Deployment Example: Sun Java Communications Suite 5 on a Single Host (Linux)

Part Number 820-2857-10

This deployment example describes how to install Sun Java™ Communications Suite 5 software on one computer running Redhat Linux AS 4.0 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.

CAUTION	This evaluation has been verified in many different environments. However, every deployment is unique, so you may not experience a completely trouble-free installation. See "Evaluating the Deployment" on page 39 for known problems.

This deployment example contains the following sections:

- Deployment Example Revision History
- Summary of Changes
- About This Deployment Example
- Installing the Example
- Configuring Components
- Starting and Stopping Communications Services
- Evaluating the Deployment
- Accessing Sun Resources Online
- Sun Welcomes Your Comments

Deployment Example Revision History

Table 1 Revision History

Date	Description of Changes
August 2007	Initial release of this document.

Summary of Changes

The following describes the changes that have occurred from the Sun Java System Communications Services 6 2005Q4 single host installation example (as described in *Deployment Example: Sun Java Communications Services 2005Q4 on a Single Host*):

1. Portal Server is no longer installed.

2. Redhat Linux AS 4.0 is used.

3. Hosted domains are now configured.

4. All Communications Express UI rendering elements are now deployed in the same web container to support Single Sign-On. As a result, Access Manager is no longer required for Communications Express and there are fewer configuration settings that you have to enter

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

This scenario results in a functioning deployment suited for the evaluation and testing of Sun Java Communications Suite 5. 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 6.3
- Sun Java System Calendar Server 6.3
- Sun Java System Instant Messaging 7.2
- Sun Java System Communications Express 6.3
- Sun Java System Directory Preparation Tool 6.4
- Communications Services Delegated Administrator 6.4
- Sun Java System Web Server 7.0
- Sun Java System Message Queue 3.7 UR1
- Sun Java System Access Manager 7.1

- Sun Java System Directory Server Enterprise Edition 6.0
- 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 Redhat AS 4.0)
- 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.

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.

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 4 on page 5 for more information.

NOTE	Unless otherwise indicated, all of the examples and instructions in this document assume that you are logged in as `root`.

Implementation Specifications for This Example

This section describes implementation specifications for this example.

Table 2 Evaluation Host Hardware and Software Requirements

Component	Platform Requirement
CPU	x86
RAM	2 Gbytes or more
Disk space	2.2 Gbytes or more free disk space for installed software. 1.3 Gbytes additional disk space may be needed for temporary storage of Communications Suite zip files.
Software	Redhat AS 4.0
Users	Provisioned with test users

Table 3 Client Software Requirements

Component	Platform Requirement
Browser	Netscape™ Communication 7.2, Internet Explorer 6.0 SP2+, or Mozilla™ 1.7+, Mozilla Firefox 1.0.7+

Table 4 Server Configuration Information

Install Notes	Install Location	Database Location	Port Name	Port Number
Directory Server 6.0				
Installed with Communications Suite	`/opt/sun/ds6`	`/var/opt/sun/dsins1`	Directory Server Port	389
			LDAP port	389
			SSL Port	636
Messaging Server 6.3				
Additional configuration required	`/opt/sun/messaging`	`/var/opt/sun/messaging`	Webmail port (HTTP)	8080
			SMTP port	25
			POP port	110
			IMAP port	143

Table 4   Server Configuration Information *(Continued)*

Install Notes	Install Location	Database Location	Port Name	Port Number
Web Server 7.0				
Installed with Communications Suite	`/opt/sun/webserver7`	`/var/opt/sun/webserver7`	Web Port	80
			Admin Port	8800
			Admin SSL Port	8989
Calendar Server 6.3				
Additional configuration required	`/opt/sun/calendar`	`/var/opt/sun/calendar`	Calendar Server Port	3080
			LDAP Port	389
Instant Messaging 7.2				
Additional configuration required	`/opt/sun/im`	`/var/opt/sun/im`	XMPP Port	5222
			Multiplexed XMPP Port	45222
			Admin Port	8989

Installation Time Estimates

The following table provides time estimates for installing this example.

Table 5   Installation Time Estimates

Phase	Number of Hours
Redhat 4.0 AS OS installation	3
Software installation	1.5
Software configuration	2.5
Total	7 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. Use `gzip -d` or gunzip to decompress the `*.gz` files.

2. Use `unzip` to decompress the `*.zip` files.

Expected User Input

During installation, your 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 6   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. Running the Java ES installer and selecting the necessary components

3. Installing Messaging Server, Calendar Server, Communications Express, Delegated Administrator, Instant Messaging, Web Server, Directory Server, and Access Manager software

4. Configuring Delegated Administrator

5. Configuring Messaging Server

6. Configuring Calendar Server

7. Configuring Communications Express

8. Configuring Instant Messaging

9. Configuring users

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.

This section contains the following topics:

- Checking Installation Requirements
- Installing the Components
- 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 1.3 GB free disk space for the zip files and zip image. Recommendation: Have 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 192.168.88.1
nameserver 192.168.88.2
nameserver 192.168.88.3
```

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:

```
192.168.88.128 wireless.comms.beta.com wireless
```

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
```

➤ **To Verify the File Descriptor Parameter**

The default installation of Redhat Linux AS 4.0 has 1,024 file descriptors set. This is insufficient for the correct operation of Communications Suite 5. Confirm the number of file descriptors as follows.

1. Open a terminal window.

2. As `root`, type:

   ```
   ulimit -n
   ```

   If this number is less than 16,384, increase the value.

3. To increase the value:

   a. Add the following to `/etc/sysctl.conf` file (or if the parameter is already set, increase the value to 16384):

   ```
   # Increase max file descriptors
   fs.file-max = 16384
   ```

      b. Add the following to `/etc/security/limits.conf` file:

```
# Increase max file descriptors
* - nofile 16384
```

4. Reboot the system for the values to take effect.

5. Open a terminal, and as `root` verify the change again by running the `ulimit -n` command.

➤ **To Unzip the Sun Java Communications Services Zip Files**

1. Download the Communications Suite software.

   http://www.sun.com/download/products.xml?id=45f95b76

2. Create a `/tmp/JCS5` directory.

3. Unzip the Communications Suite zip files in this directory. Then run the Sun Java Communications Suite 5 installer as described in the next section.

Installing the Components

You install Communications Suite components by running the Sun Java Communications Suite 5 installer.

➤ **To Start the Installer**

1. Log in as `root` to the machine on which you are installing Communications Suite software.

2. Change to the `/tmp/JCS5` directory where you stored and unzipped the Communications Suite zip files.

3. Change to the `sun_java_commsuite5` directory

4. Change to the `Linux_x86` platform directory.

5. Start the Sun Java Communications Suite 5 installer in graphical mode.

   `./installer &`

6. Click Next at the Welcome page.

7. Accept the license.

8. Select the following products then click Next to continue:

   ❍ Sun Java System Messaging Server 6.3

   ❍ Sun Java System Calendar Server 6.3

   ❍ Sun Java System Instant Messaging 7.2

- ❍ Sun Java System Communications Express 6.3
- ❍ Sun Java System Directory Preparation Tool 6.4
- ❍ Communications Services Delegated Administrator
- ❍ Sun Java System Web Server 7.0
- ❍ Sun Java System Message Queue 3.7 UR1
- ❍ Sun Java System Access Manager 7.1 (only the required software; no Client SDK)
- ❍ Sun Java System Directory Server Enterprise Edition 6.0 (Core, Control Center, Command-Line Utility)
- ❍ All Shared Components

NOTE	Select the checkbox for multilingual packages if desired.

---

9. Specify the installation directories.

   Locations:

   - ❍ Directory Preparation Tool: `/opt/sun/comms/dssetup`
   - ❍ Directory Server: `/opt/sun` (will create `/opt/sun/ds6 /opt/sun/dsee6 /opt/sun/dscc6`)
   - ❍ Access Manager: `/opt/sun` (will create `/opt/sun/identity`)
   - ❍ Web Server: `/opt/sun` (will create `/opt/sun/webserver7`)
   - ❍ Web Server Instance: `/var/opt/sun/webserver7`
   - ❍ Instant Messaging Server: `/opt/sun` (will create `/opt/sun/im`)
   - ❍ Messaging Server: `/opt/sun/messaging`
   - ❍ Calendar Server: `/opt/sun` (will create `/opt/sun/calendar`)
   - ❍ Delegated Administrator: `/opt/sun/comms/commcli`
   - ❍ Communications Express: `/opt/sun` (will create `/opt/sun/uwc`)

10. Accept the target directories for each product and click Next.

11. The installer verifies system requirements, such as memory, disk space, and operating system patches. When done click Next.

12. Choose Configure Now then click Next.

13. The installer lists the components that must be configured after installation. This document informs you of the order in which to do so.

    ○ Sun Java System Instant Messaging 7.2

    ○ Sun Java System Messaging Server 6.3

    ○ Sun Java System Calendar Server 6

    ○ Sun Java System Delegated Administrator

    ○ Sun Java System Communications Express 6

14. Click Next to configure the remaining components. You configure these components as part of the installation process.

    Continue with the following procedures to input the appropriate information for each of these products when prompted by the installer.

CAUTION   This example uses `root` and `root` (or `root` and `other`) for System User and System Group. These choices are satisfactory for evaluation deployments but not for production deployments. If you use this document to create a production deployment, use non-root identifiers. *Sun Java Communications Suite 5 Installation Guide* (`http://docs.sun.com/app/docs/doc/819-7560`) for more information.

➤ **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

Option	[Default Value]	Enter:
Common Server Settings		
Host Name	wireless	*accept default*
DNS Domain Name	comms.beta.com	*accept default*

Table 7 Common and Web Server Settings *(Continued)*

Option	[Default Value]	Enter:
Host IP address	Machine IP address	**Verify correct address**
System user	root	*accept default*
System group	root	*accept default*
Web Server Settings		
Type of configuration	[Configure Administration Instance as Server]	*accept default*
Start servers after system startup	[Unchecked]	*accept default*
Server Host	wireless.comms.beta.com	*accept default*
Admin Server SSL port	8989	*accept default*
Admin Server HTTP port	8800	*accept default*
Admin runtime user ID	root	*accept default*
Web Server Name	wireless.comms.beta.com	*accept default*
HTTP port	80	*accept default*
Web Server runtime UNIX user ID	webservd	**root**
Document root directory	[/var/opt/sun/webserver7/https-wireless .comms.beta.com/docs]	*accept default*

➤ **To Select Directory Server Settings**
- The following table shows how to respond to the Directory Server configuration options.

Table 8 Directory Server Settings

Option	[Default Value]	Enter:
Create a Directory Instance?	[Yes]	*accept default*
Instance Directory	[/var/opt/sun/dsins1]	*accept default*
Directory Instance Port	[389]	*accept default*
Directory Instance SSL Port	[636]	*accept default*
Directory Manager DN	[cn=Directory Manager]	*accept default*
System User	[root]	*accept default*
System Group	[root]	*accept default*
Directory Manager Password	[adminpass]	*accept default*

Table 8   Directory Server Settings *(Continued)*

Option	[Default Value]	Enter:
Suffix	[dc=comms,dc=beta,dc=com]	**o=isp**

➤ **To Select Access Manager Settings**

   • The following table shows how to respond to the Access Manager configuration options.

Table 9   Access Manager Settings

Option	[Default Value]	Enter:
Install type	Legacy Mode (version 6.x style)	*accept default*
Admin User ID	amadmin	*accept default*
Password	--	**adminpass** <shared>
LDAP User ID	amldapuser	*accept default*
LDAP Password	--	**nonadminpass**
Password Encryption Key	87dfjkauefjkdafdadf...	*accept default*
Access Manager Web Container Options	[Sun Java System Web Server]	Choose **Sun Java System Web Server**
Hostname	[wireless.comms.beta.com]	*accept default*
Services Deployment URI	[amserver]	*accept default*
Common Domain Deployment URI	[amcommon]	*accept default*
Cookie Domain	[.beta.com]	**.comms.beta.com**
Password Deployment URI	[ampassword]	*accept default*
Console Protocol	[HTTP]	*accept default*
Administration Console	[Deploy new console]	*accept default*
Console Deployment URI	[amconsole]	*accept default*
Console Host Name	[wireless.comms.beta.com]	*accept default*
Console Port	[80]	*accept default*
Choose Directory Server Instance	[Use directory server instance you just created]	*accept default*
Directory Server provisioned with user data?	[No]	*accept default*

➤ **To Install the 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.

NOTE   You might receive the following error on the command line after the installer has exited:

```
Exception in thread "main" java.lang.NoClassDefFoundError:
com/sun/entsys/installer/common/CallhomeLauncher
```

You can ignore this error.

➤ **To Verify the Installation**

Once the installation has completed, start LDAP and verify that it works. Then Start Web Server. Finish by starting and enabling SMC webconsole.

1. Start Directory Server:

   ```
   cd /opt/sun/ds6/bin
   ```

   ```
   ./dsadm start /var/opt/sun/dsins1
   ```

2. Start Web Server:

   ```
   cd /var/opt/sun/webserver7/admin-server/bin
   ```

   ```
   ./stopserv
   ```

   ```
   ./startserv
   ```

   ```
   cd /var/opt/webserver7/https-wireless.comms.beta.com/bin
   ```

   ```
   ./stopserv
   ```

   ```
   ./startserv
   ```

   The Web Server can take a while to start.

3. 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/amconsole`

   Use `amadmin` and `adminpass` as the user ID and password.

4. After verifying that you can log in to the Access Manager console, log out.

5. Start and enable the SMC webconsole (smcwebserver):

   `cd /opt/sun/webconsole/bin/`

   `./smcwebserver start`

6. Log in to SMC webconsole to register the directory service instance.

   The URL for the SMC webconsole is:

   `https://`**`fully-qualified-hostname`**`:6789/`

   In this example, type:

   `https://wireless.comms.beta.com:6789/`

   Use `root` and the *system-root-user* password as the user ID and password.

7. Click the Directory Service Control Center (DSCC) link under the Services category.

   Use the directory manager password, `adminpass`, and click Initialize.

NOTE   This will pop-up a new screen (you might need to disable pop-up blockers on your web client).

---

8. Close the window then click Continue at the Authentication As root No Longer Required window.

9. Select the Directory Servers tab.

10. Select Register Existing Servers from the More Server Actions drop-down box.

   a. In the pop-up window, add in the instance path: **`/var/opt/sun/dsins1/`**

   b. Click Next

   c. In Review Server Certificate, click next to accept the certificate

    d. In the Provide Authentication Information, type the Directory Manager password:
       `adminpass`

    e. Click Finish to register the server.

11. Proceed to Configuring Components for instructions on how to configure Communications Suite components.

Uninstalling the Components

After you complete your evaluation, you can use the Java Enterprise System uninstaller to remove the components that you installed. See the *Sun Java Enterprise System 5 Installation Guide for UNIX*:

    http://docs.sun.com/app/docs/doc/819-4891

Configuring Components

This section describes how to configure and start the components that you use in this example deployment.

This section contains the following topics:

- Before You Begin
- Preparing the Directory and Configuring Messaging Server
- Configuring Delegated Administrator and Communications CLI
- Configuring Messaging Server
- Configuring Calendar Server
- Configuring Communications Express
- Configuring Instant Messaging
- Verifying the Configuration
- Configuring Access Manager
- Creating Additional User Accounts and Groups

Before You Begin

Before you configure the Messaging Server software, you need to disable the sendmail process.

➤ To Disable sendmail

*   Prior to configuring Messaging Server, use the following to kill the sendmail process and prevent it from starting during bootup.

```
/etc/init.d/sendmail stop
chkconfig --del sendmail
```

Preparing the Directory and Configuring Messaging Server

This section explains how to prepare the Directory Server LDAP schema and configure Messaging Server.

➤ To Apply Schema 2 to Your Directory Tree

1. Run the comm_dssetup.pl script:

    cd /opt/sun/comms/dssetup/sbin

    ./comm_dssetup.pl

    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/dsins1]	*accept default*
Directory Manager DN	[cn=Directory Manager]	*accept default*
Directory Manager Password	--	**adminpass**
Use directory server for users/groups	[Yes]	*accept default*
Users/Groups base suffix	[o=isp]	*accept default*
Schema type?	[2]	*accept default*

Table 10 Values for `comm_dssetup.pl` Script *(Continued)*

Option	[Default Value]	Enter:
Update the schema files?	[yes]	*accept default*
Configure new indexes?	[yes]	*accept default*
Reindex new indexes?	[yes]	*accept default*

2. Confirm your choices and type **y** to continue. The `comm_dssetup` script proceeds.

3. When prompted, type **y** to continue with script.

   Continue with the next section after the `comm_dssetup` script finishes and displays its "Successful Completion" message.

Configuring Delegated Administrator and Communications CLI

This section describes configuring Delegated Administrator console and utility, which provide user management.

➤ **To Configure Delegated Administrator**

1. Run the configurator script:

   ```
   cd /opt/sun/comms/commcli/sbin/
   ```

   ```
   ./config-commda
   ```

2. Click Next in the Welcome window.

3. Accept the default for the Directory to store User Mgmt data files:
   [`/var/opt/sun/comms/commcli`]

   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. Use the following table to respond to the configuration options:

Table 11 Values for `config-commda` Script

Option	[Default Value]	Enter:
AM Hostname	[wireless.comms.beta.com]	*accept default*

Table 11 Values for config-commda Script *(Continued)*

Option	[Default Value]	Enter:
AM Port	[8080]	**80**
Default Domain	[comms.beta.com]	*accept default*
Default SSL Port	[443]	*accept default*
Web Container	[Web Server 6.x]	**Web Server 7.x**
Install Root Directory (for DA Console)	[/opt/sun/webserver7]	*accept default*
Instance Root Directory	[/var/opt/sun/webserver7]	*accept default*
Server Instance Identifier	[wireless.comms.beta.com]	*accept default*
Virtual Server Identifier	[wireless.comms.beta.com]	*accept default*
Web Server HTTP Port	[80]	*accept default*
Administration Server Port	[8800]	*accept default*
Administrator User ID	[admin]	*accept default*
Administrator Password	--	**adminpass**
Secure Administration Server Instance?	[Unchecked]	*accept default*
Default Domain Separator	[@]	*accept default*
Access Manager Base Directory	[/opt/SUNWam]	*accept default*
Install Root Directory (for DA Server)	[/opt/SUNWwbsvr7]	*accept default*
Instance Root Directory	[/var/opt/SUNWwbsvr7]	*accept default*
Server Instance Identifier	[wireless.comms.beta.com]	*accept default*
Virtual Server Identifier	[wireless.comms.beta.com]	*accept default*
Web Server HTTP Port	[80]	*accept default*
Administration Server Port	[8800]	*accept default*
Administrator User ID	[admin]	*accept default*
Administrator Password	--	**adminpass**
Secure Administration Server Instance?	[Unchecked]	*accept default*
URL of Directory Server	[ldap://wireless.comms.beta.com:389]	*accept default*
Bind As	[cn=Directory Manager]	*accept default*
Password	--	**adminpass**
AM Top level admin	[amadmin]	*accept default*

Table 11 Values for `config-commda` Script *(Continued)*

Option	[Default Value]	Enter:
AM admin password	--	**adminpass**
Access Manager Internal LDAP Auth Username	amldapuser	*accept default*
AM Internal LDAP Auth Password for amldapuser	--	**nonadminpass**
Organization DN	[o=comms.beta.com,o=isp]	*accept default*
Top Level Admin for Default Organization	[admin]	*accept default*
Password	--	**adminpass**
Load Sample Service Packages	--	**Yes (Checked)**
Load Sample Organizations	--	**No (Unhecked)**
Preferred Mailhost for Sample	[wireless.comms.beta.com]	*accept default*

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 is remind you to restart Web Server; the other is to remind you to enable the mail and calendar services in the domain. The next steps correct these problems.

7. Click Close to complete the configuration.

8. Restart Web Server:

   ```
   cd /var/opt/sun/webserver7/https-wireless.comms.beta.com/bin
   ```

   ```
   ./stopserv
   ```

   ```
   ./startserv
   ```

9. Modify the mail and calendar domains, and create users by using the `commadmin` utility:

```
cd /opt/sun/comms/commcli/bin/

./commadmin domain modify -D admin -w adminpass -X wireless.comms.beta.com -n comms.beta.com
-p 80 -d comms.beta.com -S mail,cal -H wireless.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 wireless.comms.beta.com -S mail,cal -E jdoe@comms.beta.com -H
wireless.comms.beta.com

./commadmin user create -D admin -F Calendar -l calmaster -L Master -n comms.beta.com -p 80
-w adminpass -W adminpass -X wireless.comms.beta.com -S mail,cal -E
calmaster@comms.beta.com -H wireless.comms.beta.com
```

Create as many users as you need. Steps later in this document show how to add Presence and Instant Messaging services to those users.

Configuring Messaging Server

This section describes configuring Messaging Server, including configuring the Webmail port.

➤ **To Configure Messaging Server**

1. Run the Messaging Server configure script:

    ```
    cd /opt/sun/messaging/sbin
    ```

    ```
    ./configure
    ```

    The Configuration Wizard appears. Read the introductory information and proceed by clicking Next.

2. Verify the following:

    a. Fully qualified host name of Messaging Server, FQHN: [`wireless.comms.beta.com`]

    b. Directory to store config/data files: [`/var/opt/sun/messaging`]

        When prompted, choose to create the new directory.

    c. Install MTA, Message Store, and Webmail Server. There is no need to install the Multiplexor for this deployment.

    d. Name of the mail server Unix user: Unix username [`mailsrv`]

   e. Unix group: [mail]

3. The installation script prompts for a series of options. Use the following table to respond to the configuration options:

Table 12 Values for Messaging Server `configure` Script

Option	[Default Value]	Enter:
User/Group Server LDAP	[ldap://wireless.comms.beta.com:389]	*accept default*
Bind As	[cn=Directory Manager]	*accept default*
Password	--	**adminpass**
Postmaster email address	--	**jdoe@wireless.comms.beta.com**
Password for Messaging Server accounts	--	**adminpass**
Default email Domain	[comms.beta.com]	*accept default*
Organization DN	[o=comms.beta.com,o=isp]	*accept default*

4. Click Next, then click Configure Now.

   You will receive an error about the Webmail port being in use. Click OK to acknowledge this message. The configuration begins. The following step corrects the Webmail port problem.

5. When the 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 steps above. When prompted for the directory 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:

```
cd /opt/sun/messaging/sbin

./configutil -o service.http.port -v 8080

./configutil -o local.webmail.sso.uwcenabled -v 1

./configutil -o local.webmail.sso.uwccontexturi -v uwc
```

7. Start Messaging Server:

    ```
    cd /opt/sun/messaging/sbin/
    ```

    ```
    ./stop-msg
    ```

    ```
    ./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. Run the Calendar Server configurator script:

    ```
    cd /opt/sun/calendar/sbin
    ```

    ```
    ./csconfigurator.sh
    ```

2. Click Next at the Welcome page.

3. The installation script prompts for a series of options. Use the following table to respond to the configuration options:

Table 13 Values for Calendar Server csconfigure Script

Option	[Default Value]	Enter:
LDAP Server Host Name	[wireless.comms.beta.com}	*accept default*
LDAP Server Port	[389]	*accept default*
Directory Manager DN	[cn=Directory Manager]	*accept default*
Directory Manager Password	--	**adminpass**
Enable Virtual Domains support	[Checked]	*accept default*
Virtual Domains setting: Default domain	[comms.beta.com]	*accept default*
Calendar Administrator Username	[calmaster]	*accept default*
Calendar Administrator Password	--	**adminpass**
Calendar Administrator Email address	[calmaster@comms.beta.com]	*accept default*
Site administrator	[Yes]	*accept default*

Table 13 Values for Calendar Server `csconfigure` Script *(Continued)*

Option	[Default Value]	Enter:
Set up a Front End/Back End deployment	[Unchecked]	*accept default*
Email Alarms	[Enabled]	*accept default*
Administrator Email Address	[calmaster@comms.beta.com]	*accept default*
SMTP Host Name	[wireless.comms.beta.com]	*accept default*
Service Port	[80]	**3080**
Maximum Sessions	[5000]	*accept default*
Maximum Threads	[20]	*accept default*
Number of server processes	[1]	*accept default*
Runtime User ID	[icsuser]	*accept default*
Runtime Group ID	[icsgroup]	*accept default*
Start Calendar Server after Successful Configuration	[Unchecked]	*accept default*
Start Calendar Serve on System Startup	[Checked]	**Unchecked**
Configuration Directory	[/etc/opt/sun/calendar/config]	*accept default*
Database Directory	[/var/opt/sun/calendar/csdb]	*accept default*
Attachment Store Directory	[/var/opt/sun/calendar/astore]	*accept default*
Logs Directory	[/var/opt/sun/calendar/logs]	*accept default*
Temporary Files Directory	[/var/opt/sun/calendar/tmp]	*accept default*
Enable Archive	[Checked]	*accept default*
Archive Directory	[/var/opt/sun/calendar/csdb/archive]	*accept default*
Enable Hot Backup	[Checked]	*accept default*
Hot Backup Directory	[/var/opt/sun/calendar/csdb/hotbackup]	*accept default*
Keep archives for (in days)	[Minimum: 3, Maximum: 6]	*accept default*
Keep hot backups for (in days)	[Minimum: 3, Maximum: 6]	*accept default*
Same as archive checkbox	[Checked]	*accept default*

4. Click the Configure Now button to configure Calendar Server.

   The Configuration begins and takes less than two minutes.

5. Click Next when the configuration is complete.

6. Click the Details button to verify that all packages configured correctly. Click the Close button to exit the configurator.

7. Start the Calendar Server daemons:

```
cd /opt/sun/calendar/sbin
./stop-cal
./start-cal
```

8. Continue with the next section to configure Communications Express.

Configuring Communications Express

This section shows you how to run the Communications Express configuration script.

➤ **To Configure Communications Express**

1. Run the Communications Express configurator script:

```
cd /opt/sun/uwc/sbin
./config-uwc
```

2. Click Next at the Welcome page.

3. Accept the default for Directory to store configuration and data files: [/var/opt/SUNWuwc]

Choose to create the directory when prompted.

4. Install the Mail and Calendar Components.

The installation script prompts for a series of options. Use the following table to respond to the configuration options:

Table 14   Values for `config-uwc` Script

Option	[Default Value]	Enter:
Hostname	[wireless]	*accept default*
DNS Domain	[comms.beta.com]	*accept default*
Web Container	[Web Server]	*accept default*
Web Server Root Directory	[/opt/sun/webserver7]	*accept default*
Web Server Config Root Directory	[/var/opt/sun/webserver7]	*accept default*

Table 14 Values for `config-uwc` Script *(Continued)*

Option	[Default Value]	Enter:
Web Server Instance Identifier	[wireless.comms.beta.com]	*accept default*
Virtual Server Identifier	[wireless.comms.beta.com]	*accept default*
HTTP Port	[80]	*accept default*
Administration Server Port	[8800]	*accept default*
Administrator User ID	[admin]	*accept default*
Administrator Password	--	**adminpass**
Secure Administration Server Instance	[Unchecked]	*accept default*
Web Container User ID	[roo]	*accept default*
Web Container Group IP	[root]	*accept default*
URI Path	[/uwc]	*accept default*
Enable Hosted Domain Support	[Unchecked]	**Checked (Yes)**
URL of Directory Server	[ldap://wireless.comms.beta.com:389/]	*accept default*
Bind DN	[cn=Directory Manager]	*accept default*
Password	--	**adminpass**
DC Tree suffix	[o=isp]	*accept default*
Default Domain	[comms.beta.com]	*accept default*
Enable Access Manager for Single Sign-On	[Unchecked]	*accept default (not enabled)*
Webmail Server Host Name	[wireless.comms.beta.com]	*accept default*
Webmail Server Port Number	--	**8080**
Enable login in secure mode	[Unchecked]	*accept default (not secure)*
Webmail Server SSL Port Number	--	**Leave blank**
Webmail Admin User ID	--	**admin**
Admin Password	--	**adminpass**
Calendar Server Hostname	[wireless.comms.beta.com]	*accept default*
Calendar Server Port	[9004]	**3080**
Calendar Admin User ID	[calmaster]	*accept default*
Calendar Administrator User Password	--	**adminpass**
URL of PAB Directory Server	[ldap://wireless.comms.beta.com:389]	*accept default*

Table 14 Values for `config-uwc` Script *(Continued)*

Option	[Default Value]	Enter:
Bind As	[cn=Directory Manager]	*accept default*
Password	--	**adminpass**

5. Click the Configure Now button to configure Communications Express.

6. After the configuration is finished, click Next to continue.

   The system displays a message to restart the Web Server instance.

7. Click OK.

8. Click Next to continue.

9. Click Close to quit the Communications Express configurator script.

10. Restart Web Server:

    ```
    cd /var/opt/sun/webserver7/https-wireless.comms.beta.com/bin
    ```

    ```
    ./stopserv
    ```

    ```
    ./startserv
    ```

11. Continue with the next section to configure Instant Messaging.

Configuring Instant Messaging

Configuring Instant Messaging is important for the completeness of the Sun Java Communications Suite but is not necessary for Communications Express.

➤ **To Configure Instant Messaging**

1. Run the Instant Messaging configurator script:

   ```
   cd /opt/sun/im
   ```

   ```
   ./configure
   ```

2. Read the Software Requirements and click Next to continue.

   The Components Selection page appears.

3. Verify that both Server components and Client components are selected for configuration then click Next to continue.

   The installation script prompts for a series of options. Use the following table to respond to the configuration options:

Table 15 Values for Instant Messaging `configure` Script

Option	[Default Value]	Enter:
Use Access Manager for Single Sign-On	[Unchecked]	**Checked**
Use Access Manager for Policy	[Unchecked]	**Checked**
Where to Store Instant Messaging User Data	On the file system	*This selection is disabled*
User ID	[root][1]	*accept default*
Group ID	[root][2]	*accept default*
Runtime Directory	[/var/opt/sun/im]	*accept default*
Domain Name	[comms.beta.com]	*accept default*
XMPP Port	[5222]	*accept default*
Multiplexed XMPP Port	[45222]	*accept default*
Disable Server (enable only multiplexor)	[Unchecked]	*accept default*
LDAP Host Name	[wireless.comms.beta.com]	*accept default*
LDAP Port Number	[389]	*accept default*
Base DN	[dc=comms,dc=beta,dc=com]	**o=isp**
Bind DN	--	**cn=Directory Manager**
Bind Password	--	**adminpass**
Enable Email Integration	[Checked]	*accept default*
SMTP Server	[wireless.comms.beta.com]	*accept default*
Enable Email Archiving	[Checked]	*accept default*
Deploy Messenger Resources	[Checked]	*accept default*
Codebase	[http://wireless.comms.beta.com:80/im]	*accept default*

Table 15 Values for Instant Messaging `configure` Script *(Continued)*

Option	[Default Value]	Enter:
Web Administration URL	[https://wireless.comms.beta.com:4849/]	**https://wireless.comms.beta.com:8989/**
Web Administrator User ID	[admin]	*accept default*
Web Administrator Password	--	**adminpass**
Deploy Instant Messaging HTTP Gateway	[Checked]	*accept default*
Context Root	[http://wireless.comms.beta.com:80/httpbind]	*accept default*
Web Administration URL	[https://wireless.comms.beta.com:8989/	*accept default*
Web Administrator User ID	[admin]	*accept default*
Web Administrator Password	--	**adminpass**
Enable Calendar Agent	[Unchecked]	**Checked**
Notification Server Host Name	[wireless.comms.beta.com]	*accept default*
Notification Server Port	[57997]	*accept default*
Calendar Alarm URL	[enp:///ics/customalarm]	*accept default*
Start Services After Successful Configuration	[Checked]	*accept default*
Start Services When System Starts	[Checked]	*accept default*

1. Access Manager requires that Instant Messaging services be installed and run as user `root`.
2. Access Manager requires that Instant Messaging services be installed and run as group root.

4. Click Next to configure Instant Messaging.

   It could take a while to complete the configuration.

5. At the Configuration Summary page, click Close to exit.

6. Restart Web Server.

   ```
   cd /var/opt/sun/webserver7/https-wireless.comms.beta.com/bin
   ```

   ```
   ./stopserv
   ```

   ```
   ./startserv
   ```

7. Continue with the next section to verify the configuration.

Verifying the Configuration

This section describes how to verify the configuration for Communications Express client, Delegated Administrator, and Instant Messenger. You simply verify that you can log in to the various services. After you are satisfied that you can log in, log out.

1. In your web browser, open the following URL for the Communications Express client:

   ```
   http://wireless.comms.beta.com/uwc
   ```

2. Log in as one of the users created earlier.

   If you created a user according to the previous steps, type **jdoe** for the user name, and **demo** for the password.

3. In your web browser, open the following URL for Delegated Administrator:

   ```
   http://wireless.comms.beta.com/da/DA/Login
   ```

   Log in as user admin. The password is adminpass.

4. In your web browser, open the following URL for Instant Messenger:

   ```
   http://wireless.comms.beta.com/im/en/im.jnlp
   ```

   Login in as user jdoe and password demo.

NOTE   If you cannot log into Instant Messaging as a user, you might need to manually add the Instant Messaging and Presence Services to the user. See for more information.

---

5. Continue with the next section to configure Access Manager.

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*:*portal-server-port*/amconsole

   In this example, type:

   http://wireless.comms.beta.com/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 need to add IM and Presence services to the comms.beta.com organization. Once these services have been added to the suborganization, you add the necessary services to each user in this suborganization.

NOTE	Previously, you created a set of users with the commcli 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 are presented with a view of all your organizations. The comms.beta.com organization is listed. 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 this domain 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. Click the properties icon next to Core, just below Authentication Modules.

   You need to select the ldap1 service for both Administrator Authentication Configuration and Organization Authentication Configuration.

7. Click Save.

8. 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.

9. Click the property icon beside a user.

10. In the right pane, open the View drop-down menu and choose Services.

    No services are listed.

11. Click the Add button.

    A list of services appears.

12. 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 Users 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 do not 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 a single time 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/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/sun/webserver7/https-wireless.comms.beta.com/bin

   ./stopserv

   ./startserv
   ```

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 End User Accounts 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.

```
cd /opt/sun/comms/commcli/bin

./commadmin user create -D admin -F Demo -l demo1 -L One -n comms.beta.com -p 80 -w
adminpass -W demo -X wireless.comms.beta.com -S mail,cal -E demo1@comms.beta.com -H
wireless.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 wireless.comms.beta.com -S mail,cal -E demo2@comms.beta.com -H
wireless.comms.beta.com

./commadmin group create -D admin -G Demostaff -n comms.beta.com -p 80 -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 Create User Accounts by Using Delegated Administrator Console**

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 directories to `/var/opt/sun/comms/commcli/WEB-INF/classes/sun/comm/cli/server/servlet` and edit the `resource.properties` file.

   The default settings for `servicepackage` refresh rates are as follows:

   ```
   servicepackage-ttlhours=5
   ```

   ```
   servicepackage-ttlminutes=0
   ```

   These settings establish the time between refreshes of service packages. In a demo scenario, service packages do not change very often so there is no need to refresh them every five minutes. Instead, they are refreshed every five hours. This improves Delegated Administrator performance. If you later decide to change the refresh rate, for example, to 20 hours, then make this change:

   `servicepackage-ttlhours=20`

   The default setting for calendar ID type is set using the `switch-caltype` variable as follows:

   ```
   switch-caltype=hosted
   ```

   The `caltype` can either be `hosted` or `legacy`. When you set `caltype` to `hosted`, users are created as `uid@`*domain* rather than `uid`, when you use Delegated Administrator to create them.

2. If you make changes to the `resource.properties` file, restart Web Server:

   ```
   cd /var/opt/sun/webserver7/https-wireless.comms.beta.com/bin
   ```

   ```
   ./stopserv
   ```

   ```
   ./startserv
   ```

3. The first time you use Delegated Administrator console, you must add service packs to the organization that contains your users. In a web browser, open the URL for the Delegated Administrator console and log in as `amadmin` (password is `adminpass`):

   ```
   http://wireless.comms.beta.com/da/DA/Login
   ```

4. Click the check box next to the `comms.beta.com` organization, then click the Allocate Service Package button.

   The Allocate Service Package window appears. Service packages are organized within a set of three pages.

5. Click the Single Page button (to the right of the Compare button) to map the three pages into a single page view.

6. Select the desired service packages.

    Choose from among earth, mars, mercury, and venus, because they have mail and calendar services enabled. Each service package has a different mail quota.

7. Click Next to continue.

8. Accept the Mail Service defaults, then click Next.

9. If you chose a service package that contains Calendar, type the Calendar Host `wireless.comms.beta.com` and Anonymous Login Yes. Then click Next.

10. Select the quantity of each service pack desired then click Next.

    A quantity of 100 is adequate for demo purposes.

11. Review your choices and click Finish.

    The service packages are created.

12. Once the service packs have been allocated for the domain, you can now add users to the domain. Click the domain link, `comms.beta.com`.

13. Click the New button to create a new user account within this domain.

14. Type a First Name (such as `Demo`), Last Name (such as `Five`), Display Name (such as `Demo Five`), then click Next.

15. There is no need to type postal information, so click Next.

16. Select a service pack for this user, for example, earth, then click Next.

17. Type the email address, for example, `demo5@comms.beta.com`. Mail Delivery Option should be Local Inbox. Leave the other fields blank.

18. Click Next.

19. Choose your calendar preferences and pick your preferred timezone. Then click Next.

20. Type Login ID and Password. In this example, Login ID is `demo5` and password is `demo`.

21. Click Next to continue.

22. Verify the user information then click Finish to create the user account.

23. 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, assign services to those users as described previously in .

Starting and Stopping Communications Services

This section describes the commands needed to start and stop all the Communications Services.

➤ **To Start and Stop Services**

You should stop services before attempting to start them.

1. To stop all services:

Table 16 Commands to Stop Communications Services

Service	Command
Instant Messaging	`/opt/sun/im/sbin/imadmin stop`
Access Manager	`/opt/sun/identity/bin/amserver stop`
Web Server	`/var/opt/sun/webserver7/https-wireless.comms.beta.com/bin/stopserv`
Web Server Administrator	`/var/opt/sun/webserver7/admin-server/bin/stopserv`
Calendar Server	`/opt/sun/calendar/sbin/stop-cal`
Messaging Server	`/opt/sun/messaging/sbin/stop-msg`
Directory Server	`/opt/sun/ds6/bin/dsadm stop /var/opt/sun/dsins1`
SMC Console	`/opt/sun/webconsole/bin/smcwebserver stop`

2. To start all services:

Table 17 Commands to Start Communications Services

Service	Command
SMC Console	`/opt/sun/webconsole/bin/smcwebserver start`
Directory Server	`/opt/sun/ds6/bin/dsadm start /var/opt/sun/dsins1`
Messaging Server	`/opt/sun/messaging/sbin/start-msg`
Calendar Server	`/opt/sun/calendar/sbin/start-cal`
Web Server Administrator	`/var/opt/sun/webserver7/admin-server/bin/startserv`
Web Server	`/var/opt/sun/webserver7/https-wireless.comms.beta.com/bin/startserv`
Access Manager	`/opt/sun/identity/bin/amserver start`
Instant Messaging	`/opt/sun/im/sbin/imadmin start`

Evaluating the Deployment

Now that you have installed and configured your single host deployment example, you can begin evaluating and using the email, calendar, and instant messaging services both as an end user and as an administrator.

To use and learn about the Sun Java Communications Suite, see the *Sun Java Communications Suite Evaluation Guide* at `http://docs.sun.com/doc/820-2199`. This guide provides a tutorial-type walk through of the key features of the Sun Java Communications Suite, including the Connector for Microsoft Outlook plug-in, the messaging, calendaring, and address book components of the Communications Express UI, and Instant Messaging.

Known Issues and Limitations

For more information about known issues, see the *Sun Java Communications Services Release Notes* at the following URL:

> `http://docs.sun.com/app/docs/doc/819-4432`

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