



Sun Java™ System

Communications Express 6 Administration Guide

2004Q2

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U.S.A.

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About This Guide

This manual describes how to administer Sun Java™ System Communications Express 6 2004Q2 and its accompanying software components.

This preface contains the following sections:

- [Who Should Read This Book](#)
- [What You Need to Know](#)
- [How This Book is Organized](#)
- [Conventions Used in This Manual](#)
- [Where to Find Related Information](#)
- [Where to Find This Guide Online](#)

Who Should Read This Book

You should read this book if you are responsible for administering, configuring, and deploying Communications Express.

What You Need to Know

This book assumes that you are responsible for configuring, administering, and maintaining Communications Express, and you have an understanding of the following:

- JavaScript™
- HTML

- Sun Java™ System Calendar Server
- Sun Java™ System Web Server Enterprise Edition
- Sun Java™ System Messaging Server
- Sun Java™ System Identity Server
- Sun Java™ System Directory Server

How This Book is Organized

Table 1 Organization of the Sun Java System Communications Express Administration Guide

Chapter	Description
This chapter	Describes the audience, requirements, organization, document conventions, and related information.
Chapter 1, “Installing and Configuring Communications Express”	Describes how to invoke the configurator tool and configure Sun Java System Communications Express.
Chapter 2, “Overview of Communications Express”	Provides a high-level overview of Communications Express, including the components, architecture, and interfaces.
Chapter 3, “Configuring Your System for Communications Express”	Describes the system requirements and system configuration details.
Chapter 4, “Implementing Single Sign-On”	Provides an overview of the single sign-on process and its implementation.
Chapter 5, “Deploying Communications Express and Identity Server”	Describes the different deployment scenarios for Communications Express with Identity Server and the configuration steps to be performed for proper operation.
Chapter 6, “Troubleshooting”	Describes the common problems you may encounter during installation and deployment of Communications Express and outlines the steps to create and enable error logs.
Chapter 7, “Configuring the Client”	Provides a high level overview of the data migration process and the steps to migrate PAB data to address book server.

Table 1 Organization of the Sun Java System Communications Express Administration Guide

Chapter	Description
Chapter 8, “Migrating PAB Data to Address Book Server”	Describes the settings you can configure for Communications Express.
Chapter 9, “Tuning and Performance Information”	Describes the tuning you can perform on Directory Server, Calendar Server, Web Server, and Communications Express to enhance performance.
Index	

Conventions Used in This Manual

Monospaced Font

Monospaced font is used for any text that appears on the computer screen or text that you should type. It is also used for file names, distinguished names, functions, and examples.

Bold Monospaced Font

Bold monospaced font is used to represent text within a code example that you should type. For example, you might see something like this:

```
./setup
```

```
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is subject to license terms. Sun, Sun Microsystems, the Sun logo,
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```

```
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```

```
=====
```

```
Verifying permissions
Verifying java available
Found java (/usr/j2se/bin/java) version (1.3.0) in the system.
Verifying installation components available
Verifying directories available
Verifying files available
Starting install wizard in graphical mode
```

In this example, `./setup` is what you would type from the command-line and the rest is what would appear as a result.

Italicized Font

Italicized font is used to represent text that you enter using information that is unique to your installation (for example, variables). It is used for server paths and names and account IDs.

Command-Line Prompts

Command-line prompts (for example, `%` for a C-Shell, or `$` for a Korn or Bourne shell) are not displayed in the examples. Depending on which operating system environment you are using, you will see a variety of different command-line prompts. However, you should enter the command as it appears in the document unless specifically noted otherwise.

Where to Find Related Information

In addition to this guide, Sun Java System Communications Express comes with supplementary information for administrators as well as documentation for developers. Use the following URL to see all the Sun Java System Communications Express, Sun Java System Calendar Server, and Sun Java System Messaging Server documentation:

http://docs.sun.com/db/coll/CalendarServer_04q2

http://docs.sun.com/db/coll/MessagingServer_04q2

Listed below are additional documents that are available:

- Sun Java System Communications Express Customization Guide
<http://docs.sun.com/db/doc/817-6243-10>

- Sun Java System Messaging Server Release Notes
<http://docs.sun.com/db/doc/817-6363-10>

Where to Find This Guide Online

You can find the Sun Java System Communications Express Administration Guide online in PDF and HTML formats. This book can be found at the following URL:

<http://docs.sun.com/db/prod/817-4416-10>

Miscellaneous Related Links

Other links include:

- Sun Java System 2004Q2 documentation web site:
(<http://docs.sun.com/prod/entsys.04q2>)
- Directory Server documentation:
http://docs.sun.com/coll/DirectoryServer_04q2
- Web Server documentation:
http://docs.sun.com/coll/S1_websvr61_en
- Application Server documentation
http://docs.sun.com/coll/s1_asseu3_en
- Web Proxy Server documentation:
<http://docs.sun.com/prod/s1.webproxys#hic>
- Download Center:
<http://www.sun.com/software/download/>
- Technical Support:
<http://www.sun.com/service/sunone/software/index.html>
- Professional Services:
<http://www.sun.com/service/sunps/sunone/index.html>
- Sun Enterprise Services, Solaris Patches, and Support:
<http://sunsolve.sun.com/>

Miscellaneous Related Links

Installing and Configuring Communications Express

Sun Java™ System Communications Express consists of three client modules - Calendar, Address Book and Mail.

The Calendar and Address Book client modules are deployed as a single application on any web container and are collectively referred to as the unified web client (UWC) throughout this guide. Messenger Express is the standalone web interface mail application that uses the HTTP service of the Messaging Server. Messenger Express should be deployed on the same system as the Calendar and Address Book modules. To be able to access Messenger Express from UWC, ensure that the `mail.deployed` parameter in `uwconfig.properties` file is set to “true “ and also set the a mail related attributes mentioned in [Table 4-5](#).

The Messenger Express Multiplexor allows you to connect to the Messenger Express deployed on another system by accepting the authentication information and routing them appropriately. Refer to Chapter 5, *Configuring and Administering Multiplexor Services*, of *Sun Java System Messaging Server Administration Guide*, for steps on how to configure your Messenger Express Multiplexor.

For the high level architecture diagram, refer to [Figure 2-1](#).

This chapter describes how to install and configure Communications Express.

The following topics are covered in this chapter:

- [Installing Communications Express from Java Enterprise System Installer](#)
- [Prerequisites](#)
- [Configuring Communications Express](#)
- [Post Configuration Instructions](#)

- [Unconfiguring Communications Express](#)
- [Installing Communications Express without Messaging Server and using a Single Tree Structure](#)

-
- NOTE**
- Ensure Messaging Server 6.1 and Calendar Server 6.1 are installed and configured before you begin to install and configure Communications Express. You need to configure Messaging Server to be able to access Messenger Express. Also, ensure that Messaging Server and Communications Express are installed on the same server.
 - To use Sun Java System LDAP Schema, v.2, ensure that Identity Server 6.2 is installed and configured.
-

Installing Communications Express from Java Enterprise System Installer

To install Communications Express follow the steps mentioned below:

-
- NOTE** Uninstall any previous installation of Communications Express.
- You need to uninstall Communications Express using Java Enterprise System Uninstaller if you have installed it from an earlier build of the Java Enterprise System Installer. On Solaris, Sun Java™ Enterprise System Uninstaller is available at:
- ```
/var/sadm/prod/entsys/uninstall
```
- However, if you have installed an earlier version of the Communications Express from the Communications Express point product build, remove the Communications Express package. For example, on Solaris, if you have installed an earlier version of the Communications Express package using “pkgadd” command, remove it using the “pkgrm SUNWuwc” command.
-

1. Select Sun Java™ System Communications Express from the list of components displayed in Sun Java™ Enterprise System Install Wizard.

---

**NOTE** When Sun Java System Communications Express is selected, the Web Server gets automatically selected under “Web and Applications Services” list in the Component Selection window. However, if Web Server is already installed in the system this option is disabled.

---

2. The Install Directories panel is displayed. Browse to specify the name of the target installation directory for each component product.

Click Next

3. After a couple of panels the Configuration Type panel is displayed.
  - a. Decide on the configuration type you want:
    - **Configure Now.** Allows you to configure component products that permit configuration at installation time.
    - **Configure Later.** The installer installs the packages in the specified directory paths and proceeds without configuring them. For more details, refer to the section on Choosing a Configuration Type in Chapter 2 of the *Sun Java Enterprise System Installation Guide* at:  
<http://docs.sun.com/doc/817-5760-10>
  - b. Select a configuration type and click Next.

If you choose to Configure Later, make sure that the configuration of the following products for Communications Express is done in the order mentioned:

- I. Directory Server
- II. Administrative Console for Directory Server
- III. Application Server (if chosen)
- IV. Web Server

## V. Commcli

For details on the configuration process for the products, refer to the Configuring Component Product section in Chapter 7 of the *Sun Java Enterprise System Installation Guide* at:

<http://docs.sun.com/doc/817-5760-10>

4. The Custom Configuration panel appears.

Click Next to configure other component products (if any).

---

**NOTE** By default, Identity Server SDK is installed along with Communications Express. You need to provide a Password Encryption Key in the Identity Server Administration (1 of 4) panel to be able to proceed with the installation process even when you have opted for Messaging SSO setup. Later if you select Identity Server SSO, remember to enter the same Password Encryption Key.

---

5. Complete the installation process.

---

**NOTE** Communications Express cannot be configured from Sun Java™ Enterprise System Install Wizard. You need to run the Communications Express configurator program to configure Communications Express.

---

## Prerequisites

Before running the Communications Express configurator program make sure you perform the following:

1. Run `comm_dssetup.pl (version6.1 rev 0.2)` to update the schema details in the User/Group Directory Server. The `comm_dssetup.pl` tool can be accessed from the Messaging or Calendar Server products.

Run the `comm_dssetup.pl` script from the Calendar or Messaging directory.

- o To run the script from Calendar Server type:
 

```
cd /<root of the calendar directory>/SUNwics5/cal/sbin/
perl comm_dssetup.pl
```
- o To run the script from Messaging Server type:
 

```
<root of the messaging directory>/lib
perl comm_dssetup.pl
```

---

**NOTE** Skip this step if you have successfully configured Messaging Server 6.1 and Calendar Server 6.1.

---

2. Run `comm_dssetup.pl(version6.1 rev 0.2)` to update the PAB Directory Server, when the PAB Directory Server is different from User/Group Directory Server. The `comm_dssetup.pl` tool can be accessed from the Messaging or Calendar Server product.

3. Ensure that you have the following entry in `/etc/hosts` file on your Solaris system:

```
<ip-of system> <FQHN> <hostname>
```

For Example, 129.158.230.64 bugie.siroe.varrius.com budgie

4. 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:

- a. Enter the configuration details for the hosts in `/etc/nsswitch.conf` file. For example,

```
hosts: files dns nis
```

This configuration indicates to the name service lookup the order it should use to resolve host names and host aliases. The name service lookup order is: `files`, `dns`, and `nis`.

- b. Ensure that `/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 bugie.siroe.varrius.com budgie
```

or

```
129.158.230.64 bugie.siroe.varrius.com budgie loghost
```

An example of an incorrect IP address:

```
129.158.230.64 budgie
```

## Configuring Communications Express

1. Login as Administrator.
2. Before invoking the configuration wizard set the display settings.
3. Go to `<uwc-basedir>/SUNWuwc/sbin` directory.

*uwc-basedir* is the directory in which the Communications Express package is installed. It is the directory path entered for Communications Express in the Install Directories panel of the JES installer.

4. Then type

`./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 version does not support the Silent installation mode.

---



5. The configuration wizard appears. 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 panel to view its contents properly.

---

- a. Welcome.

The first panel in the configure program is a copyright page. Select Next to continue or Cancel to exit.

- b. Select the Directory to Store Configuration and Data Files.

Select the directory where you want Communications Express's configuration and data files to reside. For example, `/var/opt/SUNWuwc`.

---

**NOTE** The directory you enter here is the directory in which Communications Express is deployed. This directory is referred as *<uwc-deployed-path>* throughout this guide.

---

Click Next.

- c. You will see a small alert window indicating that the components are being loaded. This may take a few minutes.
- d. Select Components to be Configured.

Select the components you want to configure and uncheck those components you do not wish to configure.

- Mail Component
- Calendar Component

---

**NOTE** You have to select atleast one component from the Select Components to be Configured panel.

---

Click Next.

e. Network Connection.

The configuration program tries to establish a network connection using the host name and DNS domain name displayed in this panel.

**Host Name.** The host name on which Communication Express is being configured is displayed.

**DNS Domain Name.** Displays the DNS domain name maintained by the DNS Server.

Click Next.

f. Select the Web Container.

Select the web container you want to use from the options displayed. The options available are:

- Web Server
- App Server

Click Next.

o If you have selected Application Server to be your web container

i. The Application Server Configuration Details panel appears.

Specify the following details in the panel:

**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 Instance Name.** Enter a name for the Application Server Instance for which Communications Express is to be configured.

**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.

Click Next.

---

**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 [“To Use Communications Express in the SSL mode,”](#) in Chapter 3, [“Configuring Your System for Communications Express”](#).

---

- ii. You will see a small pop-up 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.

- iii. Application Server Administration Instance Details.

Specify the administration instance details of the Application Server. The administration instance details is used by the configurator to configure Communications Express on Application Server.

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

---

**NOTE** The Application Server’s Administration port 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 check box 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.

Click Next.

Depending on the selection, a pop-up window confirming the mode in which the application server's administration instance is running appears. Click OK to exit the pop-up window.

---

**NOTE** When deploying Communications Express on Application Server, two files, `server.xml` and `server.policy`, are modified.

Before modifying `server.xml` and `server.policy` files, a backup of these files is maintained by the configurator program. The backup files are stored in the directory

`DOMAIN-DIRECTORY/ SERVER-INSTANCE-NAME/ config/ .CommsExpress_YYYYMMDDhhmmss`

Where,

DOMAIN-DIRECTORY is 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.

---

#### IV. Module Name for this Web Application.

Enter the module name with which Communications Express should be deployed on Application Server.

Click Next.

- o If you have selected Web Server to be your web container
  - i. The Web Server Configuration Details panel is displayed.

Specify the local Web Server instance details. The web server details specified here is used by the installer to deploy Communications Express on Web Server.

**Server Root Directory.** Browse to select the installation root of the Web Server. For example, `/opt/SUNWwbsr/`

**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. This is the HTTP port from which 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 refer to the post configuration steps provided in the section [“To Use Communications Express in the SSL mode,”](#) in [Chapter 3, “Configuring Your System for Communications Express”](#).

---

Click Next.

- ii. You will see a small pop-up window indicating that the Web 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 Web Server Instance. Click Accept, to continue with the installation process or click Choose New to specify different Web Server Configuration Details.

- g. Web Container User and Group.

Specifies the identity the web container uses to run the services.

**Web Container User ID.** The web container user identifier from the user database is displayed.

**Web Container Group ID.** The web container group identifier from the group database is displayed.

Click Next.

The configurator program 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 panel. 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 panel. Entering wrong values may result in startup failure of Communications Express.

---

**h.** URI Path Setting.

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 will result in loss of the previous application's data and accessibility of the application.

---

Click Next.

**i.** Do you want Hosted Domain Support?

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

---

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

---

Click Next.

j. User/Group Directory (LDAP) Server Details.

Enter the following details:

**LdapURL.** Specify the user/group LDAP URL in the format  
`ldap://user-group-ldap-hostname:user-group-ldap-port.`

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

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

Click Next.

k. DC Tree Suffix.

Enter the base distinguished name for the DC tree suffix. This suffix will be used by Communications Express to search for configured hosted domains.

Click Next.

l. 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.

m. Enable Identity Server for Single Sign-on

To setup single sign-on with Identity Server, select Enable Identity Support for Sun Java System Communications Express.

- If you have enabled Identity Support for Sun Java System Communications Express the Identity Server Preferences panel is displayed.

Enter the Identity Server Preferences such as the login URL, Identity Server Administrator DN and Password in this panel.

**Login URL.** Specify the Identity Server Login URL in the format  
`<protocol>://<Identity server hostname>:<Identity Server port>/<context-path-of-amserver>/UI/Login.`

**Admin DN.** Enter the LDAP distinguished name of the Identity Server Administrator such as `DN=uid=amAdmin, ou=people, <Identity Server-root suffix>`

**Admin Password.** Enter the Password for the Identity Server administrator.

Click Next.

n. Messaging Express Port

This panel appears only when mail component is selected in Select Components to be Configured panel.

Enter the port number where the Messenger Express service is available.

---

**NOTE** Ensure Communications Express is deployed on the same machine on which Messenger Express is deployed.

---

Click Next.

o. Calendar HTTP Server Host and Port Configuration

This panel appears only when calendar component is selected in Select Components to be Configured panel.

**Calendar HTTP Server Host Name.** Enter the Calendar Server's host name.

**Calendar HTTP Server Port Number.** Enter the Calendar Server's HTTP port number.

Click Next.

p. Calendar Server Administration Details

This panel appears only when calendar component is selected in Select Components to be Configured panel.

**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 corresponds to the `service.admin.calmaster.userid` value mentioned in Calendar Server's `ics.conf` file.

---

Click Next.



q. PAB Directory Server Details.

The Personal Address Book LDAP Server contains the personal address book information for users.

**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

r. Ready to Configure

The configuration program will check for enough disk space on your machine and then outline the components it is ready to configure.

Click Configure Now, to configure the Communications Express.

Click Back, to change any of your configuration variables.

Click Cancel, to exit from the configuration program.

s. A summary of tasks and the sequence status is displayed.

Click Next.

t. The Configuration Summary panel lists the status of the configuration program. Click Details button to view the log.

In order to complete the configuration process, follow the post-configuration steps provided here.

# Post Configuration Instructions

---

**NOTE** Make sure you are familiar with the location of the Communications Express files.

All the Communications Express configuration files are located under `<uwc-deployed-path>/WEB-INF/config` directory. The *uwc-deploy-path* is the directory entered in “Select Directory to Store Configuration and Data files” panel of the configurator tool.

Refer to [Chapter 3, “Configuring Your System for Communications Express,”](#) and [Chapter 7, “Configuring the Client,”](#) of this guide for details on configuration parameters.

---

After you have configured Communications Express, perform the following steps

1. If you have enabled Identity Server for Communications Express, refer to [Chapter 5, “Deploying Communications Express and Identity Server,”](#) for configuration steps to be performed to enable proper operation of Identity Server with Communications Express.
2. To enable the Mail component in Communications Express, configure SSO. Refer to [Chapter 4, “Implementing Single Sign-On,”](#) for information on configuring Messaging Express and Communications Express.
3. Customize the user’s default view after logging in. By default, Address Book is configured to be the user’s default view. You can configure the default view to Calendar or Mail by editing the parameter `uwc-user-attr-sunUCDefaultApplication` in `uwcdomainconfig.properties` file. For information on `uwc-user-attr-sunUCDefaultApplication` parameter refer to the section on [“Configuring Parameters in uwcdomainconfig.properties file”](#).
4. Go to `<calendar-server-install-directory>/SUNWics5/cal/bin/config` (e.g. `/opt/SUNWics5/cal/bin/config`).

Edit the `ics.conf` file and set the following:

- o `service.http.allowadminproxy = "yes"`
- o `service.http.admins = <proxy admin for calendar http service>`
- o `service.admin.calmaster.userid = <the value specified for calendar.wcap.adminid in uwccconfig.properties>`

- o `service.admin.calmaster.cred = <the value specified for calendar.wcap.passwd in uwccconfig.properties>`
  - o `service.wcap.anonymous.allowpubliccalendarwrite = "yes"`
  - o `service.http.allowanonymouslogin = "yes"`
  - o `service.calendarsearch.ldap = "no"`
5. If you have edited the `ics.conf` file, restart Calendar Server for the changes to take effect.
  6. Restart Web Server, if Web Server was selected as the web container.
  7. Restart the Application Server, if you have selected Application Server as the web container and enabled Identity Server for Communications Express.
  8. Communications Express is now ready and you can access the application from:

`http://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 application is configured

*URI path* is the path specified in the URI Path Setting panel.

## Unconfiguring Communications Express

Perform the following steps if you have configured Communications Express on Web Server or Application Server and feel the need to unconfigure Communications Express:

- To unconfigure Communications Express from Web Server, use the `wdeploy` tool of the Web Server. Refer to the *Web Server Administration Guide* for steps on how to run the `wdeploy` tool.
- To unconfigure Communications Express from Application Server, use the `asadmin` tool of the Application Server. Refer to the *Application Server Administration Guide* for steps on how to run the `asadmin` tool.

# Installing Communications Express without Messaging Server and using a Single Tree Structure

If you are installing Communications Express on a setup on which the Messaging Server is not installed or configured and uses a single tree namespace structure for retrieving user/group entries, you need to map the existing DIT to the dual tree namespace to retrieve user/group entries.

The sections below describes how Communications Express uses the two DIT tree mechanism and how an existing single tree namespace structure maps to the dual tree name space.

## Two Tree Names Space Mechanism

The namespace of Communications Express should consist of two directory information trees (DIT), an Organization Tree and a Domain Component Tree (DC Tree). Organization Trees contain the user and group entries. The DC Tree mirrors the local DNS structure and is used by the system as an index to the Organization Tree(s) containing the data entries. The DC Tree also contains the domain's operating parameters such as the service specific attributes.

### *How the Two-tree Namespace Mechanism Works*

This section describes how Communications Express uses the two-DIT mechanism.

When Communications Express searches for user/group entries, it first looks at the user/group's domain node in the DC Tree and extracts the value of the `inetDomainBaseDN` attribute. This attribute holds a DN reference to the organization subtree containing the actual user/group entry.

Using this model, Communications Express can support entries stored in any type of directory Tree, provided that a domain component node in the DC Tree points to the node in the Organization Tree under which the users for that domain can be found.

### *Why Two Directory Information Trees?*

This dual-tree mechanism provides the following enhancements:

- The partitioning of data for organization-specific access control. That is, each organization can have a separate subtree in the DIT where user and group entries are located. Access to that data can be limited to users in that part of the subtree.

- The ability to have a distinct namespace for subdomains. For example, `west.siroe.com` and `siroe.com` may be mapped to separate organization subtrees allowing the creation of user entries with the same UID in each one of them.

*How to map an existing DIT to the dual tree namespace?*

Assuming that the root suffix for Organization tree is: `o=isp`

Assuming that the Organization DN that is currently being used is

`o=siroe.com,o=isp` and the user container is `ou=People,o=siroe.com,o=isp`

1. Create a root suffix, `o=internet` for DC tree.

The root suffix can be created using the Directory Server console.

2. Under this DC tree root suffix, create a domain entry with DN as

`dc=siroe,dc=com,o=internet.`

Use the following LDIFs to create the domain entry using the `ldapmodify` command:

---

**NOTE** Please change the Organization root, Organization Name, Organization DN, Object Classes and Attribute values mentioned in the LDIF files to reflect your deployment details.

---

```
root suffix
Organization root suffix: o=isp
Organization name: siroe
DNS domain name: siroe.com
Organization DN: o=siroe.com,o=isp
```

The following Object Classes and attributes are used by mail service:

```
ObjectClasses:
mailDomain, nsManagedDomain

Attributes:
mailDomainStatus, preferredMailHost, mailDomainDiskQuota,
mailDomainMsgQuota

mailDomainReportAddress, nsMaxDomains, nsNumUsers, nsNumDomains,
nsNumMailLists
```

---

**NOTE** Remove mail service ObjectClasses and Attributes from the LDIFs if you do not wish to use them.

Ensure that the value of `inetDomainBaseDN` attribute in the LDIF is assigned the organization DN.

---

## Examples of LDIF File

**Table 1-1** LDIF File 1

```
dn: dc=com,o=internet
dc: com
objectclass: top
objectclass: domain
```

**Table 1-2** LDIF File 2

```

dn: dc=com,o=internet
dc: com
objectclass: top
objectclass: domain
dn: dc=siroe,dc=com,o=internet
objectClass: top
objectClass: domain
objectClass: inetDomain
objectClass: mailDomain
objectClass: nsManagedDomain
dc: siroe
aci:
(targetattr="icsTimeZone||icsMandatorySubscribed||icsMandatoryView||icsDefaultAccess||icsRecurrenceBound||icsRecurrenceDate||icsAnonymousLogin||icsAnonymousAllowWrite||icsAnonymousCalendar||icsAnonymousSet||icsAnonymousDefaultSet||icsSessionTimeout||icsAllowRights||icsExtended||icsExtendedDomainPrefs")(targetfilter=(objectClass=icsCalendarDomain))(version 3.0; acl "Domain Administrator access - product=ims5.0,class=nda,num=16,version=1"; allow (all) groupdn="ldap:///cn=Domain Administrators,ou=Groups,o=siroe.com,o=isp";
description: DC node for siroe.com hosted domain
inetDomainBaseDN: o=siroe.com,o=isp
inetDomainStatus: active
mailDomainStatus: active
preferredMailHost: mailhost.siroe.com
mailDomainDiskQuota: -1
mailDomainMsgQuota: -1
mailDomainReportAddress: postmaster@siroe.com
nsMaxDomains: 1
nsNumUsers: 1

```



**LDIF File 2 .....Continued**

```
nsNumDomains: 1
nsNumMailLists: 0
```

Use `ldapmodify` command to add the LDIF file entries to the DC tree



# Overview of Communications Express

Sun Java™ System Communications Express 6 2004Q2 provides an integrated web-based communication and collaboration client that caters to the needs of Internet Service Providers, Enterprises, and Original Equipment Manufacturers.

As a web-based client, the three client modules - Calendar, Address Book and Mail of Communications Express depends on a web server for access and a browser for presentation.

## Product Features

- Communications Express has an integrated user interface for calendar, mail, and address book and enables the access of one client module from another without re-authenticating user credentials.
- Communication between mail and calendar is established using Identity or Messaging Single sign-on mechanism.
- Both calendar and mail applications share the same address book.
- All modules share the common user preferences specified in the Options tab of Communications Express.

This chapter contains the following sections:

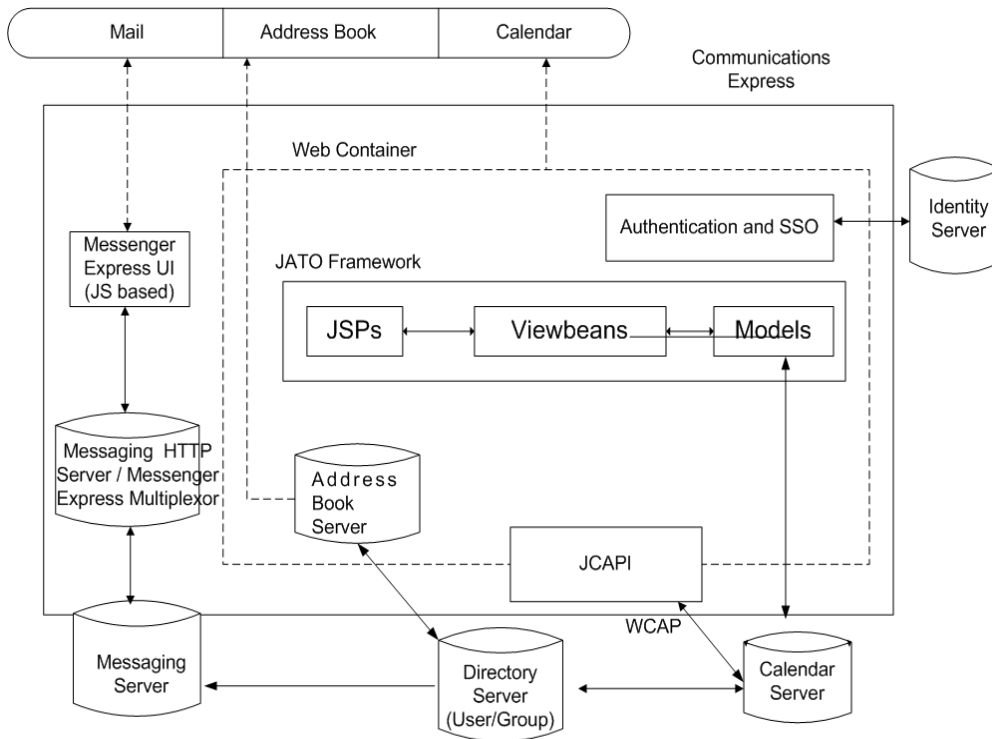
- [High-Level Architecture](#)
- [Overview of the Request Flow](#)
- [Initialization](#)
  - [Application Initialization](#)

- User Session Based Initialization
- Module Level Initialization

## High-Level Architecture

The Calendar and Address Book client modules are deployed as a single application on any web container and are collectively referred to as the unified web client (UWC) throughout this guide.

**Figure 2-1** High Level Architecture



Messenger Express is the standalone web interface mail application that uses the HTTP service of the Messaging Server. Messenger Express should be deployed on the same system as the Calendar and Address Book modules. Messenger Express is the standalone web interface mail application that uses the HTTP service of the Messaging Server. Messenger Express should be deployed on the same system as the Calendar and Address Book modules.

UWC is based on JATO, the Sun ONE Application Framework. It requires a J2EE compliant web server to serve HTTP requests made to access UWC.

Every user request passes through a dedicated application controller servlet which delegates the request to the appropriate communication client module, such as mail, calendar, or address book. Before delegating a request, the application servlet checks for the presence of a valid HTTP session for the browser client attempting to access UWC. In the absence of a valid HTTP session the controller servlet directs the request flow through the authentication process.

The authentication process is handled by a set of web filters and an authentication servlet.

- **Identity Server SSO Filter.** It checks for established sessions with Sun Java System Identity Server using the Identity Server's Single Sign-On mechanism. If a valid Identity Server session is found, the filter creates an HTTP Session for UWC and passes the control to other filters in the chain. Otherwise, the control is transferred without creating a session.
- **Messaging SSO Filter.** It checks for established sessions with peer Sun Java System applications for example, Portal Server or stand alone Messenger Express participating in Messaging SSO mechanism.
  - If the Identity Server SSO filter has already created a session for UWC, this filter passes the control seamlessly to the rest of the filters.
  - If no session is created by the Identity Server SSO filter, this filter checks for an established Messaging SSO session. If it finds a valid session, it creates an HTTP session for UWC and then forwards the control to the next web filter.
- **LDAP Auth Filter.** This filter is used to support applications supporting Sun ONE LDAP Schema, v1 and when both Identity Server SSO and Messaging SSO filters have not been able to create a successful HTTP session. The filter uses the username and password to validate the credentials against the authentication LDAP configured for UWC. Once the credentials are authenticated it creates an HTTP session and transfers the request to the next filter.

- **Anonymous Access Filter.** In the absence of a valid session, this filter checks for the presence of a URL in the format `http://host:port/?calid=calid`. The presence of a URL in this format indicates an anonymous access.
- **Authentication Servlet.** The Authentication Servlet determines whether any of the web filters could create a successful HTTP session for UWC. If the Servlet does not find a valid session, it directs the request to a login page for the user to enter the user name and password. If Identity Server is enabled in UWC, the UWC login page is displayed.

The credentials entered in the Identity Server login page are authenticated by the Identity Server using one of the configured services. For example, LDAP services.

The credentials submitted via the Communications Express login page are authenticated against the authentication LDAP configured for UWC.

After the credentials are submitted and authenticated, the request is again routed through the filters to obtain a valid HTTP session for UWC.

Once the Authentication Servlet determines the presence of a valid session it redirects the request to the application controller that displays the requested client module.

Sun Java System Communications Express comprises of the following three modules:

- **Mail.** The Mail architecture uses Javascript to present the user interface and interacts with Sun Java System Messaging Server over HTTP protocol to fetch the data.
- **Calendar.** The presentation layer in the Calendar module is based on Sun ONE Application Framework. The data layer accesses a Java API for Calendar (JCAPI) to enable exchange of data with Sun Java System Calendar Server over HTTP based protocol.
- **Address Book.** The Address Book architecture uses XML/XSLT for the presentation layer and LDAP for data storage. Data storage is accessed using LDAP SDK API.

Each client module is further defined as a Sun ONE Application framework module, which is handled by the module specific controller servlets.

The JATO modules defined for UWC are:

- **Base Level Module.** All application-wide tasks such as views for options and application-level initialization are handled by the base level module. The controller servlet for this module is `UWCServletBase` and it handles all requests for the URI “base.” All other module’s controller servlets inherit from this servlet.
- **Calendar Module.** All views and models belonging to the calendar application are handled by this module. The controller servlet for this module is `CalModuleServlet` and it handles all requests for the URI “calclient.”
- **Mail Module.** All views and models belonging to the mail application are handled by this module. The controller servlet for this module is `MailModuleServlet` and it handles all requests for the URI “mailclient.”
- **Address Book Module.** All views and models belonging to the address book application are handled by this module. The controller servlet for this module is `ABModuleServlet` and it handles all requests for the URI “abclient.”

## Overview of the Request Flow

A request to UWC can initiate the following phases:

1. **Authentication.** In this phase a user session is created by the web filters.
2. **Session Creation.** Once a user session is created, the following actions are performed to enable the application for the rest of the user session:
  - a. **Initialization.** During this phase, the information is read and the required objects cached.

The scope of information cached for UWC are:

    - [Application Initialization](#)
    - [User Session Based Initialization](#)
    - [Module Level Initialization](#)
  - b. **Redirection.** After initialization, the request is forwarded to the default application specified in global user preferences.
3. **UI Rendering.** During this phase, a completed request outputs the resultant page for display.
4. **Request Forwarding (submission).** In this phase, server-level validations are performed on the data entered and submitted by users. Based on the success or failure of the validation, the request is forwarded to the appropriate target.

5. **Error Handling.** In the event of an error or an exception, an error page pertaining to the request is displayed.
6. **Anonymous Access.** Anonymous calendars provide a limited “read only” access to the calendar being viewed. The anonymous calendar displays only the events list, day, week, month, and year views. Contents of the mail, address book, and options tab cannot be viewed in an anonymous access.

## Initialization

UWC refers to a number of objects that are shared throughout the application during a user session. These objects are initialized either when a new user session is created or when the application is started. Initialization can be categorized into:

- [Application Initialization](#)
- [User Session Based Initialization](#)
- [Module Level Initialization](#)

### Application Initialization

All application-wide objects are cached in the application scope.

1. **Authentication and Application Configuration.** Authentication and application configuration parameters are present in `uwcauth.properties` and `uwconfig.properties` under `WEB-INF/config` directory. Application configuration details are loaded when the application is started. Authentication parameters are used when UWC is accessed for the first time.
2. **Domain Configuration.** Domain configuration is stored in the user’s domain LDAP entry and in `uwcdomainconfig.properties` file. Each defined domain for UWC is read and stored. The application then obtains the domain configuration details from the cache instead of reading it from LDAP every time.
3. **Resource Bundle Caching.** All i18n strings, image paths, and other items that are localizable and customizable are read once and cached.
4. **LDAP Pool.** A connection pool for the user/group LDAP is created when the application is started. The pool is destroyed when the application is stopped.

### User Session Based Initialization

The following are initialized for a new user session:



1. **User Preferences.** The User's global preferences are read from the LDAP user entry and stored in the scope of the session.
2. **Mail and Calendar Active Status.** The mail and calendar modules's service availability status is computed and stored within the scope of the session. This information is later used by the UI to determine whether the mail or calendar application should be displayed.

## Module Level Initialization

Module level initializations are performed when a request is made specifically to a module's Uniform Resource Identifier (URI).

Calendar Store, Calendar Preferences, and Calendar data Objects are examples of module level initializations for the calendar module of a user.



# Configuring Your System for Communications Express

This chapter describes the system requirements and system configuration details for Communications Express.

## System Requirements

This section describes the following:

- [Hardware](#)
- [Browser](#)
- [Platforms](#)
- [Software Dependencies](#)
- [Editing the Properties file](#)
- [Configuring Mail, Calendar and Address Book Parameters](#)

## Hardware

Before installing Sun Java™ System Communications Express, you must ensure you have met the minimum hardware and operating system requirements.

A JavaScript enabled browser is required to access Sun Java System Communications Express.

## Browser

The Communications Express can be viewed using:

- Netscape™ Communicator 6.2.x, 7
- Internet Explorer 5.x, 6.0
- Mozilla™ 1.0 or higher

## Platforms

The product is supported on following platforms:

- Solaris 9 on Sparc with Webserver 6.1 and Application Server 7.0
- Solaris 9 on X86 with Webserver 6.1 and Application Server 7.0

For optimal performance, use the browser and platform combinations listed in [Table 3-1](#).

**Table 3-1** Browser Platform Recommendations

| Browsers               | Solaris on Sparc | Solaris on x86 | Linux on x86 | Windows XP | Windows 98 |
|------------------------|------------------|----------------|--------------|------------|------------|
| Netscape™ Communicator | 6.2.x, 7.x       | 6.2.x, 7.x     | 6.2.x, 7.x   | 6.2.x, 7.x | 6.2.x, 7.x |
| Internet Explorer      | NA               | NA             | NA           | 6.0, 5.5   | 6.0, 5.5   |
| Mozilla™               | 1.0              | 1.0            | 1.0          | 1.0        | 1.0        |

## Software Dependencies

The following should be installed before installing Communications Express:

- Directory Server 5.2
- Calendar Sever 6.1
- Messaging Server 6.1
- Identity Server 6.2 (if you are using Schema 2)

- Web Server 6.1 SP2 with JDK version 1.4.2
- or
- Application Server 7.0

## Editing the Properties file

Communication Express maintains the configuration parameters in the following files:

1. The `uwcauth.properties` file maintains the authentication, user/group access and single sign-on related parameters. The `uwcauth.properties` file is located at: `<uwc-deployed-path>/WEB-INF/config/`
2. The `uwconfig.properties` file maintains the calendar, mail and address book related configuration parameters. The `uwconfig.properties` file is located at: `<uwc-deployed-path>/WEB-INF/config/`
3. The `db_config.properties` file is used to define the address book store configuration details. By default Communications Express deploys two types of `db_config.properties` file.
  - a. **Personal address book store.** The personal address book store configuration file resides under `<uwc-deployed-path>/WEB-INF/config/ldapstore/db_config.properties`.
  - b. **Corporate address book store.** The Corporate address book store configuration file resides under `<uwc-deployed-path>/WEB-INF/config/corp-dir/db_config.properties`

All configuration files are ASCII text files, with each line defining a parameter and its associated value in the following format:

```
<parameter>=<value>
```

The parameters are initialized when configuring Communications Express. After installation, you can edit the file using a text editor.

### ► To Edit the Properties file

1. Login as a user having modify permissions.
2. Change to the directory where the `.properties` file is located.
3. Edit the parameters using a text editor.

Conventions for parameters are:

- All parameters and their associated value(s) must be separated by an equal sign (=). Spaces or tabs are allowed before or after the equal sign.

For example:

```
uwc-user-attr-sunUCDefaultApplication=calendar
```

- A comment line begins with an exclamation point(!).

Some of the configuration parameters are commented out using exclamation points by default. To use these parameters, you must remove the exclamation point, change the value (if required), and restart the Web Server for the parameters to take effect.

4. Restart the Web Server for the new configuration values to take effect.

## Configuring Mail, Calendar and Address Book Parameters

You can modify calendar, mail, and address book configuration parameters as explained in the following tables.

- [Configuring the Application-Wide Parameters in uwconfig.properties and uwcauth.properties File](#)
- [Configuring the Mail Server Parameters in uwconfig.properties File](#)
- [Configuring LDAP Auth Filter Parameters for Sun Java System LDAP Schema v.1 in uwcauth.properties File](#)
- [Configuring Identity Server Parameters in uwcauth.properties File](#)
- [Configuring User Lookup Parameters for User/Group in uwcauth.properties File](#)
- [Configuring the Calendar Server Parameters in uwconfig.properties File](#)
- [Configuring the Address Book Personal Store Parameters in db\\_config.properties file](#)
- [Configuring Corporate Directory Parameters db\\_config.properties File](#)
- [Configuring Secure Socket Layer \(SSL\)](#)

Refer to [Chapter 4, “Implementing Single Sign-On,”](#) for more mail, calendar and address book configurable parameters.

## Configuring the Application-Wide Parameters in uwccfg.properties and uwcauth.properties File

**Table 3-2** Configuring Application-Wide Parameters in uwccfg.properties

| Parameters          | Default Value | Description                                                                                                                           |
|---------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------|
| uwc.defaultskin     | uwc           | Specifies the name of the global theme to be used for the application.                                                                |
| uwc.gzipcompression | true          | Enables GZIP compression of the web-page contents.<br><br>Set this value to true to enable GZIP compression of the web-page contents. |

**Table 3-3** Configuring Application-Wide Parameters in uwcauth.properties

| Parameters         | Default Value | Description                                                                                                                                                                                                                                                      |
|--------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| defaultdomain      |               | Specifies the default domain to be used for a user logging in without a domain suffix.<br><br>The <code>defaultdomain</code> is assigned the value entered during configuration.                                                                                 |
| defaultlocal       | en            | Specifies the default locale to be used by the application.                                                                                                                                                                                                      |
| virtualdomain.mode |               | Specifies if Communications Express is operating in virtual domain mode.<br><br>Enable this option if you have enabled hosted domain support for Calendar Server.<br><br>The <code>virtualdomain.mode</code> is assigned the value entered during configuration. |

## Configuring the Mail Server Parameters in uwccconfig.properties File

**Table 3-4** Mail Server Parameters

| Parameter     | Default Value | Description                                                                                                                                                                                     |
|---------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mail.deployed |               | Specifies whether Messenger Express is deployed. The parameter is set when you run the configuration wizard.<br><br>The attribute is set to “true” if Messenger Express is deployed.            |
| webmail.host  |               | Specifies the host name of the machine on which Messenger Express is deployed.<br><br>The host name of Messenger Express should correspond to the machine name on which Web Server is deployed. |
| webmail.port  |               | Specifies the port number Messenger Express HTTP Server listens to.                                                                                                                             |

## Configuring LDAP Auth Filter Parameters for Sun Java System LDAP Schema v.1 in uwcauth.properties File

You may edit the parameters mentioned in [Table 3-5](#) when the Authentication LDAP Server is different from the User/Group LDAP.

**Table 3-5** LDAP Auth Filter Parameters

| Parameter         | Default Value | Description                                                                                                                                                              |
|-------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ldapauth.ldaphost |               | Specifies the LDAP host value.<br><br>Frequently the ldapauth.ldaphost value is the same as the ldapusersession value. You can set it to a different value, if required. |
| ldapauth.ldapport |               | Specifies the ldap port number.                                                                                                                                          |
| ldapauth.dcroot   |               | Specifies the DC root for the authentication tree.                                                                                                                       |



**Table 3-5** LDAP Auth Filter Parameters (*Continued*)

| Parameter             | Default Value                                                                                 | Description                                                                                                                                                                  |
|-----------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ldapauth.domainattr   | inetDomainBaseDN,inetDomainStatus,inetDomainSearchFilter,domainUidSeparator,preferredLanguage | Specifies the list of attributes to be retrieved from the domain entry in which the user is authenticated.                                                                   |
| ldapauth.domainfilter | ( (objectclass=inetDomain)(objectclass=inetDomainAlias))                                      | Specifies the filter based on which the domain entry is retrieved.                                                                                                           |
| ldapauth.ldapbinddn   |                                                                                               | Specifies User DN of the user binding to the authentication LDAP.                                                                                                            |
| ldapauth.ldapbindcred |                                                                                               | Specifies Password of the user binding to the authentication LDAP.                                                                                                           |
| ldapauth.enablessl    | false                                                                                         | Specifies whether the directory against which authentication is to be performed is in SSL mode.<br><br>Change the default value to "true" to setup a secure LDAP connection. |

**Table 3-6** LDAP User Group Parameters

| Parameters                 | Default Value | Description                                                                   |
|----------------------------|---------------|-------------------------------------------------------------------------------|
| ldapusersession.ldaphost   |               | Specifies the hostname of the user group directory server.                    |
| ldapusersession.ldapport   |               | Specifies the port number of the user/group directory server.                 |
| ldapusersession.ldapbinddn |               | Specifies the UserDN of the admin binding to the user group Directory Server. |

**Table 3-6** LDAP User Group Parameters (*Continued*)

| Parameters                   | Default Value | Description                                                                                                                              |
|------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------|
| ldapusersession.ldapbindcred |               | Specifies the password of the admin binding to the user tree.                                                                            |
| ldapusersession.dcroot       |               | Specifies the Domain Component (DC) tree in the user/group LDAP that is used to resolve a user entry in Sun Java System LDAP Schema v.1. |

## Configuring Identity Server Parameters in uwcauth.properties File

**Table 3-7** Identity Server Parameters

| Parameter                   | Default Value | Description                                                                                                                                                  |
|-----------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| uwcauth.identity.enabled    | true          | Specifies whether Identity Sever is enabled.<br><br>The attribute is set to “true” if Identity Server’s single sign-on mechanism is used for authentication. |
| uwcauth.identity.naming.url |               | Specifies the Identity Server naming URL<br><br>For Example,<br>uwcauth.identity.naming.url=<br><i>protocol://hostname:port</i><br><i>Context URI</i>        |
| uwcauth.identity.binddn     |               | Specifies the complete Distinguished Name (DN) of the amAdmin user.<br><br>For example,<br><br>uid=amadmin, ou=People, o=siroe.com                           |
| uwcauth.identity.bindcred   |               | Specifies the amAdmin password.                                                                                                                              |

---

**NOTE** It is mandatory to configure `uwcauth.identity.naming.url`, `uwcauth.identity.binddn`, `uwcauth.identity.bindcred` when `uwcauth.identity.enabled` value is set to “true.”

---

## Configuring User Lookup Parameters for User/Group in `uwcauth.properties` File

**Table 3-8** User Lookup Parameters

| Parameter                                    | Default Value           | Description                                                                                                                                                     |
|----------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>ldapusersession.defaultugfilter</code> | <code>uid@domain</code> | Specifies the default filter syntax to be used when retrieving the user entry.                                                                                  |
| <code>ldapusersession.ldapoolmin</code>      | 30                      | Specifies the minimum number of LDAP user connections to be created for a user/group LDAP.                                                                      |
| <code>ldapusersession.ldapoolmax</code>      | 100                     | Specifies the maximum number of LDAP user connections to be created for a user/group LDAP.<br><br>Enter an optimum value to suit your deployment's requirement. |
| <code>ldapusersession.lookthru_limit</code>  | 1000                    | Specifies the search query limit for a search.                                                                                                                  |

---

## Configuring the Calendar Server Parameters in uwccconfig.properties File

---

**NOTE** Ensure that Proxy Authentication and Anonymous Access is enabled in Sun Java™ System Calendar Server.

To enable Proxy Authentication and Anonymous Access, configure the following Calendar Server parameters in the calendar configuration, `ics.config`, file:

- `service.http.allowadminproxy = "yes"`
- `service.http.admins = <includes the value specified for calendar.wcap.adminid in uwccconfig.properties>`
- `service.admin.calmaster.userid = <the value specified for calendar.wcap.adminid in uwccconfig.properties>`
- `service.admin.calmaster.cred = <the value specified for calendar.wcap.passwd in uwccconfig.properties>`
- `service.wcap.anonymous.allowpubliccalendarwrite = "yes"`
- `service.http.allowanonymouslogin = "yes"`
- `service.calendarsearch.ldap = "no"`

For more information on enabling Proxy Authentication and instructions on configuring the Calendar Server parameters, refer to *Sun Java System Calendar Server Administration Guide* at <http://docs.sun.com/doc/817-5697-10>

---

**Table 3-9** Calendar Server Parameters

| Parameter                       | Default Value | Description                                                                                                                                                                   |
|---------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>calendar.deployed</code>  | true          | Specifies whether the calendar module is deployed. The parameter is set when you run the configuration wizard.<br><br>The attribute is set to "true" if Calendar is deployed. |
| <code>calendar.wcap.host</code> |               | Specifies the host name of the WCAP server.                                                                                                                                   |

---

**Table 3-9** Calendar Server Parameters

| Parameter                          | Default Value | Description                                       |
|------------------------------------|---------------|---------------------------------------------------|
| <code>calendar.wcap.port</code>    |               | Specifies the port number WCAP listens to.        |
| <code>calendar.wcap.adminid</code> |               | Specifies the Admin ID for the WCAP Sever.        |
| <code>calendar.wcap.passwd</code>  |               | Specifies the Admin Password for the WCAP Server. |

- NOTE**
- Ensure that the Calendar Admin User ID value you have assigned to `calendar.wcap.adminid` is the same as the `service.admin.calmaster.userid` value mentioned in Calendar Server's `ics.conf` file.
  - The Calendar Admin User ID value should be in the format "uid@domain" if calendar is running in the hosted domains (or virtual domains) enabled mode. Otherwise, if calendar is running in hosted domains disabled (or non virtual domains) mode, the Calendar Admin User ID value should be in the format `uid`.
  - Ensure that the corresponding user entry for Calendar Admin User ID exists on LDAP server.

### Configuring the Address Book Personal Store Parameters in `db_config.properties` file

**Table 3-10** lists the default Address Book personal store configuration parameters in `db_config.properties` file.

The file can be accessed from:

`<uwc-deployed-path>/WEB-INF/config/ldapstore/`

**Table 3-10** Personal Address Book Personal Store Parameters

| Parameter                  | Default Value | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| defaultserver.ldaphost     |               | Specifies the LDAP host for the Personal Address Book (PAB) Store.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| defaultserver.ldapport     |               | Specifies the port for the Store.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| defaultserver.ldapbinddn   |               | Specifies the DN used to bind to the PAB Store.<br><br>It is mandatory to enter this value if the login type is restricted or proxy.<br><br>If the login type is “anonymous” you need not enter a value for this parameter.                                                                                                                                                                                                                                                                                                                                                                                                   |
| defaultserver.ldapbindcred |               | Specifies the password for the DN used to bind to the PAB Store.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| login_type                 | restricted    | Specifies the method using which the connection to the LDAP store is maintained.<br><br>You can assign the following three values to this parameter:<br><br><b>anon</b> - to connect to the LDAP as an anonymous user<br><br><b>restricted</b> - to connect as a user who has the rights to perform operations on the Address Book Store.<br><br><b>proxy</b> - to masquerade as a user who can perform operations on the Address Book Store. Assigning this value enhances performance as it bypasses the LDAP bind on each operation.<br><br>NOTE: It is recommended that the user masquerading here have admin level ACLs. |
| defaultserver.ldappoolmin  | 4             | Specifies the minimum number of LDAP client connections maintained for PAB Store.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**Table 3-10** Personal Address Book Personal Store Parameters *(Continued)*

| Parameter                     | Default Value | Description                                                                                                                    |
|-------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------|
| defaultserver.ldappoolmax     | 12            | Specifies the maximum number of LDAP client connections maintained for PAB Store.                                              |
| defaultserver.ldappooltimeout | 10            | Specifies the number of seconds before timing out an LDAP connection. Increase this value to accommodate large search results. |
| lookthru_limit                | 1000          | Specifies the search query limit for a search.                                                                                 |

## Configuring Corporate Directory Parameters db\_config.properties File

**Table 3-11** lists the default corporate directory parameters in `db_config.properties` file. By default, all the LDAP related information is set based on the values mentioned for user/group directory.

The `db_config.properties` file can be accessed from:

`WEB-INF/config/corp-dir/`

**Table 3-11** Corporate Directory Parameters

| Parameter                  | Default Value | Description                                                                                                                                                                                                                                              |
|----------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| defaultserver.ldaphost     |               | Specifies the LDAP host for the Corporate Directory.                                                                                                                                                                                                     |
| defaultserver.ldapport     |               | Specifies the Port for the Corporate Directory.                                                                                                                                                                                                          |
| defaultserver.ldapbinddn   |               | Specifies the DN used to bind to the Corporate Directory.<br><br>if the login type is restricted or proxy it is mandatory to assign a value to defaultserver.ldapbinddn. If the login type is "anonymous" you need not enter a value for this parameter. |
| defaultserver.ldapbindcred |               | Specifies the bind password.                                                                                                                                                                                                                             |

**Table 3-11** Corporate Directory Parameters *(Continued)*

| Parameter                     | Default Value | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| entry_id                      | uid           | <p>Specifies the key in corporate directory used to identify a contact/group entry.</p> <p>You can set the entry_id to the UID or a key used to fetch the contact/group information such as empid or principal ID.</p> <p>In the <code>xlate-inetorgperson.xml</code> file replace “uid” in <code>&lt;entry entryID= “db:uid”&gt;</code> with the entry_id value specified here.</p>                                                                                                                                                                                                                             |
| login_type                    | restricted    | <p>Specifies the method using which the connection to the LDAP store is maintained.</p> <p>You can assign the following three values to this parameter:</p> <p><b>anon</b> - to connect to the LDAP as an anonymous user</p> <p><b>restricted</b> - to connect as a user who has the rights to perform operations on the Address Book Store.</p> <p><b>proxy</b> - to masquerade as a user who can perform operations on the Address Book Store. Assigning this value enhances performance as it by passes the LDAP bind on each operation.</p> <p>NOTE: A Read only access is given to a masquerading user.</p> |
| defaultserver.ldappoolmin     | 1             | Specifies the minimum number of LDAP client connections maintained for Corporate Directory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| defaultserver.ldappoolmax     | 4             | Specifies the maximum number of LDAP client connections maintained for Corporate Directory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| defaultserver.ldappooltimeout | 10            | Specifies the number of seconds before timing out an LDAP connection. Increase this value to accommodate large search results.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |



**Table 3-11** Corporate Directory Parameters (*Continued*)

| Parameter      | Default Value | Description                                    |
|----------------|---------------|------------------------------------------------|
| lookthru_limit | 1000          | Specifies the search query limit for a search. |

Corporate Directory maintains two `xlate` files in the format `xlate-<objectclass-name>.xml`.

- `xlate-inetorgperson.xml` for contacts
- `xlate-groupofuniquemembers.xml` for groups

In `xlate-<objectclass-name>.xml`, `<objectclass-name>` represents the object class identifying a particular LDAP entry type. For example, `xlate-inetorgperson.xml` is an object class used to identify a contact, and `groupofuniquemembers` is an object class used to identify a group in Sun Java System Directory Server.

The `xlate` files contains the field mappings between an LDAP schema and address book XML schema for a contact or group. The mapping is defined in terms of XML nodes. For example,

```
<ab-xml-schema-key>db:LDAPField</ab-xml-schema-key>
```

Where, `ab-xml-schema-field` is the value address book uses in the code and `LDAPField` is the corresponding field name in LDAP.

You need to provide an appropriate field name for `LDAPField`. The value assigned to `LDAPField` should correspond to the value of `LDAPField` existing in your corporate directory LDAP schema.

[Code Example 3-1](#) is an example of `xlate-inetorgperson.xml` file:

**Code Example 3-1** Default Contents of xlate-intro person

```
<abperson uid="db:uid">
 <entry entryID="db:uid">
 <displayname>db:cn</displayname>
 <description>db:multilineDescription</description>
 <creationdate>db:createtimestamp</creationdate>
 <lastmodifieddate>db:modifytimestamp</lastmodifieddate>
 </entry>
 <person>
 <givenname>db:givenname</givenname>
 <surname>db:sn</surname>
 </person>
 <organization>
 <company>db:company</company>
 <organizationalunit>db:ou</organizationalunit>
 <location>
 <building>db:buildingnum</building>
 <floor>db:iplanetbuildinglev</floor>
 <office>db:roomNumber</office>
 </location>
 <title>db:title</title>
 <manager>db:manager</manager>
 <secretary>db:secretary</secretary>
 </organization>
 <phone priority="1" type="work">db:telephoneNumber</phone>
 <phone priority="2" type="fax">db:facsimileTelephoneNumber</phone>
```

```

<phone priority="3" type="mobile">db:mobile</phone>
<phone priority="4" type="home">db:homePhone</phone>
<phone priority="5" type="pager">db:pager</phone>
<email priority="1" type="work">db:mail</email>
<im priority="1" service="SunONE">db:uid</im>
<im priority="2" service="AIM">db:aimscreenname</im>
<im priority="3" service="ICQ">db:icqnumber</im>
<postaladdress type="home">
 <street>db:homePostalAddress</street>
</postaladdress>
<postaladdress type="work">
 <street>db:postaladdress</street>
</postaladdress>
<weblink priority="1">
 <urladdr>db:labeleduri</urladdr>
 <description>URL</description>
</weblink>
<weblink priority="2">
 <urladdr>db:homepage</urladdr>
 <description>Home URL</description>
</weblink>
<calendar type="calendar">
 <urladdr>db:caluri</urladdr>
</calendar>
</abperson>

```

## Configuring Secure Socket Layer (SSL)

You can configure the Web Server on which Communications Express is deployed in SSL mode. For information on how to configure the Web Server on which Communications Express is deployed in SSL mode, refer to *SunONE Web Server Administrator's Configuration File Reference* at [http://docs.sun.com/db/coll/S1\\_websvr61\\_en](http://docs.sun.com/db/coll/S1_websvr61_en)

### ► To Use Communications Express in the SSL mode

1. Edit the following configuration parameters in `<uwc-deployed-path>/WEB-INF/config/uwcauth.properties`:
  - `uwcauth.ssl.enable=true`
  - `uwcauth.https.port=SSL-port-number-of-the-webserver-in-which-uwc-is-deployed`

Communications Express can also be configured for SSL, for authentication only. Implied, authentication can be performed over SSL, but access of the application thereafter is over non-SSL mode.

### ► To Configure Communications Express for SSL for Authentication Only

1. Set `uwcauth.ssl.enable` to “false” in `uwcauth.properties` file.
2. Set `uwcauth.https.port` to the SSL port number of the Web Server in which Communications Express is deployed.
3. Set `uwcauth.ssl.authonly` to “true.”

---

**NOTE**      The two parameters, `uwcauth.ssl.authonly` and `uwcauth.ssl.enable` are mutually exclusive parameters.

---

# Implementing Single Sign-On

Single Sign-On allows an end user to authenticate once and use multiple applications without re-authenticating. For example, you can login to Communications Express and use the mail applications without authenticating again, provided single sign-on is enabled in the mail application. Single Sign-On can be performed with or without Identity Server.

---

**NOTE** Messenger Express or Messenger Express Multiplexor (MEM) and Communications Express should be deployed on the same host to enable inter- operability between calendar and mail, and address book and mail user interfaces. If the applications are deployed on different hosts, the browser will not permit you to inter-operate between applications for security reasons.

---

This chapter contains the following sections:

- [Setting up Single Sign-On With Identity Server](#)
- [Setting up Single Sign-On With Messaging SSO](#)
- [Setting up Common Parameters for both Identity Server SSO and Messaging SSO](#)
- [Accessing Messenger Express in Communications Express](#)

# Setting up Single Sign-On With Identity Server

The following sections explain how to set up and use Communications Express with single sign-on of the Identity Server.

- [Enabling Single Sign-On in Communications Express With Identity Server](#)
- [Enabling SSO in Messaging Express With Identity Server](#)
- [How UWC Works With Identity Server SSO](#)

## Enabling Single Sign-On in Communications Express With Identity Server

When Communications Express is deployed with Identity Server, it uses the Identity Server's single sign-on mechanism for authentication. All parameters mentioned in [Table 4-1](#) are set when the configuration wizard is invoked. Follow the guidelines provided in [Table 4-1](#) while setting the parameters.

---

**NOTE** • The `uwcauth.identity.binddn` and `uwcauth.identity.bindcred` values should correspond to the values entered when installing Identity Server.

For example, `uwcauth.identity.binddn=uid=amAdmin,ou=People,o=siroe.example.com,o=example.com` and `uwcauth.identity.bindcred=password`.

- Do not leave `uwcauth.identity.binddn` and `uwcauth.identity.bindcred` values unassigned.
  - You need to move the Identity Server related jar files (`am_sdk.jar` and `am_services.jar`, from `<UWC-deployed-path>/WEB-INF/lib`) to the temporary directory till the fix for bug number 4920222 is resolved.
- 

You can modify Communications Express specific parameters, listed in [Table 4-1](#), in `uwcauth.properties` file to enable you to work with Identity Server SSO.

**Table 4-1** Configure UWC Specific Parameters to Access Messenger Express using the Identity Server Session

Parameter	Default Value	Purpose
uwcauth.identity.enabled	true	Specifies whether identity server is enabled.  The attribute is set to “true” to enable Identity Server.
uwcauth.identity.login.url		Specifies the configuration variable that enables SSO from Identity Server. The parameter should point to the URL where the Identity Server runs the naming service.  For example, uwcauth.identity.login.url=http://siroe.example.com:85/amserver/UI/login
uwcauth.identity.cookieName	iPlanetDirectoryPro	Specifies the cookie name used by Identity Server.  The value of uwcauth.identity.cookieName should correspond to the value configured for Identity Server.
uwcauth.identity.bindDN	amAdmin BindDN	Specifies the complete DN of the amadmin.  For example, uid=amAdmin, ou=People, o=siroe.example.com, o=example.com
uwcauth.identity.bindCred	amAdminBindCred	Specifies the password of the amadmin

Parameter	Default Value	Purpose
uwcauth.http.port	80	Specifies the port number that Communications Express listens to when Communications Express is configured on a non SSL port.
uwcauth.https.port	443	Specifies the https port number that Communications Express listens to when Communications Express is configured on Web Server.

## Enabling SSO in Messaging Express With Identity Server

As an Administrator, you can configure the parameters listed in [Table 4-2](#) using `msg-svr_install_root/sbin/configutil` tool. Note that these parameters need to be set explicitly after install as the installer does set these parameters.

For more information on using the `configutil` tool, refer to Chapter 3, *Configuring General Messaging Capabilities*, of the *Sun Java System Messaging Server Administration Guide* at <http://docs.sun.com/doc/817-6266-10>

You can modify the Messenger Express specific parameters listed in Sun Java System Messaging Sever configuration, to enable UWC users access Messenger Express using the Identity Server session.



**Table 4-2** Configure Messenger Express Specific Parameters in Messaging Sever configuration, to enable UWC users access Messenger Express using the Identity Server session

Parameters	Example	Purpose
local.webmail.sso.amnamingurl		<p>This configuration enables SSO from Identity Server.</p> <p>The variable should point to the URL Identity Server runs the naming service.</p> <p>For example,</p> <pre>configutil -o local.webmail.sso.amnamingurl -v http://siroe.example.com:85/amserver/naming-service</pre>
local.webmail.sso.uwcenabled	1	Enables UWC users access Messenger Express.
local.webmail.sso.uwclogouturl	<p>http://siroe.example.com:85/base/UWCmain?op=logout</p> <p>When Communications Express is deployed in non-root URI, such as /uwc, the value of this parameter is:</p> <pre>http://siroe.example.com:85/uwc/base/UWCmain?op=logout</pre>	Specifies the URL Messenger Express uses to invalidate the UWC session.
local.webmail.sso.uwcport	85	Specifies the UWC HTTP port.

**Table 4-2** Configure Messenger Express Specific Parameters in Messaging Sever configuration, to enable UWC users access Messenger Express using the Identity Server session (*Continued*)

Parameters	Example	Purpose
local.webmail.sso.uwccontexturi	uwc	Specifies the path in which UWC is deployed.  Specify this parameter only when UWC is deployed in non root URI. For example if UWC is deployed in /uwc, local.webmail.sso.uwccontexturi=uwc
local.webmail.sso.amcookieName	iPlanetDirectoryPro	Specifies the Identity Sever session cookie.  Ensure that in the uwcauth.properties file the value of uwcauth.apprefix is set to the value of local.webmail.sso.amcookieName.
local.webmail.sso.uwchome		Specifies the url required to access the home link in the Mast head.

## How UWC Works With Identity Server SSO

1. If Identity Server is enabled the authentication is performed by the Identity Server and the cookie is set with a name as specified in `uwcauth.identity.cookieName` in `uwcauth.properties` file.
2. Communications Express verifies the validity of the cookie by sending a request to the Identity Server naming URL using Identity Server SDK. The Identity Server naming URL is picked up from the key whose value is in the format:

*<protocol>://<host>:<port>/<content URI>*

For example, `http://siroe.example.com:/amserver`

For example, `http://siroe.com:80/amserver`

3. UWC receives the user ID and the organization DN from SSO SDK after the credentials are successfully verified.
4. UWC verifies the services enabled for that particular user and creates a local session.
5. UWC session is invalidated and redirected to the UWC login page when either the Identity session times out or is destroyed when the user logs out.

## Setting up Single Sign-On With Messaging SSO

This section explains how to set up and use the Communications Express with Messaging Server single sign-on. The configuration wizard does not set any of the mandatory SSO related parameters. You need to manually set the required parameters as explained in the first and second sections listed below.

- [Enabling Communications Express Using Messaging SSO](#)
- [Enabling Messaging Server Using Messaging SSO](#)
- [How Communications Express works with Messaging SSO](#)

---

**NOTE**

- Messaging SSO does not support virtual domains.
- Messenger Express will not run in SSL mode when messaging SSO is enabled.

---

## Enabling Communications Express Using Messaging SSO

You can modify mail specific parameters, listed in [Table 4-3](#), in `uwcauth.properties` file to enable communications Express users access Messenger Express using Messaging SSO.

**Table 4-3** Configure Mail Specific Parameters in `uwcauth.properties` File

Parameters	Default Value	Purpose
<code>uwcauth.sessioncookie</code>	<code>JSESSIONID</code>	Specifies the name of the cookie used by the servlet container to track the sessions.

Parameters	Default Value	Purpose
uwcauth.appprefix		<p>Specifies the prefix for the host application.</p> <p>The prefix is used to find cookies generated by other trusted applications during single sign-on.</p> <p>If the deployment uses Messaging SSO, this attribute should be assigned the value of <code>local.webmail.sso.prefix</code> set during messaging configuration.</p>
uwcauth.appid	uwc	Specifies the cookie name containing the unique application ID for the host application.
uwcauth.cookieDomain		<p>Specifies the domain name saved as part of the single sign-on cookie.</p> <p>The value must begin with a period (.), for example, <code>.example.com</code> where the fully qualified host name is <code>siroe.example.com</code>.</p>
uwcauth.messagingssso.enable	true	<p>Enables or disables all single sign-on functionality with messaging.</p> <p>Set this parameter to “true” to enable single sign-on and “false” to disable single sign-on.</p>
uwcauth.messagingssso.cookiepath	/	Specifies the domain or path saved as part of the single sign-on cookie.

Parameters	Default Value	Purpose
uwcauth.messagingsso.singlesignoff	true	If set to “true” both UWC and Messenger Express sessions are invalidated and the user is redirected to the login page. Otherwise, only the Messenger Express session is invalidated.
messagingssso.xxx.url	http:// <i>servername</i> /VerifySSO?	<p>Specifies the URL used to verify the SSO cookie.</p> <p>The value of xxx should be replaced by the application ID of the server.</p> <p>For example, if you want to enable SSO with Messaging Server whose application ID is “msg60”, you need to add the following configuration parameter:</p> <pre>messagingssso.msg60.url=http://servername/VerifySSO?</pre> <p>The value of xxx mentioned here should be identical to the value assigned in Messenger Express to <code>local.webmail.sso.id</code>.</p>
messagingssso.uwc.url	<p>http://<i>servername</i>:85/VerifySSO?</p> <p>When Communications Express is deployed in non-root URI, such as /uwc, the default value of the parameter is:</p> <pre>http://servername:85/uwc/VerifySSO?</pre>	<p>Specifies the verify URL of UWC server.</p> <p>If you have edited the value of <code>uwcauth.appid</code> for this server, replace <code>uwc</code> in <code>messagingssso.uwc.url</code> with the new <code>uwcauth.appid</code>.</p>

Parameters	Default Value	Purpose
messagingssso.appid	ims	<p>UWC uses this cookie to determine whether to issue the logout request to Messenger Express.</p> <p>The value of <code>messagingssso.appid</code> should be same as the <code>local.webmail.sso.id</code> set during messaging configuration .</p>

## Enabling Messaging Server Using Messaging SSO

You can modify mail specific parameters, listed in [Table 4-4](#), using `configutil` utility (`msg-svr_install_root/sbin/configutil`) to enable UWC users access Messenger Express using Messaging SSO.

**Table 4-4** Configure Messenger Express parameters in Messaging Server configuration to Enable UWC Users Access Messenger Express Using Messaging SSO

Parameter	Example	Purpose
<code>local.sso.&lt;uwc-appid&gt;.verifyurl</code>	<p><code>http://siroe.example.com:85/VerifySSO?</code></p> <p>When Communications Express is deployed in non-root URI, such as <code>/uwc</code>, the default value of the parameter is:</p> <p><code>http://siroe.example.com:85/uwc/VerifySSO?</code></p>	<p>Specifies the URL used by Messenger Express to verify the cookie with UWC.</p> <p>The value of <code>&lt;uwc-appid&gt;</code> should correspond to the value of <code>appid</code> provided in <code>uwcauth.properties</code> file.</p>

**Table 4-4** Configure Messenger Express parameters in Messaging Server configuration to Enable UWC Users Access Messenger Express Using Messaging SSO (Continued)

Parameter	Example	Purpose
local.webmail.sso.cookieDomain	.example.com	<p>The string value of this parameter is used to set the cookie domain value of all SSO cookies by the Messenger Express HTTP server.</p> <p>The value must begin with a period (.), for example, ".example.com" when the fully qualified hostname is siroe.example.com.</p> <p>Ensure that the value specified for this parameter is the same as that entered for uwcauth.cookieDomain</p>
local.webmail.sso.enable	1	Enables or disables single sign-on functionality with Messaging SSO.
local.webmail.sso.ims.verifyurl	<p>http://siroe.example.com/VerifySSO?</p> <p>Here it is assumed that webmail is deployed in port 80.</p>	Specifies the URL used to verify the SSO cookie.
local.webmail.sso.prefix		<p>Specifies the prefix of the host application used to find cookies generated by other trusted applications for SSO.</p> <p>Ensure this value corresponds to the value entered for uwcauth.appprefix.</p>

**Table 4-4** Configure Messenger Express parameters in Messaging Server configuration to Enable UWC Users Access Messenger Express Using Messaging SSO (Continued)

Parameter	Example	Purpose
local.webmail.sso.singlesignoff	1	<p>If set to true, the server removes all single sign-on cookies for the user matching the value of <code>sso.prefix</code>, when the user logs out.</p> <p>If set to false, the server removes only its single sign-on user cookie.</p>
local.webmail.sso.uwcenabled	1	Enables or disables UWC users access Messenger Express.
local.webmail.sso.uwclogouturl	<p><code>http://siroe.example.com:85/base/UWCMain?op=logout</code></p> <p>When Communications Express is deployed in non-root URI, such as <code>/uwc</code>, the default value of the parameter is:</p> <p><code>http://siroe.example.com:85/uwc/base/UWCMain?op=logout</code></p>	Specifies the URL used by Messenger Express to invalidate the UWC session.
local.webmail.sso.uwcport	85	Specifies the UWC HTTP port.
local.webmail.sso.uwccontexturi	uwc	<p>Specifies the path in which UWC is deployed.</p> <p>Specify this parameter only when UWC is deployed in non-root URI. For example, if UWC is deployed in <code>/uwc</code>,</p> <p><code>local.webmail.sso.uwccontexturi=uwc</code></p>

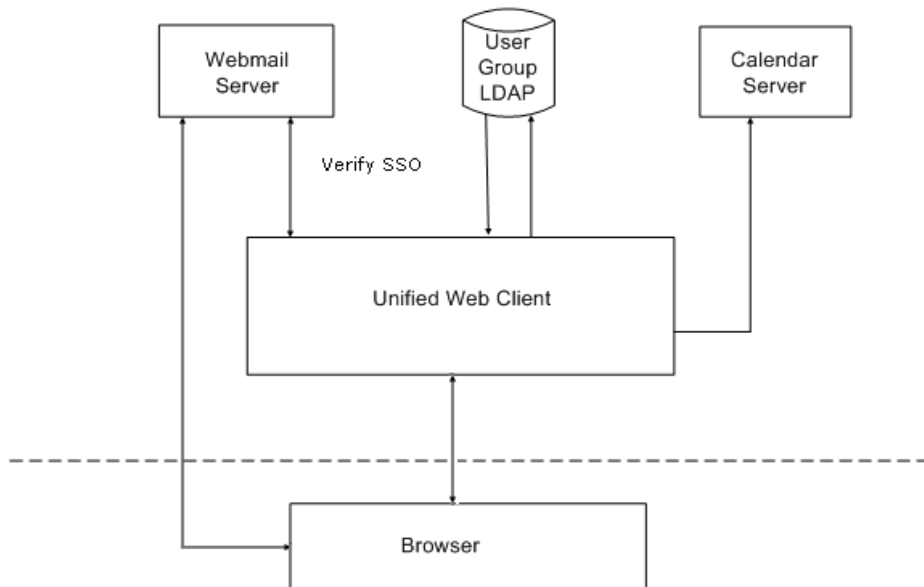


**Table 4-4** Configure Messenger Express parameters in Messaging Server configuration to Enable UWC Users Access Messenger Express Using Messaging SSO (Continued)

Parameter	Example	Purpose
local.webmail.sso.uwchome	http://www.sun.com	Specifies the url required to access the home link in the Mast head.

## How Communications Express works with Messaging SSO

**Figure 4-1** Setting up Single Sign-on with Messaging SSO



When a user logs into Communications Express, the unified web client authenticates the user and maintains the session's cookie in the browser. The cookie name of this session is in the format:

`uwcauth.appprefix + "-" + uwcauth.appid.`

When Messenger Express is accessed from UWC with SSO enabled in Messenger Express:

- Messenger Express receives all the cookies that have names starting with the value configured in `local.webmail.sso.prefix`. The cookie which contains the UWC appid is selected to be verified.
- Messenger Express creates an appropriate UWC URL using the parameters `local.webmail.sso.uwcontexturi` and `local.webmail.sso.uwcport`.

The `uwcport` is the port where Communications Express is deployed.

For example, if UWC and Messenger Express are deployed on `siroe.varrius.com`, Messenger Express creates the URL string in the following format:

`http(s)://siroe.varrius.com:local.webmail.sso.uwcport/local.webmail.sso.uwcontexturi`

- Messenger Express verifies the cookie value with UWC by sending the verify request to `local.sso.uwc.verifyurl`.
- Messenger Express receives the User ID and domain information after UWC authenticates the user credentials.
- Messenger Express then creates a local session and displays the mail box of the user.
- When the user clicks on logout, the logout request goes to Messenger Express to invalidate the Messenger Express Session. After invalidating the Messenger express session it redirects the user to the logout url of Communications Express. Communications Express invalidates its session and redirects users to the login page.

# Setting up Common Parameters for both Identity Server SSO and Messaging SSO

---

**NOTE** Both Communications Express and Messenger Express should be deployed in the same protocol (either http or https).

---

[Table 4-5](#) lists the common UWC specific parameters in `uwconfig.properties` file. The parameters are set when Communications Express is configured.

**Table 4-5** Common UWC Specific Parameters set when Communications Express is configured

Parameter	Example	Description
mail.deployed	true	Enables or disables mail access in UWC.  The attribute is set to “true” if Messenger Express is deployed.
webmail.host	siroe.example.com	Specifies the host name of Messenger Express (or MEM). Messenger Express’s host name should correspond to the host name of UWC.
webmail.port	80	Specifies the port number where Messenger Express is running.

---

## Accessing Messenger Express in Communications Express

The Communications Express decides whether to show the 'Mail' tab to a user based on the values of the LDAP attributes in the following order:

```
mailDeployed (appl level) -> inetDomainStatus(domain level) ->
mailDomainStatus(domain level) -> inetUserStatus(user level) ->
mailUserStatus(user level)
```

For more details on these LDAP attributes refer to the *Sun Java System Communications Services 6 Schema Reference Guide*.

# Deploying Communications Express and Identity Server

This chapter lists the combination of deployment scenarios for Communications Express with Identity Server and the configuration steps to be performed for proper operation.

## Deploying Communications Express and Identity Server in Web Container Instance

This section provides the configurations to be performed when deploying Communications Express and Identity Server in both SSL and non-SSL modes, on different and same Web container.

- [Deploying Identity Server and Communications Express in the same Web Container Instance](#)
- [Other Identity Server and Communications Express Deployment Scenarios](#)

## Deploying Identity Server and Communications Express in the same Web Container Instance

- In non-SSL Mode

When Identity Server and Communications Express are deployed in the same web container instance in non SSL mode you need to

- a. Remove `jss3.jar` from `<uwc-deployed-path>/WEB-INF/lib`

For example, `#rm /var/opt/SUNWuwc/WEB-INF/lib/jss3.jar`

- b. Remove `am_sdk.jar`, `am_services.jar` from `<uwc-deployed-path>/WEB-INF/lib`

For example,

```
#rm /var/opt/SUNWuwc/WEB-INF/lib/am_sdk.jar
#rm /var/opt/SUNWuwc/WEB-INF/lib/am_services.jar
```

- c. Restart the web container for the changes to take effect.

- In SSL Mode

When Identity Server and Communications Express are deployed in the same web container instance in SSL mode you need to

- a. Remove `jss3.jar` from `<uwc-deployed-path>/WEB-INF/lib`

For example, `#rm /var/opt/SUNWuwc/WEB-INF/lib/jss3.jar`

- b. Remove `am_sdk.jar`, `am_services.jar` from `<uwc-deployed-path>/WEB-INF/lib`

For example,

```
#rm /var/opt/SUNWuwc/WEB-INF/lib/am_sdk.jar
#rm /var/opt/SUNWuwc/WEB-INF/lib/am_services.jar
```

- c. Make sure the following property is set in `AMConfig.properties` file:

```
com.ipplanet.am.jssproxy.trustAllServerCerts=true
AMConfig.properties is present in <IS-SDK-BASEDIR>/lib
```

For example, `/opt/SUNWam/lib`

- d. Restart the web container for the changes to take effect.

## Other Identity Server and Communications Express Deployment Scenarios

You need to perform the configuration steps mentioned below for the following deployment scenarios:

- When Identity Server and Communications Express are deployed in different web container instance in non- SSL mode

- When Identity Server and Communications Express are deployed in different web container instance in SSL mode
- When Identity Server and Communications Express are deployed in different web container instance with Identity Server deployed in SSL mode and Communications Express in non-SSL mode
- When Identity Server and Communications Express are deployed in different web containers that are running on the same system, in non- SSL mode
- When Identity Server and Communications Express are deployed in different web containers on the same system in SSL mode
- When Identity Server and Communications Express are deployed in different web containers, with Identity Server deployed in SSL mode and Communications Express in non-SSL mode

#### Configuration Steps:

1. Remove `jss3.jar` from `<uwc-deployed-path>/WEB-INF/lib`

For example,

```
#rm /var/opt/SUNWuwc/WEB-INF/lib/jss3.jar
```

2. Install and configure IS SDK before proceeding further.
  - If the web container is Sun Java System Web Server:
    - Change to `<IS-SDK-BASEDIR>/bin` directory  
For example, `/opt/SUNWam/bin`
    - Run `amws61config` program
  - If the web container is Sun Java System Application Server:
    - Change to `<IS-SDK-BASEDIR>/bin` directory  
For example, `/opt/SUNWam/bin`
    - Run `amas70config` program

**3. Make sure the following is present in the web container's CLASSPATH:**

```
/opt/SUNWam/lib:/opt/SUNWam/locale:/etc/opt/SUNWam/config:/opt/SUNWam/lib/am_logging.jar:/opt/SUNWam/lib/am_sdk.jar:/opt/SUNWam/lib/am_services.jar:/opt/SUNWam/lib/am_sso_provider.jar:/usr/share/lib/mps/secv1/jss3.jar
```

---

**NOTE** In the code, `/opt/SUNWam/` is considered to be the directory denoting IS SDK install directory.

The code is specified in web container's configuration file.

---

**4. Make sure the following JVM options are set in web container's configuration file:**

- `<JVMOPTIONS>-Dcom.ipplanet.coreservices.configpath=/opt/SUNWam/config/ums</JVMOPTIONS>`
- `<JVMOPTIONS>-Djava.protocol.handler.pkgs=com.ipplanet.services.comm</JVMOPTIONS>`

---

**NOTE** In the code `/opt/SUNWam/` is considered to be the directory denoting IS SDK install directory.

---

**5. In `AMConfig.properties` file, set the following property:**

```
com.ipplanet.am.notification.url=<url-to-access-web-container-of-UWC>/servlet/com.ipplanet.services.comm.server.PLLRequestServlet
```

For example,

```
com.ipplanet.am.notification.url=http://mysystem.siroe.com:85/servlet/com.ipplanet.services.comm.server.PLLRequestServlet
```

The `AMConfig.properties` file can be found in `<IS-SDK-BASEDIR>/lib`

For example, `/opt/SUNWam/lib`



6. Restart the web container for the changes to take effect.



# Troubleshooting

This chapter lists the common problems you may encounter and the steps to create and enable error logs.

The following sections are contained in this chapter:

- [Identifying the Problem](#)
- [Log Files](#)

## Identifying the Problem

Communications Express provides an integrated web-based communications client that depends on many disassociated products. This may sometimes cause problems during usage that requires trouble shooting.

To establish the cause of the problem use the following common troubleshooting methods first before addressing the problem:

1. Check the component logs for errors and exceptions reported. The log file maintains the list of errors encountered during installation, configuration and running of Communications Express.
2. Verify whether the steps mentioned in *Sun Java System Communications Express Release Notes* and *Sun Java System Communications Express Administration Guide* have been followed when configuring the product.
3. Enable Communications Express logs to view the detailed error logs and determine the cause for failure. Refer to the section on [Log Files](#) for steps to enable logging.

## Troubleshooting Commonly Identified Problems

This section provides an overview of problems that can be encountered during installation, configuration, start-up, or while accessing Communications Express user interface client components.

Listed below are some commonly identified problems in Communications Express components and their possible causes.

- [Configuring Communications Express](#)
- [Accessing Calendar](#)
- [Accessing Address Book](#)
- [Restart the Web Server where Communications Express is deployed](#)
- [Authenticating using Identity Server](#)

### Configuring Communications Express

**Configuration changes are not reflected, even after restarting the web container.**

Make sure the configuration changes have been applied to the files in the appropriate config path.

Once Communications Express configuration is completed, the following configuration directories are created in your system:

- `<uwc-deployed-path>/WEB-INF/config`
- `<uwc-deployed-path>/staging/WEB-INF/config`
- `<uwc-basedir>/SUNWuwc/WEB-INF/config`

To ensure that the changes are reflected in your application, make configuration changes to `<uwc-deployed-path>/WEB-INF/config`

The other two directories such as `<uwc-deployed-path>/staging/WEB-INF/config` and `<uwc-basedir>/SUNWuwc/WEB-INF/config` are temporary place holders created and used internally by the configurator during configuration. Changes made in them will not get reflected in application.

**Configuration tasks have failed.**

To locate the problem, use the log file located at `<uwc-basedir>/SUNWuwc/install/uwc-config_<TIME-STAMP>.log`

Where, `<TIME-STAMP>` is the time stamp of the configuration in the form `YYYYMMDDhhmmss`.

### **Configuration program is not working properly.**

To identify the problem

Invoke the configuration program with debug options enabled using the following debug modes:

- debug : Use this option to generate general debug information
- debugMessage : Use this option to generate a log of errors and warnings
- debugWarning : Use this option to generate a log of warning messages and error messages
- debugError : Use this option to generate a log of error messages. By default this option is enabled.

### **UWC applications startup failed and web container logs shows exceptions.**

This error might have occurred due to an incomplete or incorrect configuration.

*Work around.*

- Make sure you have completed all the post configuration steps.
- Make sure you have specified correct values to all the configuration questions asked by the configuration wizard.
- Check whether the web container user and group specified in the configuration wizard are correct.

### **The “chown” commands have failed during configuration.**

*Work around.*

Run the configuration program and enter the correct web container user and group values in the “Web Container User and Group” panel of the configuration program.

### **The message “An error occurred during this operation” appears when you access Communications Express with Identity Server enabled after authentication.**

*Work around.*

Ensure that `uwcauth.identity.binddn` property in `<uwc-deployed- path>/WEB_INF/config/uwcauth.properties` is set to amAdmin DN that was provided when installing Identity server SDK. Refer to the section on [Configuring Identity Server Parameters in uwcauth.properties File](#) in Chapter 3, Configuring Your System for Communications Express.

Although the directory manager credentials may work for Identity Server SSO, the directory manager does not have the ACLs required to obtain certain domain specific attributes that Communication Express depends on to function properly.

## Accessing Calendar

**The message “An error occurred during this operation” appears when you access Calendar from Communications Express.**

This error can appear because of either one or more of the following reasons.

- The Calendar Server configurations in `<uwc-deployed-path>/WEB_INF/config/uwconfig.properties` are incorrect.
- The Calendar Server calmaster information in `uwconfig.properties` file in Communications Express is not the same as the value in Calendar Server’s `<cal deploy path>/bin/config/ics.conf` file.

Refer to “[Configuring the Calendar Server Parameters in uwconfig.properties File](#)”, for calendar server related parameters.

- Both Communications Express and Calendar Server are not enabled for hosted domains.

Make sure either Communications Express and Calendar Server are either both enabled for Virtual Domains or both disabled for Virtual Domains. Refer to “[Enabling Virtual Domain Configuration in Calendar](#)” for details on enabling Communications Express and Calendar Server for hosted domains.

- Calendar Server is not started.
- Calendar service is not enabled for this user.

**The message “Calendar Not Available. Could Not Display View. The selected calendar(s) was either deleted, or does not exist, or you do not have permissions to view it. Select another calendar(s)” appears when you access Calendar from Communications Express.**

This error can occur when users are provisioned using `commcli`, which is used for Schema 2, in a non-hosted domain setup scenario. The error message is displayed because `commcli` incorrectly appends `@<domain>` to the value of `icsCalendar` attribute in the user’s LDAP entry.

### *Work around*

To provision users using `commcli` in a non-hosted domain environment, use the `-k legacy` option in the `commadmin` command. For a Hosted domain environment, use `-k hosted` option. If the `-k` option is not specified a hosted domain setup is assumed.

For example,

**Code Example 6-1** Commcli provisioning

```
./commadmin user create -D admin -w password -X siroe .varrius
.com -n siroe.varrius.com -p 85 -d siroe.varrius.com -F test -L
user2 -l user2 -W user2 -S mail,cal -k legacy
ok
```

or

If the entry corresponding to an already provisioned user cannot be removed, manually remove the '@<domain>' part from `icsCalendar`, `icsSubscribed` and `icsOwned` attributes.

**The following message appears on the screen when accessing calendar:**

**Application Error**

**java.lang.NullPointerException**

This error can occur if the user is provisioned with an empty “preferredLanguage” attribute.

*Work around*

Remove the “preferredLanguage” attribute in the User’s LDAP entry or enter a valid value for the “preferredLanguage.”

**Accessing Address Book**

**A “Server Error” occurs when Address Book is accessed. The Web Server log records an exception "org.apache.xml.utils.WrappedRuntimeException: The output format must have a '{http://xml.apache.org/xslt}content-handler' property!"**

This exception is thrown by Web Server when JDK Web Server points to a version lower than JDK 1.4.2. The Communications Express uses the latest version of `xalan` and `xerces` for XML/XSL parsing. The `xalan` and `xerces` files bundled with Communications Express do not work with JDK versions less than JDK 1.4.2. Since JDK 1.4.1 is usually bundled with Web Server 6.1 the exception is generated.

*Work around*

If you have not installed Web Server from the JES installer, manually upgrade the JDK version of the web container that is defined as `java_home` attribute of `<java>` tag in `server.xml` Web Server configuration file.

or

Re-install webserver from JES2, and have the install process upgrade JDK automatically.

---

**NOTE** If this step is performed, then all the other web-applications need to be redeployed. As a precaution, take a backup of the `server.xml` file.

---

### **The message “An error occurred during this operation” appears when Address Book is accessed from Communications Express**

This error occurs when the LDAP configuration for Personal Address Book (PAB) is not correct. When the Address Book tab is accessed, Communications Express connects to the personal address book store that is, the LDAP configured for PAB. If the personal address book store is unable to establish a connection the error is displayed.

#### *Work around*

1. Check the LDAP configuration in `WEB-INF/config/ldappstore/db_config.properties`,
2. Edit the incorrect configuration settings.
3. Restart the Web Server where Communications Express is deployed.

### **Corporate Directory shows an inline error when search is performed.**

This could happen if LDAP configuration for Corporate Directory is not configured properly.

#### *Work around.*

Check the LDAP configuration in

`WEB-INF/config/corp-dir/db_config.properties` for any misconfigurations, correct them and then restart Communications Express.

### **Viewing contacts of Corporate Directory shows error in View window**

This error is displayed when the key to access a contact entry in Corporate Directory is not “uid.”

`uid` is the default value set by Communications Express.

#### *Work around*



To access the contacts from Corporate Directory the key value should be set to the desired value in `db_config.properties` and `xlate-inetorgperson.xml` configuration files in `<uwc-deployed-path>/WEB-INF/config`.

Make the following changes in the files:

1. In `<uwc-deployed-path>/WEB-INF/config/WEB-INF/config/corp-dir/db_config.properties`, set the appropriate key value for `entry_id`.
2. In `<uwc-deployed-path>/WEB-INF/config/WEB-INF/config/corp-dir/xlate-inetorgperson.xml`, set the appropriate key in place of “uid” in `<entry entryID="db:uid">`.
3. Restart the Web Server where Communications Express is deployed

## Accessing Mail

### **Login page appears when Mail tab is clicked.**

This problem is noticed when the configuration between Communications Express and Messaging Server is done properly. For Messaging Server and Communications Express to work seamlessly, Messaging or Identity Server Single Sign-On should be enabled. Before starting Communications Express, follow the instructions outlined for Single Sign-on configuration in [Chapter 4, “Implementing Single Sign-On.”](#)

### **The message “An error occurred during this operation” appears when Mail is accessed from Communications Express**

This error appears when the mail component of Communications Express is not deployed or enabled, but the user logging in to Communications Express has set Mail to be the default application.

#### *Work around*

The Administrator needs to change the value of the attribute `sunUCDefaultApplication` in the user’s LDAP entry to “calendar” or “addressbook.”

### **The user remains logged in even after logging out of Communications Express.**

This problem is encountered when Identity Server and Communications Express are installed on different machines. Also as required, Identity Server Remote SDK is installed in the machine where Communications Express is installed.

#### *Work around*

In the machine on which Communications Express is installed, specify the following configuration parameter in `AMConfig.properties` file:

```
com.iplanet.am.notification.url=<url-to-access-web-container-of-Communications
Express>/servlet/com.iplanet.services.comm.server.PLLRequestServlet
```

---

**NOTE**      `AMConfig.properties` file can be found under  
             `<IS-SDK-BASEDIR>/SUNWam/lib`

---

**You may encounter the following problems when accessing Address book features from Mail:**

- **Calendar, Address book, and the Options page cannot be accessed from the Mail tab page.**
- **Clicking ‘To’ in compose window or ‘Send Mail’ from Address Book displays a javascript error.**
- **Mail options are not saved.**

It is mandatory to deploy Communications Express and Messenger Express (MEM) on the same host to enable them interoperate using Javascript in the browser.

## Authenticating using Identity Server

**Unable to authenticate after entering valid userid and password.**

Authentication could fail for the following reasons:

- The user is not provisioned using commcli or Identity Server and Sun Java System LDAP Schema v.2 is used

### *Work around*

If Sun Java System LDAP Schema v.2 is used, ensure that users have been added using commcli utility or through Identity Server UI console.

- The User attempting to login does not exist in the organization.

The default domain defined in `<uwc-deployed-path>/WEB_INF/config/uwcauth.properties` is used to authenticate a userid in the absence of domain information in the format `user@domain`. If the user does not exist in the organization tree for the corresponding domain, authentication fails.

- Admin credentials are not correct in `<uwc-deployed-path>/WEB-INF/config/uwcauth.properties`.

Refer to “[Configuring Identity Server Parameters in uwcauth.properties File](#)” for the configuration parameter details.

### Get Server Error with 500 HTTP code.

The presence of `am_sdk.jar` and `am_services.jar` in `<uwc-deployed-path>/WEB-INF/lib` directory causes this error.

#### Work around

Remove `am_sdk.jar` and `am_services.jar` files from `<uwc-deployed-path>/WEB-INF/lib` directory. Refer to “[Deploying Communications Express and Identity Server in Web Container Instance](#)” for various Communications Express and Identity Server deployment scenarios.

## Log Files

The log information generated by the various system components on their operation can be extremely useful when trying to isolate or trouble shoot a problem.

### ► To Enable Logging

1. Edit the file `uwcllogging.properties` in `<uwc-deployed-path>/WEB-INF/config` directory

The `uwcllogging.properties` file stores the following parameters:

**Table 6-1** Configurable Parameters in `uwcllogging.properties` File

Module/Log control file	Parameter	Default Value	Description
Configuration			Logs are maintained in a time-stamped file at <code>/opt/SUNWuwc/install/uwc-config_<i>&lt;TIME-STAMP&gt;</i>.log</code>

**Table 6-1** Configurable Parameters in `uwcllogging.properties` File

Module/Log control file	Parameter	Default Value	Description
Communications Express  < <i>uwcl-deployed-path</i> >/WEB-INF/config/uwcllogging.properties	<code>uwcllogging.enable</code>	no	Enables or disables logging.  To enable logging change the property value of <code>uwcllogging.enable</code> to "yes." For example, <code>uwcllogging.enable=yes</code>
Communications Express  < <i>uwcl-deployed-path</i> >/WEB-INF/config/uwcllogging.properties	<code>uwcllog.file</code>	< <i>uwcl-deployed-path</i> >/uwcllog  For example:  /var/opt/SUNWuwcllogs/uwcllog	Specifies the location of the log file.  Change the location of the log file, if required.  Ensure Web Server can write into this file.
Communications Express  < <i>uwcl-deployed-path</i> >/WEB-INF/config/uwcllogging.properties	<code>uwcllog.level</code>	INFO	Specifies the log level for the application.  Change the log level for the application to the desired level.  The log level values available are:  WARNING, INFO, and FINE.
Address Book  < <i>uwcl-deployed-path</i> >/WEB-INF/config/uwclconfig.properties	<code>log.file</code>	/tmp/trace.log	Specifies the location of the log file.  Change the location of the log file, if required.  Ensure Web Server can write into this file.
Address Book  < <i>uwcl-deployed-path</i> >/WEB-INF/config/uwclconfig.properties	<code>uwcllog.level</code>	3	Specifies the log level for the application.  To disable logging for this module, set the value to 0.

**Table 6-1** Configurable Parameters in `uwclogging.properties` File

Module/Log control file	Parameter	Default Value	Description
Mail			Refer to Chapter 18 (Logging and Log Analysis) of Sun Java System Messaging Server Administration Guide at <a href="http://docs.sun.com/doc/817-6266-10">http://docs.sun.com/doc/817-6266-10</a>

2. After you set the default values in `uwclogging.properties` file, restart the Web Server.

---

**CAUTION** Enabling logging will impact the performance of the system.

---

Log Files

# Configuring the Client

This chapter describes the changes to be made to mail, calendar and address book on hosted domains

## Configuring the Hosted Domain

Communications Express supports the hosted domain structure for an organization. The domain related configurable parameters are stored in the following files:

- `uwcdomainconfig.properties`
- `personalstore.properties`
- `defaultps/defaultps.xml`
- `<lang>/i18n.properties`. For example, `i18n.properties`.

When Communications Express is deployed, these files are by default copied to `<uwc-deployed-path>WEB-INF/domain` directory.

The `<uwc-deployed-path>WEB-INF/domain` directory contains configuration files that are used when domain-specific configuration files are available.

For a particular user's session, the domain related property files are searched in the following order:

1. `<uwc-deployed-path>WEB-INF/domain/<user's domain>/<property-files>`
2. `<uwc-deployed-path>WEB-INF/domain/<property-files>`

➤ **To specify the domain related properties for a particular domain:**

1. Create a directory with the domain name under `<uwc-deployed-path>WEB-INF/domain`

2. Copy the files under `<uwc-deployed-path>/WEB-INF/domain` directory to this directory.
3. Customize the property files in the `<uwc-deployed-path>/WEB-INF/domain/<domain>` directory as explained in the sections below.

The following sections describes the settings you can configure for a domain in Communications Express:

- [Configuring Parameters in uwcdomainconfig.properties file](#)
- [Configuring Virtual Domains](#)
- [Customizing the Global GUI](#)
- [Configuring Languages in uwcdomainconfig.properties File](#)

## Configuring Parameters in uwcdomainconfig.properties file

The `uwcdomainconfig.properties` files maintains the default values of the calendar and address book related user preferences that can be configured on a per domain basis. These default user preference values are dynamically assigned to new users, when they access calendar and address book in Communications Express for the first time.

[Table 7-1](#) lists the default user preferences in the application.

**Table 7-1** Default User Preferences in uwcdomainconfig.properties File

Parameter	Default Value	Description
<code>uwc-user-attr-sunUCDefaultApplication</code>	calendar	Specifies the default page to be displayed after you login. The available options are: mail, calendar, address book.
<code>uwc-user-attr-sunUCDefaultEmailHandler</code>	uc	Specifies the default email client used to send email messages from the application.  You can set the default email client to Messenger Express or to a browser mail client.



**Table 7-1** Default User Preferences in uwcdomainconfig.properties File (*Continued*)

Parameter	Default Value	Description
uwc-user-attr-sunUCDateFormat	M/D/Y	Specifies the order in which the date, month, and year should appear in a date.  The available options are: M/D/Y, D/M/Y, Y/M/D
uwc-user-attr-sunUCDateDelimiter	/	Specifies the delimiter used in dates.  Delimiter is the character that separates the date, month, and year in the date.  You can specify the delimiter as a comma(,), forward slash (/), or hyphen(-).
uwc-user-attr-sunUCTimeZone	America/Los_Angeles	Specifies the time zone in which your calendar is created.  You can choose any valid time zone from the following areas:  North and South America, Europe and Africa, Asia and Pacific Rim.

- [Table 7-2](#) lists the user preferences corresponding to the Calendar Options Tab.

**Table 7-2** Default Calendar Preferences in uwcdomainconfig.properties File

Parameter	Default Value	Description
uwc-user-attr-icsExtendedUserPref-iceDefaultView	dayview	Specifies the view your default calendar should display after you login. The available options are:  Day, Week, Month, and Year.

**Table 7-2** Default Calendar Preferences in uwcdomainconfig.properties File (*Continued*)

Parameter	Default Value	Description
uwc-user-attr-icsExtendedUserPrefs-ceShowCompletedTasks	false	Specifies whether the completed tasks will appear in the Tasks pane of the calendar.  Change the default value to “false” if you do not want the completed tasks to appear in the Tasks pane of the calendar.
uwc-user-attr-icsExtendedUserPrefs-ceDefaultCategory	Business	Specifies the default category in which the new events or tasks should be created.  The categories available are:  Anniversary, Appointment, Birthday, Business, Breakfast, Class, Conference Call, Dinner, Holiday, Lunch, Meeting, Other, Personal, Seminar, Training, Travel, Vacation and Interview.
uwc-user-attr-icsExtendedUserPrefs-ceDayHead	9	Specifies the day start time in hours.
uwc-user-attr-icsExtendedUserPrefs-ceDayTail	18	Specifies the day end time in hours.
uwc-user-attr-icsExtendedUserPrefs-ceInterval	PT1H0M (One hour)	Specifies the interval the day is split into.  In the day and week view, the day is split into half an hour or one hour time period.  You can change the default split value to PT0H30M(half hour)
uwc-user-attr-icsFirstDay	1	Specifies the day of the week to be considered as the first day of the week in the calendar. By default, Sunday(1) is considered to be first day of the week and Saturday(7) the last day of the week.

**Table 7-2** Default Calendar Preferences in uwcdomainconfig.properties File (*Continued*)

Parameter	Default Value	Description
uwc-user-icsExtendedUserPrefs-ceWeekEndDays	1,7	Specifies the days of the week in the calendar views to be considered as weekend days.  By default, Sunday(1) is the first day of the week and Saturday(7) the last day of the week.  Comma separated list of numbers represents the days of the week to be considered as week end days.
uwc-user-attr-icsExtendedUserPrefs-ceIncludeWeekendInViews	false	Enables or disables the display of weekend days in the Week and Month views of your calendar.  Set the default value to “true” if the weekend days should be displayed in the Week and Month views of the calendar.
uwc-user-attr-icsExtendedUserPrefs-ceSingleCalendarTZISD	true	Specifies whether the calendar should be displayed in the calendar’s time zone.  Change the default value to “false” if you do not want to view calendars in the calendar’s time zone. In this case, all calendars will be displayed in the time-zone specified in Global Options tab.
uwc-usr-attr-icsExtendedUserPrefs-ceDefaultAlarmStart	PT0H30M	Specifies the default number of hours and minutes before an event or task a reminder should be sent.
uwc-user-attr-icsExtendedUserPrefs-ceNotifyEnable	false	Specifies whether to send email messages (containing ical attachments) to internal invitees when new events are created.

- [Table 7-3](#) lists the Configurable Address Book Parameters.

**Table 7-3** Default Address Book Preferences in uwcdomain.properties File

Parameter	Default Value	Description
uwc-user-sunAbExtendedUserPrefs-abName	Personal Address Book	Specifies the name of the default address book.

**Table 7-3** Default Address Book Preferences in uwcdomain.properties File *(Continued)*

Parameter	Default Value	Description
uwc-user-attr-sunAbExtendedUserPrefs-abDescription	This is the personal address book	Specifies a short description for the default address book.
uwc-user-attr-sunAbExtendedUserPrefs-abEntriesPerPage	25	Specifies the maximum number of address book entries to be displayed on a page. The available options are: 25, 50, 75.
uwc-user-attr-sunAbExtendedUserPrefs-abSearchDisplayColumn1	displayname	Specifies the value to be displayed in the first column. By default, the first column displays name of contacts or group.
uwc-user-attr-sunAbExtendedUserPrefs-abSearchDisplayColumn2	primaryemail	Specifies the value to be displayed in the second column of your address book.  You can set the display column name to:  Display Name, Company, Title, Primary Phone, Work Phone, Home Phone, FAX phone, Pager Phone, Primary Email, Work Email, Home Email, Home Address, Work Address, Web Page Address 1, Web Page Address 2, Calendar Address, Availability Address, Birthday, Anniversary Date, Organization Unit, Edit link, View Calendar Icon.
uwc-user-attr-sunAbExtendedUserPrefs-abSearchDisplayColumn3		Specifies the value to be displayed in the third column of your address book.  You can set the display column name to:  Display Name, Company, Title, Primary Phone, Work Phone, Home Phone, FAX phone, Pager Phone, Primary Email, Work Email, Home Email, Home Address, Work Address, Web Page Address 1, Web Page Address 2, Calendar Address, Availability Address, Birthday, Anniversary Date, Organization Unit, Edit link, View Calendar Icon.

**Table 7-3** Default Address Book Preferences in uwcdomain.properties File (*Continued*)

Parameter	Default Value	Description
uwc-user-attr-sunAbExtendedUserPrefs-abSearchDisplayColumn4	edit	<p>Specifies the value to be displayed in the fourth column of your address book.</p> <p>You can set the display column name to:</p> <p>Display Name, Company, Title, Primary Phone, Work Phone, Home Phone, FAX phone, Pager Phone, Primary Email, Work Email, Home Email, Home Address, Work Address, Web Page Address 1, Web Page Address 2, Calendar Address, Availability Address, Birthday, Anniversary Date(Organization Unit), Edit link, View Calendar Icon.</p>

## Configuring Virtual Domains

This section describes the changes to be made in calendar, mail, and addressbook to enable virtual domains.

### Enabling Virtual Domain Configuration in Calendar

To enable virtual domain configuration in calendar, you must set the virtual domain mode parameter to “y” in `uwcauth.properties` file and configure Calendar Server for hosted domains. For information on how to configure Calendar Server for Hosted domain refer to the *Calendar Server Administration Guide* at: <http://docs.sun.com/doc/817-5697-10>

### Enabling Virtual Domain Configuration in Mail

To enable virtual domain configuration in mail and to learn about creating a hosted domain entry in the organizational tree, refer to the *iPlanet Messaging Server 5.2 Provisioning Guide* at: <http://docs.sun.com/source/816-6018-10>

For information on how to customize the Messenger Express client interface for each domain, refer to the *iPlanet Messaging Server 5.2 Provisioning Guide* at: <http://docs.sun.com/source/816-6010-10>

## Enabling Virtual Domain Configuration in Address Book

The following files can be modified to enable virtual domains.

- `personalstore.properties` file
- `defaulttps.xml` file

## Configuring the `personalstore.properties` file

You can modify the parameters in `personalstore.properties` file to configure address book store, corporate directory and any remote directories.

[Table 7-4](#) lists the settings stored in `personalstore.properties` file.

**Table 7-4** Configuration Settings Stored in `personalstore.properties` File

Parameters	Default Value	Description
<code>db.defaultpsrootpattern</code>	<code>ldap:///piPStor eOwner=%U,o= %D,o=PiServerD b</code>	<p>Specifies the pattern used to dynamically construct the <code>psRoot</code> value for a user.</p> <p>The constructed <code>psRoot</code> value is used to identify, using the value of <code>db.xxx.urlmatch</code>, an <code>xxx</code> instance that best matches the <code>psRoot</code> value.</p> <p><code>%U</code> = uid of the user ("jsmith")</p> <p><code>%D</code> = domain of the user ("siroe.com")</p> <p><code>%O</code> = most significant part of the domain ("siroe")</p>
<code>db.xxx.class</code>	<code>com.iplanet.iabs. ldap.plugin.LDAP</code>	<p>Specifies the name of the java class implementing the plug-in. For example, LDAP plug-in.</p>

**Table 7-4** Configuration Settings Stored in `personalstore.properties` File

Parameters	Default Value	Description
<code>db.xxx.urlmatch</code>		Specifies the URL in the format: <code>ldap://host:port/DN</code> Based on this parameter the xxx instance is identified. This value should correspond to the “bookremoteurl” attribute stored in <code>default.xml</code> file.
<code>db.xxx.configpath</code>		Specifies the path to the configuration directory containing the LDAP information for this instance. If the path is relative, it is relative to the location of this file.
<code>db.xxx.wildcardsearch</code>		Specifies the minimum number of characters to be provided in a wild card search.
<code>db.xxx.randompaging</code>	false	Specifies whether the plug-in supports random access and whether each page must be accessed from the first page. If false, the search process will continue to search until it gets the right page.
<code>db.xxx.corporatedir</code>	false	For a corporate directory this value should be true.

## Configuring defaulttps.xml file

The `defaulttps.xml` file contains the default definitions for personal and corporate address books that are created in the LDAP store when a user logs in for the first time.

Each book node contains a book definition that is created for users in the domain under which the `defaulttps.xml` file resides.

Following are examples of the XML sections in `defaulttps.xml` that contain the definitions of Personal Address Book and a Corporate Address Book.

## Personal Address Book XML

**Code Example 7-1** XML section containing Personal Address Book Definitions

```
<book booktype="abook">
 <bookoc>piLocalBook</bookoc>
 <entry entryID="pab">
 <displayname>_Personal Address Book</displayname>
 <description>_This is your Personal Address Book</description>
 </entry>
</book>
```

## Corporate Directory XML

**Code Example 7-2** XML section containing Corporate Address Book Definitions

```
<book booktype="abook"
 bookremoteurl="ldap://corpdirectory">
 <bookoc>piRemoteBook</bookoc>
 <entry entryID="idirectory">
 <displayname>_Corporate Directory</displayname>
 <description>_This is Corporate Directory</description>
 </entry>
</book>
```

For corporate and remote address books a corresponding xxx instance should exist in the `personalstore.properties` file. The value of `db.xxx.urlmatch` in `personalstore.properties` file should be assigned the value of `bookremoteurl` attribute present in `personalstore.xml` file.

To add a new remote address book, you need to add the following items:

1. Add a new book node in `defaultps.xml` file
2. Add a new xxx instance in `personalstore.properties` file.
3. Create a directory under `WEB-INF/config` to store the `db_config.properties` and `xlate` files.

---

**NOTE** The `xlate` files contains the field mappings between an LDAP schema and address book XML schema for a contact or group.

---



## Customizing the Global GUI

Theme files contain the logical names of the icons appearing in Communications Express and their default location. You can change the location of the images by changing the path specified in this file. The default `theme.properties` file is located under `<uwc-deployed-path>/WEB-INF/skin`.

[Table 7-5](#) lists the images and their default path.

**Table 7-5** Customizable Settings Stored in the Theme File

Image	Default Path
<code>uwc-common-SearchImage</code>	<code>../uwc/images/LrlSearch_1_wo.gif</code>
<code>uwc-common-PrintableImage</code>	<code>../uwc/images/LrlPrintable_1_wo.gif</code>
<code>uwc-common-ImportExportImage</code>	<code>../uwc/images/LrlImpExp_1_wo.gif</code>
<code>uwc-calclient-NewEventImage</code>	<code>../uwc/images/LrlNewEvent_1_wo.gif</code>
<code>uwc-calclient-NewTaskImage</code>	<code>../uwc/images/LrlNewTask_1_wo.gif</code>
<code>uwc-calclient-CheckAvailabilityImage</code>	<code>../uwc/images/LrlCheckAvail_1_wo.gif</code>
<code>uwc-calclient-publicImage</code>	<code>../uwc/images/LrlPrvPub_1.gif</code>
<code>uwc-calclient-RecurringImage</code>	<code>../uwc/images/LrlRecur_1.gif</code>
<code>uwc-calclient-NotifyImage</code>	<code>../uwc/images/LrlNotify_1.gif</code>
back/forward image	<code>../images/back.gif</code>

## Configuring Languages in uwcdomainconfig.properties File

The `uwcdomainconfig.properties` file contains the list of supported languages for a domain. Each language in the list is separated by a semi colon. You can define the list of languages Communications Express will support for a domain.

For example, if you are planning to support `en` (English), `de` (German), `fr` (French), and `ja` (Japanese) languages in a domain called `siroe.com`, set `supportedLanguages` in `uwcdomainconfig.properties` file for that domain to:  
`supportedLanguages=en;fr;de;ja`.

The `uwcdomainconfig.properties` file `siroe.com` is located at:

`WEB-INF/domain/siroe.com/uwcdomainconfig.properties`

You will also have to define the localizable strings in the corresponding `i18n.properties` files. For example,

```
uwc-common-options-preferredLanguage-en=English
```

```
uwc-common-options-preferredLanguage-de=German
```

```
uwc-common-options-preferredLanguage-fr=French
```

```
uwc-common-options-preferredLanguage-ja=Japanese
```

**The `i18n.properties` file for `siroe.com` will be located at:**

```
WEB-INF/domain/siroe.com/locale/i18n.properties
```

**In the absence of a `preferredLanguage` attribute in the User's LDAP entry, the domain `preferredLanguage` attribute, the browser provided header values and the availability of `i18n.properties` file determines the language used in the users session.**

# Migrating PAB Data to Address Book Server

Previously Personal Address Book (PAB) was used to store user's contacts in Sun ONE Messaging Server and PAB could be accessed only by web-based clients deployed on Sun ONE Messaging Server. To enable other modules such as calendar access the user's address book, Sun Java System Messaging Server for Communications Express uses the Address Book Server instead of PAB to store users' contact details. Because of this, users accessing Communications Express using existing Sun ONE Messaging Server installations must migrate their PAB data to the Address Book Server.

This chapter contains the following sections:

- [Migration Process](#)
- [Migration Thread](#)
- [Migration Scenarios](#)

## Migration Process

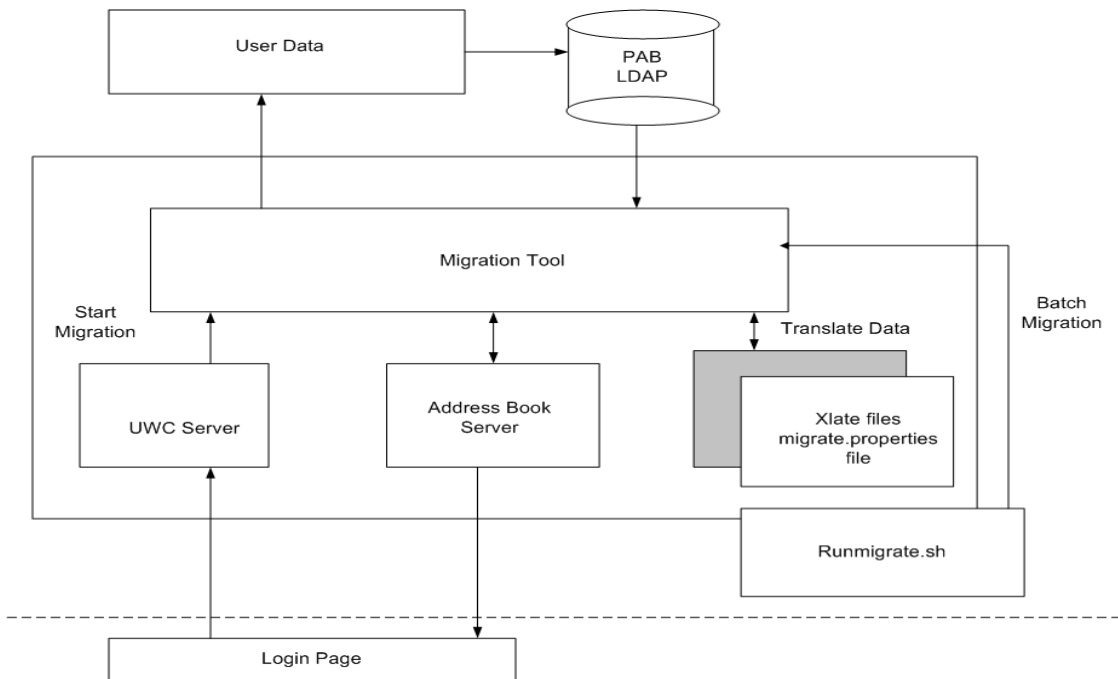
PAB data residing in different directories can be migrated to Address Book Server using the address book migration tool. The migration tool is a standalone executable that migrates user's Messenger Express address book data to the Address Book Server that is part of Communications Express.

---

**NOTE** Sun Java System Messenger Express uses a different directory server for maintaining PAB Data from the one used by Address Book in Communications Express. The migration utility migrates all the data from PAB to Address Book when the user logs in for the first time. However, once data is migrated to Address Book, new contacts or groups created using Messenger Express will not be shown in the Address Book of Communications Express. The reverse is also true.

---

**Figure 8-1** Overview of the Data Migration Process



Data migration can take place in two ways:

- [Batch Migration](#)
- [Dynamic Migration](#)

## Batch Migration

In the batch migration process, migration takes place at the server level without end user interaction. The administrator executes the `runMigrate.sh` batch script to migrate the mail users PAB data present in a given domain. For mail users present in multiple domains, the administrator will have to invoke the `runMigrate.sh` script for each domain to migrate users PAB data from the given `inetDomainBaseDN` to the Address Book Server.

Before running the `runMigrate.sh` script, the administrator should provide the following command line arguments required by the `MigratePab` utility in `runMigrate.sh`:

- Absolute path of `migrate.properties` file. The Default path is set to:  
`../WEB-INF/config/migrate.properties`
- Absolute path of config directory in which `uwcauth.properties` and other config files are located. The default path is set to: `../WEBINF/config`
- `inetDomainBaseDN` of the users

## Dynamic Migration

In the dynamic migration process, data migration is initiated when the user logs into Communications Express for the first time. For dynamic migration to occur, the administrator must enable dynamic migration when configuring Communications Express.

The Migration process depends on:

- The type of migration: Dynamic or Batch Migration
- Whether the users are registered users of Messenger Express.

Data migration occurs when:

- A user logs into Communications Express
- A batch process (`runMigrate.sh`) is executed

Preliminary steps to be performed by the administrator after installing Communications Express are:

1. Configuring Communications Express to enable dynamic migration.

---

**NOTE** If dynamic migration is not enabled in `uwcauth.properties` file, PAB data will not get migrated to the Address Book Server.

---

2. Configuring the Address Book Server with the PAB Server details. For example, you need to configure the Host Name, Port Number, BindDN, BindDN Credentials, PAB Host Path and Host Machine names to which the data is to be migrated.

Based on the user's mail host, the PAB configuration entries listed in [Table 8-1](#) are retrieved and the connection to the PAB Server established.

**Table 8-1** Field Mapping for Contacts

<b>PAB</b>	<b>Address Book</b>
cn	DisplayName
sn	sn
givenName	givenName
telephonenumber	piPhone1Type:work piPhone1:
homephone	piPhone2Type:home piPhone2;
pager	piPhone4Type:pager piPhone4:
mobile	piPhone3Type:mobile piPhone3:
facsimiletelephonenumber	piPhone5Type:fax piPhone5:
mail	piEmail2Type:home piEmail1:
mailalternateaddress	piEmail2Type:work piEmail2:
postoffice+street	homePostalAddress
l	homecity
st	homeState
postalcode	homePostalCode
co	homeCountry
labeleduri	piWebsite1
description	description

**Table 8-1** Field Mapping for Contacts *(Continued) (Continued)*

<b>PAB</b>	<b>Address Book</b>
memberofpab	memberOfPIBook
memberofpabgroup	memberOfOIGroup

**Table 8-2** Field Mapping for Groups

<b>PAB</b>	<b>Address Book</b>
cn	displayName
description	description

## Dynamic Migration Process

Dynamic Migration occurs when the user logs into Communications Express.

- The application checks if migration has been enabled in the `uwcuath.properties` file and then proceeds with the migration process.
- The login logic then compares the `nswmextendedprefs` attribute with `mepabmigration` value to determine whether the user's data has been previously migrated.

If data is being migrated for the first time, the migration thread is started by passing the user ID, domain and userdn of the user.

The PAB migration related configuration parameters are listed in [Table 8-4](#)

**Table 8-3** Parameters Configurable for PAB Migration in `migrate.properties`

<b>Parameter</b>	<b>Default Value</b>	<b>Description</b>
<code>hostname.pabldappoolmin</code>	4	Specifies the minimum number of LDAP user connections to be created for PAB LDAP.
<code>hostname.pabldappoolmax</code>	20	Specifies the maximum number of LDAP user connections to be created for PAB LDAP.
<code>hostname.pabldappooltimeout</code>	50	Specifies the number of seconds before timing out an LDAP connection.

**Table 8-3** Parameters Configurable for PAB Migration in `migrate.properties` (Continued)

Parameter	Default Value	Description
<code>hostname.alwaysusedefault</code> <code>host</code>	1	Specifies whether to use the user's PAB host mentioned in the PAB URI or to use the first fully qualified PAB hostname from the list maintained.  When set to 1, the first fully qualified PAB host is used to retrieve the PAB entries.
<code>delete_pabentry</code>	0	Enables the delete of PAB entries and PABURI after a successful migration.
<code>maxthreads</code>	10	Specifies the number of migration threads.
<code>mailhost.pabhosts</code>	The mail host name is assigned to the list of PAB hosts in which the PAB entries are located.	Specifies the list of PAB hosts.
<code>mailhost.pabports</code>		Specifies the port number of the PAB hosts.
<code>mailhost.pabbinddns</code>		Specifies the bind DN for PAB.
<code>mailhost.pabpasswd</code>		Specifies the password of the user binding to the PAB.

- Once PAB migration is completed, the Address Book Server sets the `nswmextendedprefs`, `mepabmigration` to "1" in the respective user entry to indicate the completion of the migration process.



- The user receives a mail after the PAB data is successfully migrated to the Address Book Server.

To receive a mail, you are required to define the parameters mentioned in [Table 8-4](#).

**Table 8-4** PAB Migration Email Parameters

Parameters	Default Value	Description
emailReqd	True	Enables a mail to be sent after the PAB data has been migrated successfully.  Accepted values are "True" and "False".
smtphost	local mail host For example: budgie.siroe.com	Specifies the SMTP relay host name.
smtpport	25	Specifies the SMTP relay port.
mailsubject	PAB Migration Status	Specifies the subject of the mail.
from	admin@hostname	Specifies the sender's name.

---

**TIP** It is recommended that the administrator sends an email to all users informing them that PAB data migration will be triggered during the first login and as a consequence they will not see the Address Book data during the initial sessions. Users should contact the administrator if they are unable to see their data after 2 or 3 days.

---

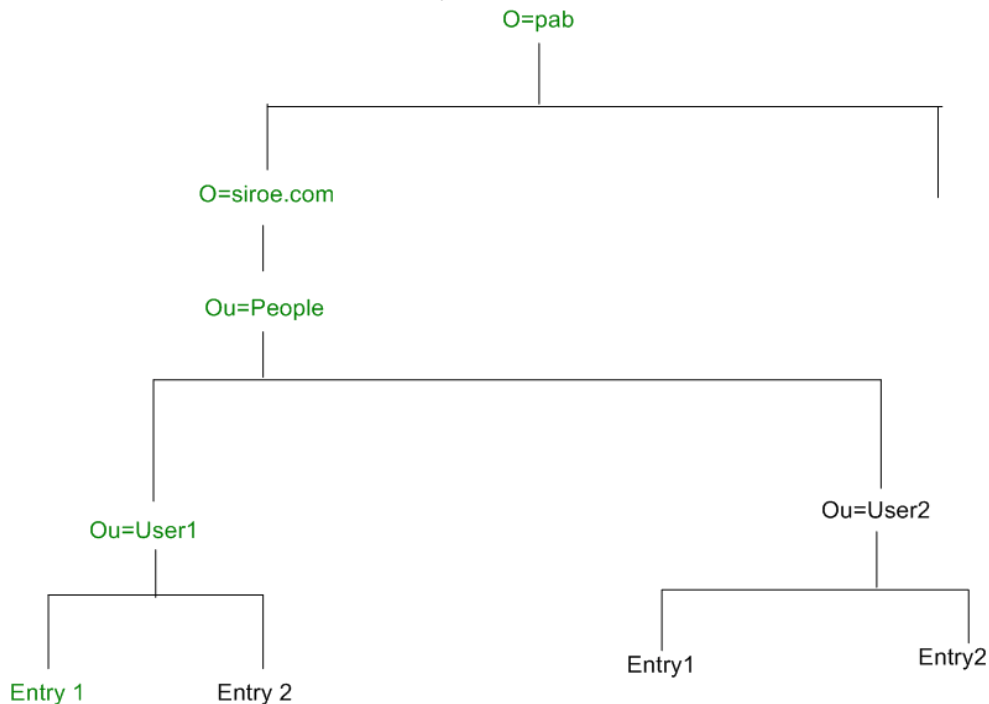
# Migration Thread

During migration, the migration thread confirms whether the user is a mail user and then finds the PAB details from `uwconfig.properties` file for the mail user. The `uwconfig.properties` file contains the default PAB host name or multiple PAB host names (if the user is present on multiple domains). Based on these entries, Address Book determines the appropriate PAB host to which the data should be migrated and establishes the connection.

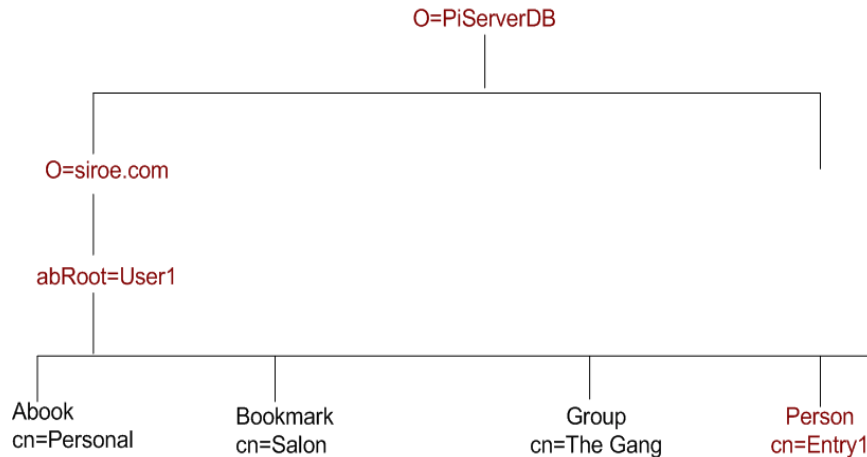
## Example

When User1 in the domain `siroe.com` has an entry in PAB such as Entry1 that needs to be migrated, the entry is located in the PAB tree under `ou=User1` as shown in green in [Figure 8-2](#).

**Figure 8-2** Location of Entry1 in the PAB tree



After migration, the newly created Address Book Server Entry is added to the Address Book Server tree under `o=siroe.com, cn=Entry 1` as shown in red in [Figure 8-3](#).

**Figure 8-3** Location of Entry 1 in the Address Book Server tree.

A new configuration file is added in the Address Book Server called `migrate.properties` that has the following details:

- Server name, port number, basedn, binddn, binddn password of PAB Directory Servers. There may be one or more directory servers where PAB can be stored. If there are many directory servers, one of them must be made the default server.
- Server name, port number, basedn, binddn, binddn password of directory server where Address Book Server's personal store data is stored.

To migrate data the migration tool needs to know whether:

- PABURI attribute must be used for deciding the directory server where each user's PAB is stored, or
- The default directory server should be considered from the list of directory servers.

## Migration Scenarios

Migration can be performed from:

1. A single Messenger Express instance pointing to the default single PAB host.
2. A single Messenger Express instance pointing to multiple PAB hosts.
3. A single Messenger Express instance pointing to multiple PAB hosts with the default PAB host set.
4. Multiple Messenger Express instances pointing to single PAB host.
5. Multiple Messenger Express instances pointing to multiple PAB hosts.

# Tuning and Performance Information

This chapter describes the information you need to consider for improving the performance of Sun Java System Communications Express.

To improve performance consider the following tuning options

- [Tuning Directory Server](#)
- [Tuning Calendar Server](#)
- [Tuning Web Server](#)
- [Tuning Communications Express](#)

## Tuning Directory Server

This section describes the tuning you can perform on Directory Server to enhance performance.

- [Indexing the LDAP Directory Server](#)
- [Setting the nsSizeLimit and nsLookthroughLimit Parameters](#)

## Indexing the LDAP Directory Server

To improve the performance of Communications Express when Calendar Server accesses the LDAP directory server, index the following LDAP attributes:

- **icsCalendar.** The attribute is used to search default calendars for a calendar user or resource. Specify the index type as presence (pres), equality (eq), or substring (sub).

- **icsCalendarOwned.** The attribute is used to search for a subscribe operation when the LDAP CLD plug-in is enabled. Specify the index type as presence (pres), equality (eq), and substring (sub).
- **mail** and **mailAlternateAddress.** These two attributes specifies a user's primary and alternate email addresses.

---

**NOTE** The `comm_dssetup.pl` script adds indexes for `icsCalendar`, `icsCalendarOwned`, `mail`, and `mailAlternateAddress` attributes.

---

## Setting the `nsSizeLimit` and `nsLookthroughLimit` Parameters

It is important that the `nsSizeLimit` and `nsLookthroughLimit` parameters in User/Group LDAP directory server configuration is large enough for searches to be completed properly.

To determine if these parameters are set to appropriate values, type the following 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.

`/user/` is the value that an end user can enter in Calendar Search dialog under the Subscribe option in Communications Express.

The LDAP server returns an error, if the `nsSizeLimit` or the `nsLookthroughLimit` parameter is not large enough.

Follow these guidelines to reset `nsSizeLimit` or the `nsLookthroughLimit` parameters:

- Ensure that the value for `nsSizeLimit` parameter is large enough to return all the desired results; otherwise, data can get truncated, and no results will be displayed

- Ensure that the value for `nsLookthroughLimit` parameter is large enough to complete a search of all the users and resources in the LDAP directory. If possible set `nsLookthroughLimit` to `-1`. By doing this, no search limit is set for `nsLookthroughLimit`.

## Tuning Calendar Server

This section describes how load balancing across multiple CPU on Calendar Server can enhance performance.

### Using Load Balancing Across Multiple CPU

If a server has multiple CPUs, by default Calendar Server distributes the HTTP Service such as `cshttpd` processes and Distributed Database Service such as `csdwpd` processes across CPUs.

The `service.http.numprocesses` and `service.dwp.numprocesses` parameters in `ics.conf` determine the actual number of processes that run for each service. By default, these parameters are set to the number of CPUs for the server during installation, but you can reset these values. For example, if a server has 8 CPUs, but you want a `cshttpd` and `csdwpd` process to run in only 4 CPUs, set the parameters as:

```
service.http.numprocesses="4"
```

```
service.dwp.numprocesses="4"
```

#### ► To disable load balancing

1. Add the `service.loadbalancing` parameter to the `ics.conf` file
2. Set `service.loadbalancing` to `"no."`
3. Restart Calendar Server for the change to take effect.

For information on load balancing refer to the chapter on Calendar Server Performance Tuning in *Sun ONE Calendar Server 6.0 Administration Guide* at:

<http://docs.sun.com/source/816-6708-10/>

# Tuning Web Server

This section describes the tuning you can perform on Web Server to enhance performance.

- [Setting the value of acceptorthreads](#)
- [Setting JVM Options](#)

## Setting the value of acceptorthreads

In `server.xml`, change the value of the attribute `acceptorthreads` present in `<vs>` (virtual server) element to the number of CPUs on the machine hosting Web Server.

For Example:

```
<VS id="https-siroe.com" connections="1s1" mime="mime1"
aclids="acl1" urlhosts="<webserver host
name"acceptorthreads="<noofcpus>" >
```

## Setting JVM Options

Set the following JVM options in the `server.xml` file of Web Server.

The following two parameters determine the Heap size of JVM

- `<JVMOPTIONS>-Xms(approx value according to the memory available)</JVMOPTIONS>`
- `<JVMOPTIONS>-Xmx(approx value according to the memory available)</JVMOPTIONS>`

It is recommended to have the same parameters for both the options, for example,

`JVMOPTIONS -server /JVMOPTIONS`

Set the following parameters for Garbage Collection

- `<JVMOPTIONS>-XX:+UseParNewGC</JVMOPTIONS>`
- `<JVMOPTIONS>-XX:ParallelGCThreads=<number-of-CPU's></JVMOPTIONS>`



- `<JVMOPTIONS>-XX:+UseConcMarkSweepGC</JVMOPTIONS>`
- `<JVMOPTIONS>-XX:+AggressiveHeap</JVMOPTIONS>`

## Tuning Communications Express

In the `uwconfig.properties` file, enable compression of the sever response by setting the `uwc.gzip.compression` parameter value to “true.” For example,

```
uwc.gzipcompression = true
```

Then restart the Web Server.

---

**CAUTION** Maintain a backup of your configuration files before making any changes.

---



# Glossary

Refer to the *Java Enterprise System Glossary* (<http://docs.sun.com/doc/816-6873>) for a complete list of terms that are used in this documentation set.



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