Section and Instance features](#)
- [Direct Editing of MTA Databases](#)
- [Netscape Browser Support](#)
- [Red Hat Linux 3 Support](#)
- [Event Notification Service \(ENS\)](#)
- [Ignored imta\\_tailor settings](#)

### DIGEST-MD5

When clients connect via IMAP, POP or SMTP to the Messaging Server, they must use a SASL (RFC 2222) authentication mechanism or a simple password to prove their identity to the server. When the LDAP directory is configured to store user passwords in the clear, all user passwords are migrated to this format and the `sasl.default.ldap.has_plain_passwords` option is set on the Messaging Server, then three additional authentication mechanisms are enabled: APOP, CRAM-MD5 and DIGEST-MD5. All three of these mechanisms transmit a one-way encoding of the password over the wire rather than the password itself. Due to its limited deployment and complexity, the DIGEST-MD5 mechanism is deprecated leaving only the APOP and CRAM-MD5 mechanisms.

## imsimta refresh

This command has been deprecated. Use `imsimta cnbuild` in [Sun Java System Messaging Server 6.3 Administration Reference](#) and `imsimta restart` in [Sun Java System Messaging Server 6.3 Administration Reference](#) instead, as appropriate.

## MMP Section and Instance features

The optional `SECTION` and `INSTANCENAME` features of the `ServiceList` MMP configuration parameter are deprecated and will be removed in a future release. These features make the MMP configuration more complex than necessary and it is believed the more commonly used virtual domain feature of the MMP provides sufficient configuration flexibility.

## Direct Editing of MTA Databases

MTA access to database files and the `imsimta` tools to manipulate MTA database files are deprecated.

## Netscape Browser Support

Netscape browser support will be removed at a future date.

## Red Hat Linux 3 Support

Red Hat Linux 3 platform support has been deprecated in this release and will be removed in a future release. Communications Suite 6 continues to be supported on Red Hat Linux 4.

## Event Notification Service (ENS)

In this release, there are two notification services for event notifications and alarms: Sun Java System Message Queue (JMQ) and Event Notification Service (ENS). For this release, Calendar Server, and Instant Messaging still have internal dependencies to ENS; therefore, you can continue to use ENS. By default, ENS is not enabled in this release. To enable ENS, set `local.ens.enable` to 1.

Prior to Messaging Server 7, if you wanted to use IMAP IDLE, you had to configure an ENS notification plug-in. In this release you can use JMQ to provide IMAP IDLE notifications.

You can use JMQ for message notifications by configuring a JMQ notification plug-in. (Messaging Server allows you to configure multiple notification plug-ins.) To enable JMQ notifications, see, [Enabling JMQ Notification](#).

## Ignored imta\_tailor settings

As part of a future project to support an XML configuration, the MTA's tailor file is in the process of being deprecated. As previously documented, some options in that file should not have been edited or otherwise changed. With this release of Messaging Server, only eight options in that file are honored. All other options specified in the tailor file are ignored, even if they were set to non-default values. The eight

options which are still honored are IMTA\_LANG, IMTA\_RETURN\_PERIOD, IMTA\_RETURN\_CLEANUP\_PERIOD, IMTA\_RETURN\_SPLIT\_PERIOD, IMTA\_TMP, IMTA\_USER, IMTA\_USER\_USERNAME, and IMTA\_WORLD\_GROUP.

## Requirements for Messaging Server 7 Update 1

See [Requirements for Communications Suite 6](#).



### Note

For information about upgrading to Messaging Server 7 Update 1 from a previous version of Messaging Server, see [Messaging Server Installation Notes](#).

## Messaging Server Installation Notes

These installation notes pertain to the Messaging Server 7 Update 1 release. This section contains the following subsections:

- [Installation Overview for Messaging Server](#)
- [comm\\_dssetup.pl Changes for this Release](#)
- [Upgrade Instructions for Messaging Server](#)
- [Checking the `/etc/hosts` file entry](#)

### Installation Overview for Messaging Server

Use the Communications Services installer to install Messaging Server.

For installation instructions, see the [Communications Suite 6 Update 1 Installation Guide](#).

Next, you must configure Messaging Server by:

- Running the Directory Server Preparation Tool, `comm_dssetup.pl`.
- Running the Messaging Server configuration program.

For configuration instructions, see the [Communications Suite 6 Update 1 Initial Configuration](#) information.

### comm\_dssetup.pl Changes for this Release

The following changes were implemented in the latest version of `comm_dssetup.pl`, the program that prepares Directory Server for Messaging Server use:

1. Silent Installation: password change  
-w `dirmanager_passwd` has been deprecated in favor of `-jpasswd_file`
2. See [Messaging Server Compatibility Issues](#) for more changes to the `comm_dssetup.pl` program.

### Upgrade Instructions for Messaging Server

If you are upgrading to Messaging Server 7 Update 1 from an earlier release, follow the upgrade instructions in the [Communications Suite 6 Update 1 Upgrade Guide](#).

### Checking the `/etc/hosts` file entry

If you are installing Messaging Server for the first time or upgrading from an earlier version of Messaging

Server, ensure that you have your host's IP address in the `/etc/hosts` file, for example:

```
129.158.230.64 budgie.siroe.varrius.com budgie
```



#### Note

On Solaris OS 10 U3 and earlier platforms, you not only have to add the Fully Qualified Domain Name (FQDN) to the `/etc/hosts` file, but also to the `/etc/inet/ipnodes` file. Otherwise, you will get an error indicating that your host name is not a Fully Qualified Domain Name. From Solaris OS 10U4 onwards, the contents of the `/etc/inet/ipnodes` and `/etc/hosts` files have been merged together into just the `/etc/hosts` file. Applying kernel patch 120011-14 on any Solaris 10 system will also perform the merge, and subsequent removal of the `/etc/inet/ipnodes` file.

## Messaging Server Documentation Updates

There are no Messaging Server Documentation Updates at this time.

## Messaging Server Compatibility Issues

To purge users with iPlanet Delegated Administrator when you are running Messaging Server 6.3, see [Purging Users with iPlanet Delegated Administrator and Messaging Server 6.3](#).

The following table describes compatibility issues with Messaging Server:

| Incompatibility                                                                                                                                                                                                                                                                              | Workaround                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Comments               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| comm_dssetup.pl, the program that prepares the directory server for Messaging Server (Calendar Server and Delegated Administrator) has been modified to work with both Directory Server 6.0 and Directory Server 5.x:<br><b>Interactive Mode: Server-root and Directory Server Instances</b> | Directory Server instance(s) reside in the server-root, or an explicit Directory Server instance directory Previous versions of Directory Server used the notion of a server-root where multiple instances and configuration info would be housed. Directory Server 6 no longer uses a server-root. Instances may be anywhere. In this question, a user needs to: 1) specify the instance directory. Or, if the user is using previous versions of Directory Server, the user can: 2) specify the server-root directory where the instances are housed. You will be prompted with an additional question to pick an instance from the server-root. Or, 3) a user who has used Directory Server 5x and is now using Directory Server 6 might manually put all of her Directory Server instances under a parent directory (what we used to call a server-root).<br><br> <b>Note</b><br>Server-root terminology has been removed from Directory Server 6. | no additional comments |

|                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <p>comm_dssetup.pl, the program that prepares the directory server for Messaging Server (Calendar Server and Delegated Administrator) has been modified to work with both Directory Server 6.0 and Directory Server 5.x:<br/><b>Silent Installation: server-root directory</b></p>                                                             | <p>In previous versions of Silent installation, you would specify both a server-root and an instance directory. If you are using Directory Server 5.x, this still holds true. Since there is no server-root directory in Directory Server 6.0, you will need to specify the parent directory of the Directory Server instance.</p> | <p>no additional comments</p>                                                                                           |
| <p>The location of the Directory Preparation Tool (comm_dssetup.pl) has changed.</p>                                                                                                                                                                                                                                                           | <p>comm_dssetup.pl is now in its own package installed in /opt/sun/comms/dssetup for Solaris and Linux<br/>Existing scripts that specify the old path need to be updated.</p>                                                                                                                                                      | <p>To install the package, be sure the Directory Preparation Tool is selected in the appropriate installer panel.</p>   |
| <p>In Messaging Server 5.x, an administrator could use the IMAP list command to display all folders in the message store. In a typical message store, this caused the server to display an unusually long list. In Messaging Server 6.x, when an administrator runs the IMAP list command, it displays only the explicitly shared folders.</p> | <p>To list all folders in the message store, use the mboxutil utility.</p>                                                                                                                                                                                                                                                         | <p>For more information on the mboxutil utility, see the Sun Java System Messaging Server 6.3 Administration Guide.</p> |
| <p>The configuration program for the Delegated Administrator has changed.</p>                                                                                                                                                                                                                                                                  | <p>Install Delegated Administrator and run the configuration program. The current program is located at:<br/>for Solaris and Linux, opt/sun/comms/da/bin/config-commda</p>                                                                                                                                                         | <p>Upgrade to the new Delegated Administrator when installing this version of Messaging Server.</p>                     |
| <p>Upgrading Messaging Server with Webmail over IMAP protocol change (6397425, 6397451, 2137362)</p>                                                                                                                                                                                                                                           | <p>The back-end server must be upgraded before upgrading the front-end server. Both the Webmail over IMAP protocol as well as the back-end message stores must be the same product version. See the <i>Sun Java Communications Suite 5 Upgrade Guide</i> for details.</p>                                                          | <p>no additional comments</p>                                                                                           |

|                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Communications Express 6.3 is incompatible with versions of Messaging Server prior to 6.3.                                                                                                   | If you upgrade Communications Express, you must also upgrade Messaging Server.                                                                                                                                                                                                                                                                                                                                                               | This also applies to Calendar Server. For more information on Communications Express, see Sun Java System Communications Express 6.3 Release Notes. |
| Clarification is needed on RTF/HTML editing and browser compatibility for Communications Express. (6311363)                                                                                  | <ul style="list-style-type: none"> <li>In the JES 2004Q2 version of Communications Express, you are able to use RTF/HTML editing for Internet Explorer browsers. You are unable to use RTF/HTML editing with Mozilla or Netscape browsers.</li> <li>In the JES 2005Q1 version of Communications Express, you are able to use RTF/HTML editing for Internet Explorer 5.5 or later, Mozilla 1.3 or later, or Netscape 7.2 or later.</li> </ul> | No additional comments.                                                                                                                             |
| "session.timeout Login Again" pop-up error displays when you click Communications Express in Portal Server. (6417988)                                                                        | Ignore the pop-up error, close the window, and continue to use Communications Express.                                                                                                                                                                                                                                                                                                                                                       | No additional comments.                                                                                                                             |
| If you use Messaging Server with Access Manager Single Sign-on, it does not support Java Enterprise System 2004Q2 Access Manager Server. However, Access Manager 6.3 and later is supported. | The specific versions of Messaging Server that do not support Java Enterprise System 2004Q2 Access Manager Server are: <ul style="list-style-type: none"> <li>Messaging Server 6.2-6.01 and later</li> <li>Messaging Server 6.3</li> </ul>                                                                                                                                                                                                   | Upgrade Access Manager (JES 2004Q2) before upgrading Messaging Server.                                                                              |
| Access Manager now has two installation types: Realm (version 7.x style) and Legacy (version 6.x style).                                                                                     | If you are installing Access Manager with Messaging Server, Calendar Server, Instant Messaging, Delegated Administrator, or Portal Server, you must select Legacy mode (version 6.x style). See: Sun Java System Access Manager 7 2005Q4 Release Notes                                                                                                                                                                                       | If the wrong Access Manager is installed, you will not be able to run Delegated Administrator.                                                      |
| SNMP MADMAN mib support in Messaging Server 6.3 and later                                                                                                                                    | Running on Solaris 9 or earlier, Messaging Server SNMP support requires the Sun SEA SNMP master agent which comes with Solaris. There are issues with the SEA master agent. The preferred solution is to upgrade to Solaris 10 or later and use the Net-SNMP which comes with the OS. Running on Solaris 10 or later, Messaging Server SNMP support requires the Net-SNMP which comes with the OS.                                           |                                                                                                                                                     |

## Problems Fixed in This Release of Messaging Server

6686339

When `imap.numprocesses` is set to 10, IMAP flag updates are not working in an IDLE session.

6648157

Messaging Server upgrade from 6.3 to 7.0 has one diff3 error in the `imta_tailor.new` file.

6569452

The following mailbox database error message can be displayed: "Environment reference count went negative."

6654364

The IMAP server closes down a client's connection after the fetch command.

## Known Issues and Limitations in Messaging Server

This section describes known issues in the Messaging Server product.

6780552

In the French version, some apostrophes are missing from some OLH pages in the GUI configurator.

6759556

**MeterMaid does not work as expected in case that quota value exceeds `quota_time`.**

### Workaround

In order to ensure proper functionality of MeterMaid, set the value of `metermaid.table.tablename.quota` to a value that is less than `metermaid.table.tablename.quota_time`. Note that `tablename` is a placeholder for your own table name.

6726739

**Metermaid integer overflow occurs with a large `quota:time` ratio**

**No Issue ID**

After an upgrade, when you restart the server, the Berkeley Database issues a log version error, issuing the following message: 'Skipping log file...historic log version.'

## Redistributable Files for Messaging Server

The following redistributable files are provided with Messaging Server 6.x:

- You can redistribute the following files in source (HTML and Javascript) or binary form (GIF files) within a licensed Messaging Server distribution only:
  - `msg-svr-base/config/html` (and subdirectories)
  - `msg-svr-base/install/config/html` (and subdirectories)

You are not permitted to distribute these files by themselves.

- You can copy and use (but not modify) the following header files solely to create and distribute programs to interface with Messaging Server APIs, to compile customer written code using the documented API to interoperate or integrate with Messaging Server, and only as expressly provided in the Messaging Server documentation:
  - *msg-svr-base*/examples/meauthsdk/expapi.h
  - *msg-svr-base*/examples/tpauthsdk/authserv.h
  - All files in the *msg-svr-base*/include directory (default location)
- The following files are provided solely as reference for writing programs that use the documented API to integrate with Messaging Server:
  - *msg-svr-base*/examples/meauthsdk/
  - *msg-svr-base*/examples/tpauthsdk/
  - *msg-svr-base*/examples/mtasdk/

# Chapter 39. Sun Convergence 1 Update 1 Release Notes

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## Sun Convergence 1 Update 1 Release Notes

These Release Notes contain important information available at the time of the general release of Sun Convergence 1 Update 1, including:

- [About Convergence 1 Update 1](#)
- [What's New in This Release of Convergence](#)
- [Requirements for Convergence 1 Update 1](#)
- [Convergence Installation Notes](#)
- [Convergence Compatibility Issues](#)
- [Problems Fixed in This Release of Convergence](#)
- [Known Issues and Limitations in Convergence](#)
- [Redistributable Files for Convergence](#)

### About Convergence 1 Update 1

See [Introduction to Convergence](#).

### What's New in This Release of Convergence

See the [What's New](#) document.

### Requirements for Convergence 1 Update 1

For Communications Suite requirements, see the [Requirements for Communications Suite 6](#).

For requirements specific to Convergence, see the [Requirements for Convergence 1 Update 1](#).

### Convergence Installation Notes

See the [Communications Suite 6 Update 1 Installation Guide](#) for information on installing Convergence.

### Running Other Applications in the Application Server Web Container That Convergence Uses

You can install other applications into the Application Server web container where you install Convergence. Note, however, that with Communications Suite you get only a license for Communications Suite dependent applications (Convergence, Access Manager, Delegated Administrator). You must pay for licenses for other non-Communications Suite dependent applications using the Application Server web container provided by Communications Suite.

### Running the Convergence Initial Configuration Program in Secure Mode

In some configurations, the Convergence `init-config` program fails when Convergence uses the `secure=true` option to run the Application Server `asadmin` commands. Specifically, the `asadmin` commands invoked by `init-config` fail in this situation.

**Situation:** This issue occurs when the Application Server is configured to run in non-secure mode, and the Convergence `init-config` program is configured to run the Application Server `asadmin` commands in secure mode. In the Convergence `init-config` program, the **Secure Administration Server** check box is checked by default.

**Solution:** If you are running Application Server in non-secure mode, when you run the `init-config` program, uncheck the **Secure Administration Server** check box in the Application Server: Administration Instance Details panel.

If you are running Application Server `asadmin` in secure mode, you can accept the defaults when you run `init-config`.

## Convergence Compatibility Issues

If necessary, this section should list any compatibility issues.

### Problems Fixed in This Release of Convergence

#### 6704008

The Avatar does not function when the Instant Messaging Server requires SSL (when you require secure communication between Convergence and the Instant Messaging back end).

#### 6702084

If you use the shift key and arrow keys to select multiple mail messages, all messages displayed in the current folder disappear.

#### 6701392

In Internet Explorer 7, when you send a long message with a large amount of text, Convergence takes a long time to send it and appears to be unresponsive.

#### 6700482

In Internet Explorer 7, if you tab from the Subject: field in a message, the cursor focus goes to the sign-out button instead of to the body text.

#### 6701368

In Internet Explorer 7, when you try to export the address book, a security warning message is displayed. You need to click the message and click Allow Download to export the address book.

#### 6697581

After importing a Microsoft Outlook CSV file into Convergence, the birthday and anniversary are lost.

#### 6699749

When you import a v-card created using a Macintosh address book, the email addresses are lost though they are in the right format.

**6697558**

After importing an LDIF file with lists into Convergence, the list is displayed only after re-logging in.

**6698171**

In some cases, when you log in to Convergence, the browser does not respond, and a dialog appears stating that a slow script is making the browser unresponsive.

**6699600**

When you mouse over a button, it remains highlighted even when you do not click it.

**6701571**

If mail service goes down and is started again, the client does not appear to reconnect to the mail service, and mail is not available in the client UI.

**6694908**

In Safari, when you drag and drop a message into a folder, a larger area of the screen than only the folder is selected.

**6692011**

Calendar Online Help needs updates

**6714325**

OLH: "Calendar Preferences". section has some unsupported features details

**6693923**

Address Book Online Help needs updates

**6702725**

In Internet Explorer 7, if you click the email ID of a contact in the Corporate Directory, an error message is displayed.

**6656871**

The Up/Down arrow keys do not work in Address Book when using Internet Explorer 6 or 7.

**6700603**

If you attach a file to one instance of a recurring event and specify that the attachment applies to "only this occurrence," the event is attached to all occurrences of the event.

**6687949**

The Add from Address Book tab lists only personal Address Book contacts. It should also list corporate Address Book contacts.

## Known Issues and Limitations in Convergence

The Convergence known issues are grouped in the following categories

- [Known Issues: General and Authentication](#)
- [Known Issues: Mail](#)
- [Known Issues: Calendar](#)
- [Known Issues: Address Book](#)
- [Known Issues: Instant Messaging](#)
- [Known Issues: Options](#)
- [Known Issues: Customization](#)
- [Known Issues: Localization](#)
- [Known Issues: Documentation and Online Help](#)
- [Known Issues: S/MIME](#)

### Known Issues: General and Authentication

#### 6775482

**In Firefox 3.0.x, the URL for Convergence 1 Update 1 Help page is not properly loaded and displayed.**

This issue occurs in Firefox 3.0.x only. The URL for the Help page does not escape the "TM" and spaces in the URL string; thus, the URL link does not connect to the actual Help page, and it is not loaded properly. With other browser versions, the URL string in question appears as:

Sun%E2%84%A2%20Convergence%20Help. On Firefox 3.0.x, it appears as: Sun<TM> Convergence Help.

#### 6701184

**The Note field in the Create or Edit Contact screen does not highlight a misspelled word in Internet Explorer 6 and 7.**

#### 6702002

**Creating a group saves the help text if the user does not enter any values.**

#### 6699051

**If pop-up windows are blocked in the user's browser, functions such as printing dialog, IM, timeout warning, and navigate away warnings do not work.**

From the user's perspective, it appears that these functions do not work. Convergence does not display a dialog telling users to enable pop-ups.

#### 6697453

**No option to set default photo or delete photo.**

There is no option to set default photo or delete photo from the Address Book. Address Book should have the same kind of option as in Instant Messaging for setting default photo.

#### 6691137

**Timeouts are reported in dialogs as formatting errors.**

If you take an action such as creating a mail folder and wait until the action times out, the error dialog tells you there was a formatting error in the folder label. It does not say that your action timed out.

#### 6690719

**Pressing the Tab repeatedly gives usability issues in Create Contact.**

When creating an Address Book contact, click the work email field then keep pressing the Tab key. After the Notes field, if you press the Tab key, focus shifts to the Buddy List.

**6686058**

**Presence alert does not close completely (or right away) when clicking Close button.**

**6686064**

**The Show Contact in presence alert should highlight the contact in the roster.**

**6688678**

**Restoring the default photo from the Avatar properties widget does not ask for confirmation before saving.**

**6679055**

**In Internet Explorer 6, logging in to the Convergence client consumes 99% of CPU resources.**  
For some time after logging in (for example, for one minute in some cases), the browser is unresponsive.

**6610071**

**Reloading the page causes the Mail tab to be displayed, no matter which tab was displayed originally.**

For example, if you are viewing the Address Book and reload the page, the Mail view is displayed.

## **Known Issues: Mail**

### **No Issue ID**

**In Internet Explorer, if you open a compose window and try to paste a list of addresses into the To: or CC: field that exceeds 4000 characters, the field is populated with blank spaces. If you highlight the field, you can see the addresses.**

This is a known IE issue. It does not occur with other browsers.

**Workaround:** You can fix this problem with a registry modification. For details, see <http://support.microsoft.com/kb/240121>

**6783674**

**With Firefox 3.0.x, you cannot re-size the sort columns in the header list displaying subject, sender, date.**

This issue only applies to Firefox 3.0.x. You cannot re-size the subject or sender column to display more of the subject text or sender's address.

**6780252**

**When you compose a message with the RTF editor and switch to plain text, double quotes (") are displayed as follows:**

`&quot;`

Similarly, an ampersand (&) in RTF is displayed as `&amp;`. This issue also occurs when you use Reply,

Reply All, Forward, and so on.

#### **6779427**

**When you save a message as a draft in plain text and then reopen the draft, spaces are displayed as &nbsp;.**

When you first save the message as a draft, the draft is saved correctly. It is only when you open the message again that the &nbsp; characters are inserted in place of spaces.

#### **6739123**

**With Internet Explorer 7, if you send a message larger than 100 KB, the message does not get delivered and the browser stops working.**

This is an IE7 issue; it does not occur with other browsers. It does occur with IE7 in other mail clients as well as Convergence. You must exit and restart the IE7 browser to use it again.

#### **6694440**

**When you perform a mail function that takes time to complete, the dialog buttons that handle the function are not disabled, and the cursor does not change to a wait symbol.**

For example, if you select all messages in a folder, the related dialog button should be disabled and the cursor should become a wait symbol until all messages are selected.

#### **6693443**

**An error message inadequate for end users is displayed when the Messaging Server goes down during a mail session in Convergence.**

If you are using mail in Convergence and the Messaging Server goes down, a pop-up error message states "Mail Service: connection refused" rather than displaying a user-friendly message such as "A temporary problem has occurred. We'll be back soon," or "Working on your request..."

#### **6692441**

**In Internet Explorer 7, when you compose a message, the cursor does not focus properly in the compose text window.**

For example, if you open compose message, enter information in the To: line, click the Tab key, enter information in the Subject: line, then click the Tab key, the cursor does not focus in the message text area.

#### **6692400**

**A message being composed is not auto-saved if the only change was in message priority or receipt status.**

If you compose a message and make any change since the message was created or since the last save, the message will be saved automatically at the end of the auto-save period (by default, every five minutes). However, auto-save does not occur if the only change is in message priority or receipt status.

#### **6657490**

**An email message containing more than 170 KB of text is received as an attachment.**

This issue occurs on Solaris SPARC and x86 platforms. It does not occur on Linux. This maximum value is specified with the `maxtext` parameter in the client configuration.

#### **6630169**

**In certain cases, users can read mail and contact details after they have logged out of Convergence.**

For example, if a user starts Convergence, then opens the Convergence url in a new tab, then logs out of Convergence in the new tab, the user can still read mail and see contact information in the first tab.

#### **6625314**

**When the unread message count is disabled, the Convergence mail application selector always shows the message count as zero.**

This issue occurs when the Messaging Server `configutil` option `local.service.http.showunreadcounts` is configured not to return the unread message count data (`configutil local.service.http.showunreadcounts=0`). When this option is disabled, the unread message count appears as **0** in the Convergence mail application selector. This option should not be shown to the end user if Messaging Server is configured not to return the unread message count data.

### **Known Issues: Calendar**

#### **6784462**

**Multibyte/European characters in the file name of an event or To-do attachment are garbled.**

If you attach a file to a calendar event or to-do list and use multibyte characters in the attachment file name, the file name is garbled.

#### **6780373**

**If you select a subscribed calendar on which you have limited permissions, you cannot create events or edit your own user-owned calendar.**

This issue occurs when you select a calendar to which you have subscribed, when your permissions on the subscribed calendar are limited. When you then try to modify your own calendar by, for example, adding an event or editing event details, you are unable to do so.

#### **6737224**

**In calendar, in the Next 7 Days view, the Refresh button does not work.**

If you open the Next 7 Days view in calendar, and an action modifies your calendar, clicking the Refresh button does not display the modification. For example, if another user invites you to an event or an event is deleted from the Convergence Server, these changes do not appear after you click Refresh.

#### **6699058**

**In the calendar, the printing button looks like this ">>" and does not have a label, which is inconsistent with the printing buttons in other services.**

#### **6698967**

**In Safari, after you change the calendar view a few times (for example, from week to day to month view), the button indicating which mode is selected is no longer highlighted.**

#### **6691971**

**The More link in a calendar continues to be displayed after the calendar is deleted.**

If you add events to a calendar until the **More** link appears, and then delete the calendar, the **More** link remains displayed until you refresh the browser.

#### **6691933**

**In Agenda view, if you add an event and change the calendar you are viewing, the new event**

**continues to show up in the second calendar until you refresh the browser.**

In Agenda view, the same event is shown twice, once in the original calendar and once in the second calendar.

**6691922**

**Changing the days of the work week in your calendar has no effect when you create recurring events.**

For example, if you include Saturday as a work day and create a recurring event that occurs daily, the event does not show up on Saturdays.

**6645274**

**A recurring event specified to end "never" actually ends after 60 recurrences.**

If you specify that a recurring event end "never," Convergence uses the default value for the number of recurring events, which is 60. You can only find out about this limit by scrolling through your calendar, as Convergence does not indicate the limit.

**6641358**

**When you add a new event in month view, using natural language to specify its duration does not yield the correct event duration.**

For example, if you add a new event in the Calendar, specify event details such as "Lunch at 1:15 tomorrow for 45 minutes," the event is created as one hour long (1:15 - 2:15) instead of 45 minutes. Note that if you enter event details using a different format, such as "Lunch tomorrow 1:15 P.M. - 2:00 P.M.," the correct duration is created.

**Workaround:** Change the length of the event in day or week view, or edit the event.

## **Known Issues: Address Book**

**6704130**

**In Address Book, the Manage Group option does not have a rename option.**

**Workaround:** Right-click on the list of contact groups in the left panel of the UI. This displays the context menu, which includes a rename option.

**6692504**

**In IE7, apostrophes are not accepted in the Group Name text box.**

In IE7, when you create an address-book group and try to use an apostrophe in the group name, the text box does not accept or display the apostrophe. This is not an issue in Firefox.

**6676645**

**The print option does not take all the contents in a contact.**

When you print an address book contact, some fields, such as the country, nickname, and notes, are not printed.

**6654530**

**In the address book, no contact is displayed when the wildcard search value is set to greater than 0.**

By default, the value of the `ab.pstore.wildcardsearch` property is set to 0. This enables the wildcard search function to begin returning results as soon as the end user enters the first character.

The feature does not operate as expected if you set `ab.pstore.wildcardsearch` to greater than 0. For example, if you set the property to 2, the user must enter two characters before the wildcard search

returns results. That is, a value of 2 functions as follows: 2 - entry/displayname=aa\*

**Workaround:** Reset the value of `ab.pstore.wildcardsearch` to 0.

#### **6649025**

**The Address Book Properties window displays incorrect information.**

#### **6646169**

**In the Address Book, the Sr/Jr option is not displayed in view mode.**

When you create or edit a contact, you can select the Sr or Jr option to add to the contact's name, but the Sr or Jr does not appear when you view the contact.

#### **6638802**

**When you create or edit a contact in the Address Book, the contact fields such as email address and phone number are not validated.**

You can enter any text in these fields, such as alpha characters in the phone number field.

#### **6637775**

**Advanced Search in the Address Book is not working.**

When you select the Advanced Search option in the Address Book, enter search criteria, and press Search, no results are returned.

#### **6609983**

**Incorrectly formatted address/bad address still shows "map" in address book.**

If you incorrectly specify an address book address entry (home or business), the resultant "map" entry points to an invalid place. The fields are not marked and bogus entries still get mapped.

#### **6673188**

**User is not able to copy contacts from one address book to another group using drag and drop.**

#### **6688097**

**Cannot make default address book as corporate address book.**

#### **6690711**

**In the corporate address book, details of a contact are displayed in the right pane, though no contact is selected in the search pane.**

#### **6692518**

**Pressing the Enter Key opens the Compose Mail screen.**

When selecting an Address Book contact and pressing the Enter key, the Compose Mail screen is opened. Because an Edit screen is associated with the contact, the Edit screen should be opened when pressing the Enter key.

#### **6699217, 6654031**

**Accented characters are not imported or exported properly, nor are they sorted properly in the address book.**

## 6702142

Though the corporate address book search does not display any contact, the following message is displayed: "Only 100 entries is displayed."\*

## Known Issues: Instant Messaging

### 6763513

**In Firefox 3.0.x, the chat window editor cursor does not appear when you toggle among multiple IM windows.**

This issue occurs only with Firefox 3.0.x.

### 6698876

**Presence information is not shown in an email header (the sender, to:, or cc: list) because the IM Add Buddy icon only accepts the uid@domain in the user name field when you add an IM buddy.**

When you add a buddy in IM, you must use the uid&domain format for the user name. You cannot use the user's email address. However, once the buddy is entered as uid@domain, that user's email address, as shown in the email header, is not recognized, and therefore the presence information does not appear in the email header.

### 6696906

**The avatar properties widget should indicate the file-size limit or image dimension limit that can be uploaded.**

By default, a text message should indicate these limits, as in the following example: "You can only upload a file size up to 100KB & image dimension up to 2000 x 2000." Without this warning, users are more likely to try to upload oversized pictures for their avatars that will fail to upload properly.

### 6696027

**In Instant Messaging, adding from the Address Book always adds the buddy to Friends group.**

**Workaround:** Manage the group then add the contact.

### 6689431

**Buddies in the Instant Messaging roster can be duplicated in the same group.**

You cannot delete the duplicate entry; if you delete one entry, all the entries for that buddy are deleted.

### 6688269

**Unable to chat with buddy using Instant Messaging if pop-up blockers are enabled.**

If you select a buddy on buddy list, then select the pop-up menu item, "Send message to," does not generate any activity.

**Workaround:** Disable pop-up blockers and restart your browser.

### 6684054

**Instant Messaging chat window: Click a URL link in chat, opens up new tab in chat window not main browser window.**

### 6668868

**Users in a buddy list who are in Do Not Disturb or Away status are not sorted.**

If you sort users (for example, in alphabetical order), the users in the following modes are not sorted: Do not disturb; Away; BRB; On the phone; Out to lunch; Gone home.

**6665909**

**Offline messages do not show up or are not emailed.**

If a user opens a chat session with another user and one user refreshes the browser, messages are not received if messages were sent before the user's browser has been refreshed.

**6665897**

**When you create a new chat session and refresh or reload the browser, the old chat session remains.**

The old chat session should be closed after a browser reload or refresh.

**6664158**

**You cannot add the first contact to any group other than Friends.**

When a user adds the first contact to the buddy list, that first contact must be in the Friends group.

**6662902**

**An IM user cannot receive chat messages if the user started the session with "block pop-up windows" configured.**

**6632069**

**The IM client disconnects automatically in some cases.**

After a period of time, the IM client goes offline automatically, although the keep-alive packets are being sent from the client. This issue occurs intermittently.

**Known Issues: Options**

**6694006**

**When you create a mail sieve filter, if you want to include special characters in the mail filter name, you must use Character Predeclared Entities.**

For example, a & or < characters are special characters in XML, and if you enter them in the mail filter name without using a Character Predeclared Entity, an "invalid formatting" error will be returned.

**6676645**

**The Print option does not take all the contents in a contact.**

If you create a contact with all the details then choose Print > Print Group, not all details are displayed.

**6654595**

**The Mail Forwarding options page displays a warning message that the page contains unsaved changes when no changes were made.**

**6648561**

There is no option that allows you to save a custom (or personalized) message.

**Known Issues: Customization**

## 6745772

**When adding a new right-to-left language such as Arabic or Hebrew to Convergence, the UI text is not right-to-left.**

This issue occurs if you enable customization and perform the steps to add a custom language to Convergence, then log in as a user created in LDAP with a language preference set to the custom language (for example, Arabic). The UI displays text and aligns widgets left-to-right instead of right-to-left.

## 6745757

**When adding a new language to Convergence, Convergence hangs if no `resources.js` file is directly under the `allDomain` directory.**

This issue occurs if you enable customization and perform the steps to add a custom language to Convergence, creating a directory structure as shown in this example:

```
/iwc_static/c11n/allDomain/nls/  
/iwc_static/c11n/allDomain/nls/<_new language_>/  
/iwc_static/c11n/allDomain/nls/<_new language_>/resources.js
```

In this situation, Convergence does not load the files; it does not bring up the UI.

**Workaround:** Add an empty `resources.js` file directly under the `/iwc_static/c11n/allDomain/nls/` directory. Note that you still must create the `resources.js` file under the `/iwc_static/c11n/allDomain/nls/<new language>/` directory. For example:

```
/iwc_static/c11n/allDomain/nls/  
/iwc_static/c11n/allDomain/nls/resources.js  
/iwc_static/c11n/allDomain/nls/<_new language_>/  
/iwc_static/c11n/allDomain/nls/<_new language_>/resources.js
```

## Known Issues: Localization

### 6772119

**Some messages and other text strings in the Convergence UI are not translated.**

Most of these messages concern S/MIME configurations. One message warns you that a message attachment size exceeds the limits set for this installation.

## Known Issues: Documentation and Online Help

### Known Issues: S/MIME

### 6781802

**When using S/MIME on Windows Vista with JDK6u1.1, the browser hangs for CAC-card users if the first message in the user's inbox is encrypted.**

After the user logs in, as soon as the inbox loads, it tries to decrypt the first message and tries to access the Private key of the user from CAC-card. The browser hangs and the user cannot perform any further operations.

### 6756541

**The S/MIME Java applet fails to load in Windows Vista SP1 with JDK 6 Update 10.**

With Java 6 Update 10 on the machine, the S/MIME Java applet fails to load. With a Java 6 Update prior to Update 10, for example Update 7, the S/MIME Java applet does load properly.

**Workaround:** The following workaround might work in some circumstances.

If you have installed JDK 6 Update 10 on your Windows machine, take these steps:

1. Uninstall JDK/JRE 6u10 or later from your system.
2. Install only JDK 6 Update 7 or JRE 6u07.

**Redistributable Files for Convergence**

Sun Convergence 1 Update 1 does not contain any files that you can redistribute.

# Chapter 40. Verifying the Correct JDK Version to Support Access Manager

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## Verifying the Correct JDK Version to Support Access Manager

The information on this page concerns you only if the following software is installed or will be installed on this machine:

- Linux operating system
- Access Manager 7.1, to be installed with the Java Enterprise System (Java ES) 5 Update 1 installer
- Java 6 (Java Development Kit 1.6) or later has been installed previously on this machine

This issue does not apply on Solaris systems.

For more information about the compatibility between Access Manager, the Java version, and a Communications Suite installation, see [Communications Suite 6 Update 1 Compatibility Issues](#).

## To Verify the Correct Java Development Kit (JDK) Version to Support Access Manager 7.1

The Java ES 5 Update 1 (JES5u1) installer cannot successfully deploy Access Manager 7.1 if Java Development Kit (JDK) 1.6 or later is installed. You can use the following command to verify the currently installed release.

In a terminal window, as `root` run the following command.

```
rpm -qa jdk
```



### Note

A default installation of Red Hat Enterprise Linux 3 or 4 will return no output to this command.

If the output of the command is `jdk-1.6.<version>`, the JDK version will need to be downgraded prior to deploying Access Manager 7.1.

This can be achieved by downloading and installing **JDK 5.0 Update 16** from the following URL:

[http://java.sun.com/products/archive/j2se/5.0\\_16/index.html](http://java.sun.com/products/archive/j2se/5.0_16/index.html)