Sun Java™ System

Instant Messaging Administration Guide

6 2004Q2

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Contents

About This Guide

This manual describes how to administer Sun Java™ System Instant Messaging server and its accompanying software components.

Instant Messaging enables end users to participate in real-time interactive messaging and discussions. Sun Java System Instant Messaging allows end users to participate in Instant Messaging and chat sessions, send alert messages to each other, and share group news instantly. It is suitable for both intranets and the Internet.

This preface contains the following sections:

- Who Should Read This Book
- What You Need to Know
- How This Book is Organized
- Document Conventions Used in This Manual
- Related Third-Party Web Site References
- Accessing Related Sun Documentation Online

Who Should Read This Book

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

What You Need to Know

This book assumes that you are responsible for configuring, administering, and maintaining Instant Messaging, and you have an understanding of JavaScript™, HTML, and any of the following servers in your deployment:

- Sun Java™ System Portal Server
- A web server such as Sun Java™ System Application Server SE (Standard Edition)
- An SMTP server such as Sun Java™ System Messaging Server
- An LDAP server such as Sun Java™ System Directory Server
- Sun Java™ System Calendar Server
- Sun Java™ System Identity Server

How This Book is Organized

This book contains the following chapters and appendices:

- About This Guide (this chapter)
- Chapter 1, "Configuration Files and Directory Structure"

  This chapter provides information about the configuation files you use to administer Instant Messaging.
- Chapter 2, "Administering Instant Messaging Server and Multiplexor"

  This chapter describes how to administer Sun Java System Instant Messaging server and multiplexor.
- Chapter 3, "Managing Instant Messenger"

  This chapter describes how to customize and administer the Sun Java System Instant Messenger.
- Chapter 4, "Managing Instant Messaging and Presence Policies"

  This chapter describes how to manage administrator and end user privileges, especially with policies set in the Sun Java System Identity Server.

- Chapter 5, "Managing The Instant Messaging Archive"

  This chapter explains how to manage and configure the Instant Messaging Archive.

- Chapter 6, "Troubleshooting Instant Messaging"

  This appendix lists the common problems that might occur during installation and deployment of the Sun Java System Instant Messaging server.

- Appendix A, "Instant Messaging Configuration Parameters"

  This appendix describes the settings you can configure for Instant Messaging.

- Appendix B, "Instant Messaging imadmin Tool Reference"

  This appendix describes the `imadmin` command used to administer Instant Messaging.

- Appendix C, "Instant Messaging APIs"

  This chapter explains the APIs used by Instant Messaging.

- Appendix D, "Legacy Instant Messaging 6.0"

  This appendix describes the Instant Messaging service and lists and describes the attributes of this service, which enable administrators to enforce policy mechanisms for accessing Sun Java System Instant Messaging server.

Document 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

Also, all paths specified in this manual are in Unix format. If you are using a Windows NT-based Instant Messaging, you should assume the Windows NT equivalent file paths whenever Unix file paths are shown in this book.

`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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subject to license terms.  Sun, Sun Microsystems, the Sun logo, Java,
Solaris and iPlanet are trademarks or registered trademarks of Sun
Microsystems, Inc.in the U.S. and other countries.  Federal Acquisitions:
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pays.
===================================================================

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.

Square or Straight Brackets

Square (or straight) brackets [] are used to enclose optional parameters. For example, in this document you will see the usage for the `imadmin` command described as follows:

```
imadmin [options] [action] [component]
```

The presence of `[options]`, `[arguments]`, and `[component]` indicates that there are optional parameters that may be added to the `imadmin` command.

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.

Related Third-Party Web Site References

Third-party URLs are often referenced in Sun documentation to provide additional, related information.

NOTE Sun is not responsible for the availability of third-party Web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources.

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Accessing Related Sun Documentation Online

In addition to this guide, administrators can refer to the following related documents:

- *Sun Java System Directory Server* documentation set

  `http://docs.sun.com/db/prod/s1.s1dirs#hic`

- *Sun Java System Messaging Server* documentation set

  `http://docs.sun.com/db/prod/s1msgsrv#hic`

- *Sun Java System Calendar Server* documentation set

  `http://docs.sun.com/db/prod/s1.s1cals#hic`

- *Sun Java System Instant Messaging* server documentation set

  `http://docs.sun.com/db/prod/s1instmsg#hic`

- *Sun Java System Identity Server* documentation set

  `http://docs.sun.com/db/prod/s1.s1idsrv#hic`

- *Sun Java System Portal Server* documentation set

  `http://docs.sun.com/db/prod/s1.s1portals#hic`

- *Sun Java System Web Server* documentation set

  `http://docs.sun.com/db/prod/s1websrv#hic`

These documents and others can all be accessed by navigating the following Web site:

`http://docs.sun.com`

Chapter 1

Configuration Files and Directory Structure

This chapter provides information about the configuation files you use to administer Instant Messaging. Familiarize yourself with the locations of these files before making changes to your deployment's configuration.

This section describes the Instant Messaging server directory structure and the properties files used to store Instant Messaging operational data and configuration information.

Instant Messaging Server Directory Structure

Table 1-1 shows the platform-specific directory structure for the Instant Messaging server.

Table 1-1 Instant Messaging server directories

Description	Solaris Location	Windows Location
Programs Files These files include the native executable files, the library files in `bin` or `lib` directory, the shell scripts in `sbin` directory, the java classes in `classes` directory, and templates files in `lib` directory.	*instant-messaging-installation-directory* `/SUNWiim` The default value for the instant-messaging-installation directory is `/opt`	*instant-messaging-installation-directory* The default value for the instant-messaging-installation directory is `c:\Program Files\Sun\InstantMessaging`

Table 1-1 Instant Messaging server directories *(Continued)*

Description	**Solaris Location**	**Windows Location**
Server Configuration files These files are in the instant-messaging-configuration directory and include the `iim.conf` file and a subdirectory which contains all the server-wide access control files.	By default, the instant-messaging-configuration directory is located at: `/etc/opt/SUNWiim/default/config` Note: The installer creates a symbolic link from `/etc/opt/SUNWiim/default/config` to *instant-messaging-installation-directory*`/SUNWiim/config`.	*instant-messaging-installation-directory* `\config`
Instant Messaging Server Data. These files include the configurable directory for the files generated by the server at runtime. It includes the end user data in the `instant-messaging-`database directory, which contains information such as the user and news channels directory. It also contains the server and multiplexor log files, in the `log` directory.	*instancevardir*`/default` The default value for *instancevardir* is `/var/opt/SUNWiim`	*instant-messaging-installation-directory* \
Instant Messenger resources. These files contain HTML documents and `jar` files used by Instant Messenger. The top-most directory contains the locale-independent resources, and the locale-specific directories contain the localized resources.	instant-messaging-resource directory The default value for this resource directory is: `/opt/SUNWiim/html`	instant-messaging-resource directory

NOTE On Linux, the primary server package name is `soim`, and all the above Solaris Location paths mentioned in Table 1-1 should be replaced by `soim`. For example, replace `SUNWiim` with `soim`.

Instant Messaging Server Configuration File

Instant Messaging stores all configuration options in the `iim.conf` file. For more information on the parameters and their values stored in this file, see "Instant Messaging Configuration Parameters" on page 117.

Instant Messaging Data

Instant Messaging server stores the following data used by Sun Java System Instant Messenger in the runtime files directory, which you specified during the installation, and is indicated by the `iim.instancevardir` parameter in the `iim.conf` file:

- End user properties, such as contact lists, messenger settings, subscribed news channels and access control (alternatively, these properties can be stored in LDAP).
- News channel messages and access rules.
- Alert Messages that are to be delivered. These messages are delivered and removed when the recipient logs in.
- Public conferences. This does not involve instant messages which are not persistent, but only properties of the conference objects themselves, such as access rules.

Chapter 2

Administering Instant Messaging Server and Multiplexor

This chapter explains how to administer the Instant Messaging server and multiplexor, and perform other administrative tasks, such as changing configuration parameters and managing end-user privileges. This chapter also lists the administrative tasks for Sun Java System Portal Server deployments.

This chapter contains the following sections, which describe the various administrative tasks in Instant Messaging:

- Administering End Users
- Stopping and Starting the Server and Multiplexor (On Unix)
- Changing Instant Messaging Server and Multiplexor Configuration Parameters
- Managing Logging
- Managing End-User Privileges
- Federating Deployment of Multiple Instant Messaging Servers
- Using SSL in Instant Messaging
- Managing Instant Messaging's LDAP Configuration
- Backing Up Instant Messaging Data

Administering End Users

The administrative tasks in Instant Messaging are listed in the preceding section and are described throughout the rest of this chapter. Take note of the methods—as explained subsequently—for provisioning and managing end users.

Instant Messaging does not provide user provisioning tools. You need to use a directory provisioning tool for provisioning Instant Messaging end users. Instant Messaging does not provide specific commands to add, modify, or delete Instant Messaging end users.

Likewise in an LDAP-only deployment, you cannot prevent an end user from using Instant Messenger. In an LDAP-only deployment, the only way to prevent end users from using Instant Messaging is to delete them from the directory. In an Identity deployment using the policy attributes, you can prevent an end user from accessing Sun Java System Instant Messenger.

The administrator can manage Instant Messaging end users, using the Instant Messaging Administrator Access Control mechanism. For more information on Instant Messaging Administrator Access Control, see "Overview of Privacy, Security, and Site Policies" on page 68. In an Identity deployment, Identity Server is used for provisioning Instant Messaging end users. For more information, see *Sun Java System Instant Messaging Deployment Planning Guide*.

CAUTION If you deny end users the privilege to set up watches on other end users by editing the `sysWatch.acl` file, the Instant Messenger's Main window is not displayed for these end users. This effectively denies end users the ability to send instant messages. However, end users would still be able to see alerts and news channels.

Stopping and Starting the Server and Multiplexor (On Unix)

The `imadmin` command enables you to:

- Start and stop the Instant Messaging server and multiplexor
- Start and stop only the multiplexor or only the server
- Refresh the Instant Messaging server and multiplexor configuration
- Refresh only the multiplexor or server configuration

The `imadmin` command-line utility can be executed only by the end user who has administration rights to the system(s) on which the Instant Messaging server and multiplexor are running. This end user is typically the identity that the server runs as and is designated during installation:

- On Solaris - `inetuser`
- On Windows - the end user with full administration privileges, such as an `administrator`.
- In an Identity deployment, if the Portal Server and the Instant Messaging server are installed on the same host, the end user is the one who is running the Sun Java System Sun Java System Identity Server, as `root`.

The `imadmin` command-line utility is located in the following directory:

- On Solaris: *instant-messaging-installation-directory*`/SUNWiim/sbin`

Starting the Instant Messaging server enables Sun Java System Instant Messenger to connect to it. Stopping the Instant Messaging server closes all connections and disconnects all the Instant Messengers.

If required, you can start and stop the multiplexor instance separately. For example, if you have changed a configuration parameter which only affects the multiplexor, or if you only have the multiplexor installed on a different host, you can start and stop the multiplexor instance separately.

To Start the Instant Messaging Server and Multiplexor

For a given instance, the configuration specifies whether only the multiplexor or only the server or both these components are enabled.

Use the `imadmin` command to start the Instant Messaging Server and/or multiplexor, depending on which component is enabled:

```
imadmin start
```

If both server and multiplexor are enabled, this command first starts the Instant Messaging server, and then starts the multiplexor.

To Stop the Instant Messaging Server and Multiplexor

Use the imadmin command to stop the Instant Messaging server and/or multiplexor, depending on which component is enabled.

```
imadmin stop
```

This command stops the server and the multiplexor, terminates all end user connections, and disconnects any inbound and outbound servers configured.

To Refresh the Configuration (Instant Messaging Server and Multiplexor)

Use the imadmin command with the refresh parameter to refresh the server and/ or multiplexor configuration, as shown in the following example:

```
imadmin refresh
```

This command stops and restarts the enabled server and/or multiplexor components.

NOTE Whenever you change a configuration parameter in the iim.conf file, make sure to refresh the configuration.

If necessary, you can stop, start or refresh the multiplexor or server only, regardless of which components are enabled in the configuration. To do this, use the multiplexor or server argument with the imadmin command.

- To Start the Multiplexor only, type:

  ```
  imadmin start multiplexor
  ```

- To Stop the Server only, type:

  ```
  imadmin stop server
  ```

To Start and Stop the Instant Messaging Server and Multiplexor (Windows Only)

On Windows, open the Services dialog box from the Control Panel to start and stop the Instant Messaging server and the multiplexor. For more instructions on starting and stopping services, refer to the documentation provided with the Windows operating system.

Changing Instant Messaging Server and Multiplexor Configuration Parameters

Instant Messaging stores configuration parameters in the `iim.conf` file. For a complete list of configuration parameters, see Instant Messaging Configuration Parameters.

To change configuration parameters, manually edit the configuration parameters and values in the `iim.conf` file, then refresh the Instant Messaging server configuration. If you change a multiplexor parameter, you only need to refresh the multiplexor using the following `imadmin` command:

`imadmin refresh` multiplexor

To Change Configuration Parameters

For a complete list of parameters and their values, see Instant Messaging Configuration Parameters.

To Change Configuration Parameters:

1. Change to the `config` directory. For example, on Solaris type:

   ```
   cd /etc/opt/SUNWiim/default/config
   ```

2. Edit the `iim.conf` file. For example:

   ```
   vi iim.conf
   ```

3. Save your changes.
4. Refresh the configuration.

CAUTION If you change the multiplexor listen port (`iim_mux.listenport`) or the multiplexor host, update the `im.html` or the `im.jnlp` files accordingly. Failure to do so disables Sun Java System Instant Messenger from connecting to the server. For more information, see the section on Managing Instant Messenger.

Managing Logging

Instant Messaging creates log files that record events, related status of various software components, system errors, and other aspects of the server and multiplexor. By examining the log files, you can monitor many aspects of the server's operation.

You can configure the level of logging for both the Instant Messaging server and the multiplexor by specifying the parameters in the `iim.conf` file. For information on configuring the level of logging in the `iim.conf` file, see the section on To Change Configuration Parameters.

The location of the log files are specified during Instant Messaging installation.

- On Solaris, the default directory is:

  `/var/opt/SUNWiim/default/log`

- On Linux, the default directory is:

  `/var/opt/soim/default/log`

- On Windows, the default directory is:

  `c:\Program Files\Sun\InstantMessaging\log`

As part of the regular system maintenance, you need to periodically review and trim the log files from occupying more disk space. The server does not perform this action.

Logging Levels

The level or priority of maintaining the error log defines how detailed, or verbose, the log should be. A higher priority level implies less details as only events of high priority (high severity) are recorded in the log file. In contrast a lower priority level implies greater details as more events are recorded in the log file.

You can set the logging level separately for the Instant Messaging server and the multiplexor.

Table 2-1 contains the logging levels for the Instant Messaging server and their description. These logging levels are a subset of the levels defined by the Unix `syslog` facility.

Table 2-1 Logging Levels for the Instant Messaging Server and the Multiplexor

Level	Description
FATAL	This priority level records minimum logging details in the log file. A log record is added to the log file whenever a severe problem or critical condition occurs. If a FATAL problem occurs, the application might stop functioning.
ERROR	A log record is added to the log file whenever a recoverable software error condition occurs or a network failure is detected. For example, when the server fails to connect to a client or to another server.
WARNING	A log record is added to the log file whenever a user error is detected. For example, when the server cannot understand the communication sent by the client.
NOTICE	A periodic event is written to the log file to report the status of the server. This includes state (running), the number of clients connected, and number of inbound and outbound servers connected.
INFO	A log record is added to the log file whenever a significant action takes place. For example, when an end user successfully logs in or logs out.
DEBUG	The tasks are recorded in the log file. This information is useful for debugging purposes only. Each event with individual steps within each process or task are written to the log file, to help the end user identify the problems while debugging the application.

When you select a particular logging level, events corresponding to that level and to all higher and less verbose levels are logged.

`NOTICE` is the default level for both the server and the multiplexor log files.

NOTE If you specify `DEBUG` as the logging level, your log files will occupy more disk space. Monitor and trim your log files to prevent them from occupying more disk space.

To Set Log File Levels

The log file levels are set within the `iim.conf` file. The following are the two log file logging level options:

- The parameter for the logging to the server is: `iim.log.iim_server.severity`.
- The parameter for the logging to the multiplexor is: `iim.log.iim_mux.severity`.

For more information on configuring Instant Messaging, see To Change Configuration Parameters.

Managing End-User Privileges

The Administrator can control end-user access to Instant Messaging information by restricting privileges to the end user. These privileges determine if the end user can add and delete news channels, send alerts, and setup watches on other end users. These features provide the end users the access to the required features and views in the Instant Messaging. All the Instant Messaging features are controlled by the privilege system that determines what a end user can view or perform on Instant Messaging.

Instant Messaging provides the following access control mechanisms:

- Conference and News Channel Access Controls
- User privacy

Conference Room and News Channel Access Controls

For each Conference room and News channel, you can define the default access end users can have. The access privileges end users can have on Conference rooms and News channels are:

- `MANAGE`
- `WRITE`
- `READ`
- `NONE`

End users with the MANAGE privilege can set the default privilege level for all the other end users. They can also define the exception rules to grant an access level that is different from the default access level to specific end users or groups.

NOTE Setting the WRITE privilege, grants end users the READ privilege.

The conference room and news channel privileges are set through Sun Java System Instant Messenger. These files are updated automatically when you use Sun Java System Instant Messenger to manage conference rooms and news channels.

Table 2-2 lists the Conference room and News channel access control files and the privileges that these files provide end users. These access control files are located in the `db/acls` directory.

Table 2-2 Conference Room and News Channel Access Control Files

ACL File	Privileges
roomname.acl	This file sets access privileges that end users can have on conference rooms.
news channelname.acl	This file sets access privileges that end users can have on news channels.

Room and News Channels Access Control File Format

The format of the *roomname*.acl and *news channelname*.acl files is slightly different from the system level access control files. For more information on the system level access control files, see "Access Control File Format" on page 74. The *roomname*.acl and *news channelname*.acl files contain an additional number entry after the user or group entry that defines the access level. The access levels are:

- 1 - None
- 2- Read
- 6 - Write
- 14 - Manage

In the following news channel access control file example, the default access is Read, with Manage access given to user1, Write access given to user2, and an access of None to user3.

```
# Example newschannel.acl file
v:3.0.1
u:user1:14
u:user2:6
u:user3:1
g:cn=group1,ou=groups,o=example:6
d:2
```

NOTE The line v:3.0.1 in the newschannel.acl file, tells the server how to interpret the values. If this line is not included, the server will not be able to associate the value of 2 with Read access, and the value 6 with Write access.

NOTE Do not edit the *roomname*.acl and *news channelname*.acl files manually. These files are updated automatically as you use Sun Java System Instant Messenger to manage conference rooms and news channels. Because Instant Messaging server reads and writes these files when end users change access using Sun Java System Instant Messenger, end users can lose their changes if the files are edited manually while the server is running.

User Privacy

You can specify if other end users can see your presence or not. By default, all end users can see your presence status. You can also set exceptions for denying this access to certain end users and groups.

If you have denied other end users from accessing your presence status, then these end users will see your availability status as offline in their contact lists. These end users will not be able to send alerts or chat invitations to you, as your presence status is offline.

User privacy can be configured using the User Settings window in the Instant Messenger. For more information on configuring user privacy, see Instant Messaging Online Help.

Federating Deployment of Multiple Instant Messaging Servers

In an LDAP-only deployment, when you federate multiple Sun Java System Instant Messaging deployments you form a larger Instant Messaging community. End users from different servers can communicate with each other, user conference rooms on other domains, and subscribe to news channels on remote servers based on the access privileges.

In an Identity deployment, a single Sun Java System Instant Messaging server can host multiple domains. You can designate a single domain as the default domain for a Sun Java System Instant Messaging server instance. End users in different domains hosted by the same server cannot interact with each other. When you federate multiple Sun Java System Instant Messaging deployments, end users in default domains can see the end users in default domains of other remote Sun Java System Instant Messaging servers.

For enabling communication between multiple Sun Java System Instant Messaging servers in your network, you need to configure your server to identify itself to the other Sun Java System Instant Messaging servers in the network. A Sun Java System Instant Messaging server identifies itself with its domain name, host and port number, serverID, and password.

Within the server configuration, you can assign each Sun Java System Instant Messaging server a symbolic name, consisting of letters and digits, for example, `IMserver1`.

CAUTION It is recommended that the server-to-server communication is secured using TLS (SSL). This is required to prevent third party infringement of security when data is exchanged between two servers. This precaution is extremely desirable in the case where the link between the two servers uses the public internet. Follow the instructions outlined below to configure SSL between Instant Messaging servers.

To Configure Communication Between Instant Messaging Servers

This procedure describes how to enable communication between two Instant Messaging servers, `iim.company22.com` and `iim.i-zed.com`.

1. Gather the following information listed in Table 2-3.

   Table 2-3 lists the parameters in the `iim.conf` file for server-to-server communication and the values for these parameters in the Instant Messaging servers, `iim.company22.com` and `iim.i-zed.com`.

Table 2-3 Configuration Information for Server-to-Server Communication

Parameter in iim.conf File	Value for Server iim.company22.com	Value for Server iim.i-zed.com
`iim_server.serverid`	`Iamcompany22`	`Iami-zed`
`iim_server.password`	`secretforcompany22`	`secret4i-zed`
`iim_server.coservers`	`coserver1`	`coserver1`
`iim_server.coserver1.host`	`iim.i-zed.com:9919`	`iim.company22.com:9919`
`iim_server.coserver1.serverid`	`Iami-zed`	`Iamcompany22`
`iim_server.coserver1.password`	`secret4i-zed`	`secretforcompany22`

For more information on the configuration parameters, see Instant Messaging Configuration Parameters.

NOTE You can configure your server to communicate with other Instant Messaging servers. Each Instant Messaging server is identified by its symbolic name. The symbolic name of the server is added in the `iim_server.coservers` parameter in the `iim.conf` file. This parameter has multiple values and each value is separated by a comma.

2. Change to the `config` directory on the server `iim.company22.com`. For example, on Solaris:

```
cd /etc/opt/SUNWiim/default/config
```

3. Edit the `iim.conf` file, for example:

   ```
   vi iim.conf
   ```

NOTE The `iim.conf` file should be owned by the Instant Messaging server account you created during installation. If the `iim.conf` file cannot be read by the Instant Messaging server account, Instant Messaging server and multiplexor would be unable to read the configuration. Additionally, you might lose the ability to edit the `iim.conf` file.

The following example shows the section of the `iim.conf` file on `iim.company22.com` corresponding to the server-to-server communications that you can modify:

```
iim_server.serverid=Iamcompany22
iim_server.password=secretforcompany22
iim_server.coservers=coserver1
iim_server.coserver1.host=iim.i-zed.com:9919
iim_server.coserver1.serverid=Iami-zed
iim_server.coserver1.password=secret4i-zed
```

4. Follow Step 2 through Step 3 for the `iim.conf` file on server `iim.i-zed.com`.

   The following example shows the section of the `iim.conf` file on `iim.i-zed.com` corresponding to the server-to-server communications that you can modify:

```
iim_server.serverid=Iami-zed
iim_server.password=secret4i-zed
iim_server.coservers=coserver1
iim_server.coserver1.host=iim.company22.com:9919
iim_server.coserver1.serverid=Iamcompany22
iim_server.coserver1.password=secretforcompany22
```

5. Save the changes and refresh the configurations on both servers.

Using SSL in Instant Messaging

Instant Messaging supports the Secure Sockets Layer (SSL) protocol, for encrypted communications and for certificate-based authentication of Instant Messaging servers. Instant Messaging server supports SSL version 3.0.

Sun Java System Instant Messaging multiplexor and Instant Messenger also support SSL for encrypted communication between the client and the multiplexor.

For detailed information on SSL, see Appendix B in *Console and Administration Server 2004Q2 Server Management Guide.*

Enabling SSL for Instant Messaging server necessitates the following:

1. Obtaining and installing a certificate for your Instant Messaging server, and configuring the Instant Messaging server to trust the Certification Authority's certificate.
2. Ensuring that each Instant Messaging server that needs to communicate using SSL with your server, obtains and installs a certificate.
3. Turning on SSL in the server by setting the appropriate parameters in the `iim.conf` file.

Enabling SSL between the multiplexor and Sun Java System Instant Messenger requires the following:

1. Requesting a Certificate from the Certificate Authority
2. Installing the Certificate

NOTE For more information about managing certificates, see *Sun Java System Web Server Administrator's Guide.*

3. Enabling SSL Between the Multiplexor and Instant Messenger
4. To Activate SSL for Server to Server Communication
5. Invoking the Secure Version of Instant Messenger

Requesting a Certificate from the Certificate Authority

To enable SSL between Instant Messenger and multiplexor, you need to install the certificate and create databases for secure communication. You can request and install the certificate using Web Server.

To request and install a certificate using Web Server:

1. Type the following URL for starting the administration server in your browser:

   ```
   http://hostname.domain-name:administration_port
   ```

   Web Server then displays a window prompting you for a user name and password.

2. Type the administration user name and password you specified during the Web Server installation.

   Web Server displays the Administration Server page.

3. Create a separate Web Server instance. For more information on installing multiple instances of the server, see Installing Multiple Instances of the Server in *Web Server, Enterprise Edition Administrator's Guide* at:

   `http://docs.sun.com/source/816-5682-10/esgstart.htm#1003083`

4. Create a trust database to store the public and private keys, referred as the key-pair file. The key-pair file is used for SSL encryption.

   For information on creating a trust database, see Creating a Trust Database in *Web Server, Enterprise Edition Administrator's Guide* at:

   `http://docs.sun.com/source/816-5682-10/esecurty.htm#1004127`

5. Request a certificate from the Certificate Authority.

   For more information on requesting a certificate, see Requesting and Installing Other Server Certificates in *Web Server, Enterprise Edition Administrator's Guide* at:

   `http://docs.sun.com/source/816-5682-10/esecurty.htm#1004981`

Installing the Certificate

When you receive the server certificate from your Certificate Authority, you need to install the certificate.

To install the certificate:

1. Type the following URL for starting the administration server in your browser:

   ```
   http://hostname.domain-name:administration_port
   ```

   Web Server then displays a window prompting you for a user name and password.

2. Type the administration user name and password you specified during the Web Server installation.

   Web Server displays the Administration Server page.

3. Install the server certificate.

   For more information on installing the certificate, see Requesting and Installing Other Server Certificates in *Web Server, Enterprise Edition Administrator's Guide* at:

   ```
   http://docs.sun.com/source/816-5682-10/esecurty.htm#1004981
   ```

4. Change to your Web Server `alias` directory.

5. Copy the database files from your Web Server `alias` directory to the Instant Messenger `config` directory.

   To copy the database files from Web Server `alias` directory to the Instant Messenger `config` directory, type the following:

   ```
   cp https-serverid-hostname-cert7.db
   /etc/opt/SUNWiim/default/config/cert7.db
   ```

   ```
   cp https-serverid-hostname-key3.db
   /etc/opt/SUNWiim/default/config/key3.db
   ```

   ```
   cp secmod.db /etc/opt/SUNWiim/default/config/secmod.db
   ```

NOTE The end user on which the Instant Messaging server runs should have Read permission on `cert7.db, key3.db,` and `secmod.db` files.

6. Change to your Instant Messaging `config` directory.

   ```
   cd /etc/opt/SUNWiim/default/config
   ```

7. Create the sslpassword.conf file using an editor of your choice. For example, you could type:

   ```
   vi sslpassword.conf
   ```

8. Enter the following line to the sslpassword.conf file

   ```
   Internal (software) Token:password
   ```

   Password: The password specified during the creation of the trust database.

9. Save the file.

NOTE	All Instant Messenger end users should have Ownership and Read permission on the sslpassword.conf file.

10. After verifying the functioning of SSL, log in to Web Server as an administrator and remove the web server instance that you have created while requesting the certificate.

Enabling SSL Between the Multiplexor and Instant Messenger

Table 2-4 lists the parameters in the iim.conf file for enabling SSL between Instant Messenger and multiplexor. It also contains the description and the default value of these parameters:

Table 2-4 Configuration Information for enabling SSL Between Instant Messenger and Multiplexor

Parameter	Default Value	Description
iim_mux.usessl	off	If the value is set to "on", the multiplexor requires an SSL handshake for each connection it accepts, before exchanging any application data.
iim_mux.secconfigdir	/etc/opt/SUNWiim/default/config	This directory contains the key and certificate databases. It usually contains the security module database.

Table 2-4 Configuration Information for enabling SSL Between Instant Messenger and Multiplexor

Parameter	Default Value	Description
`iim_mux.keydbprefix`	None	This value should contain the key database filename prefix. The key database file name must always end with `key3.db.` If the Key database contains a prefix, for example `This-Database-key3.db`, then value of this parameter is `This-Database`.
`iim_mux.certdbprefix`	None	This value should contain the certificate database filename prefix. The certificate database file name must always end with `cert7.db`. If the certificate database contains a prefix, for example `Secret-stuff-cert7.db`, then value of this parameter is `Secret-stuff`.
`iim_mux.secmodfile`	`secmod.db`	This value should contain the name of the security module file.
`iim_mux.certnickname`	`Server-Cert`	This value should contain the name of the certificate you entered while installing the certificate. The certificate name is case-sensitive.
`iim_mux.keystorepasswordfile`	`sslpassword.conf`	This value should contain the relative path and the name of the file containing the password for the key database. This file should contain the following line: `Internal (software) Token:`*password* Where *password* is the password protecting the key database.

To enable SSL between Instant Messenger and Multiplexor:

1. Change to the `config` directory. For example, on Solaris:

   ```
   cd /etc/opt/SUNWiim/default/config
   ```

2. Edit the `iim.conf` file, for example:

   ```
   vi iim.conf
   ```

3. Add the values mentioned in the Table 2-4 to the Multiplexor configuration parameters.

   The following is an example of the `iim.conf` file with the Multiplexor configuration parameters:

```
! IIM multiplexor configuration
! ============================
!
! Multiplexor specific options

! IP address and listening port for the multiplexor.
! WARNING: If this value is changed, the port value of ’-server’ argument
! in the client’s im.html and im.jnlp files should also be changed to match
th
is.
iim_mux.listenport = "siroe.com:49909"

! The IM server and port the multiplexor talks to.
iim_mux.serverport = "siroe.com:49999"

! Number of instances of the multiplexor.
iim_mux.numinstances = "1"

! Maximum number of threads per instance
iim_mux.maxthreads = "10"

! Maximum number of concurrent connections per multiplexor process
iim_mux.maxsessions = "1000"

iim_mux.usessl = "on"
iim_mux.secconfigdir = "/etc/opt/SUNWiim/default/config"
iim_mux.keydbprefix = "This-Database"
iim_mux.certdbprefix = "Secret-stuff"
iim_mux.secmodfile = "secmod.db"
iim_mux.certnickname = "Server_Cert"
iim_mux.keystorepasswordfile = "sslpassword.conf"
```

Invoking the Secure Version of Instant Messenger

The secure version of Instant Messenger can be invoked by accessing the `imssl.html` file or `imssl.jnlp` file from your browser. These files are located under the resource directory, the base directory under which all the Sun Java System Instant Messenger resources are stored.

The links to these applet descriptor files can also be added to `index.html` file.

To Activate SSL for Server to Server Communication

Before you can activate SSL, you must create a certificate database, obtain and install a server certificate, and trust the CA's certificate as described earlier.

1. Set these `iim.conf` parameters:

    - `iim_server.usesslport=true`
    - `iim_server.sslport=9910`

    These parameters should already be in the `iim.conf` file.

2. Set the server-to-server configurations as described in Federating Deployment of Multiple Instant Messaging Servers, and add the following:

    - `iim_server.coserver1.usessl=true`

    Change the port number of the following:

    - `iim_server.coserver1.host=hostname:9910`

    The port number should be the SSL port of the other server.

    Following is a section of `iim.conf` file with the required SSL configuration:

```
! Server to server communication port.
iim_server.port = "49919”
! Should the server listen on the server to server communication port
iim_server.useport = "True”
! Should this server listen for server-to-server communication using ssl port
iim_server.usesslport = "True”
iim_server.sslport=49910
iim_server.coservers=coserver1
iim_server.coserver1.serverid=Iamcompany22
iim_server.coserver1.password=secretforcompany22
iim_server.coserver1.usessl=true
iim_server.coserver1.host=iim.i-zed.com:49910
iim_server.serverid=Iami-zed
iim_server.password=secret4i-zed
iim_server.secconfigdir = "/etc/opt/SUNWiim/default/config"
iim_server.keydbprefix = "This-Database"
iim_server.certdbprefix = "Secret-stuff"
iim_server.secmodfile = "secmod.db"
iim_server.certnickname = "Server_Cert"
iim_server.keystorepasswordfile = "sslpassword.conf"
```

Enabling SSL between two servers

Table 2-5 on page 39 lists the parameters in the `iim.conf` file for enabling SSL between two Instant Messaging servers. It also contains the description and the default value of these parameters:

Table 2-5 Configuration Information for Enabling SSL Between Two Instant Messaging Servers

Parameter	Default Value	Description
`iim_server.secconfigdir`	`/etc/opt/SUNWiim/default/config`	This directory contains the key and certificate databases. It usually contains the security module database.

Table 2-5 Configuration Information for Enabling SSL Between Two Instant Messaging Servers

Parameter	Default Value	Description
`iim_server.keydbprefix`	None	This value should contain the key database filename prefix. The key database file name must always end with `key3.db.` If the Key database contains a prefix, for example `This-Database-key3.db`, then value of this parameter is `This-Database`.
`iim_server.certdbprefix`	None	This value should contain the certificate database filename prefix. The certificate database file name must always end with `cert7.db`. If the certificate database contains a prefix, for example `Secret-stuff-cert7.db`, then value of this parameter is `Secret-stuff`.
`iim_server.secmodfile`	`secmod.db`	This value should contain the name of the security module file.
`iim_server.certnickname`	`Server-Cert`	This value should contain the name of the certificate you entered while installing the certificate. The certificate name is case-sensitive.
`iim_server.keystorepasswordfile`	`sslpassword.conf`	This value should contain the relative path and the name of the file containing the password for the key database. This file should contain the following line: `Internal (software) Token:`*password* Where *password* is the password protecting the key database.
`iim_server.trust_all_cert`	false	If this value is true than the server will trust all certificates and will also add the certificate information into the log files.

Managing Instant Messaging's LDAP Configuration

An LDAP-only deployment of Sun Java System Instant Messaging server requires a directory server. In an LDAP-only deployment, the Instant Messaging server uses the directory server to perform end-user authentication and to search for end users.

In an Identity deployment, Sun Java System Instant Messaging server uses the directory used by Sun Java System Portal Server. When installed in an Identity deployment environment, Sun Java System Instant Messaging server uses the directory used by the Sun Java System Sun Java System Identity Server to search for end users, and not for end-user authentication. In an Identity deployment, Sun Java System Sun Java System Identity Server performs the authentication.

If you use an LDAP directory to maintain your user namespace, the default configuration makes the following assumptions regarding the schema used by this directory:

- End user entries are identified by the `inetOrgPerson` object class.
- Group entries are identified by the `groupOfUniqueNames` object class.
- Sun Java System Instant Messenger user ID attribute of an end user is provided by the `uid` attribute (from `inetOrgPerson` objectclass).
- The email address of an end user is provided by the `mail` attribute.
- The display name of an end user or group is provided by the `cn` attribute.
- The list of members of a group is provided by the `uniqueMember` attribute (`groupOfUniqueNames` object class).

You can change these default settings by editing the `iim.conf` file.

Searching the Directory as Anonymous Users

Instant Messaging needs to be able to search the directory to function correctly. If your directory is configured to be searchable by anonymous users, Instant Messaging has the capability to search the directory. If the directory is not readable by anonymous users, you must take additional steps to configure the `iim.conf` file with the credentials of a user ID that has at least read access to the directory.

These credentials consist of:

- A distinguished name (`dn`)
- The password of the above `dn`

To Enable the Server to Conduct Directory Searches as a Specific End User

1. Identify values for the following parameters in the `iim.conf` file:
    - `iim_ldap.usergroupbinddn` - Specifies the distinguished name (`dn`) to use to bind to the directory for searches.
    - `iim_ldap.usergroupbindcred` - Specifies the password to use with the distinguished name (`dn`)

    For example:

    ```
    iim_ldap.usergroupbinddn="cn=iim server,o=i-zed.com"

    iim_ldap.usergroupbindcred=secret
    ```

NOTE You do not have to use administrator-level credentials with write level access, as all that is necessary is read access to the domain tree. Thus, if there is an LDAP user with read level access, use its credentials instead. This is a safer alternative as it does not force you to disseminate the administrator-level credentials.

2. In an Identity deployment, the directory is generally not searchable by anonymous users. In an Identity deployment set the `iim_ldap.useidentityadmin` configuration parameter to `true`. Also you can delete or comment out the following configuration parameters:
   - `iim_ldap.usergroupbinddn`
   - `iim_ldap.usergroupbindcred`.
3. Edit the `iim.conf` file.

   See "To Change Configuration Parameters" on page 23 for instructions on editing the `iim.conf` file.

   If the `iim_ldap.usergroupbinddn` and `iim_ldap.usergroupbindcred` parameters do not appear in the `iim.conf` file, you can add them anywhere in the file.

Configuring Dynamic LDAP Server Group

In the LDAP Server, the dynamic groups filter end users based on their DN and include them in a single group. The dynamic groups are defined in Directory Server as the `groupOfUrls` objectclass.

To enable end users to view the dynamic groups in search results and add them to their contact list, you need to include the `groupOfUrls` objects to search results.

The following modifications need to be made to the server configuration file `iim.conf`:

1. Change to the `config` directory. For example, on Solaris:

   ```
   cd /etc/opt/SUNWiim/default/config
   ```
2. Edit the `iim.conf` file. For example:

   ```
   vi iim.conf
   ```
3. Add the following information to the `iim.conf` file:

```
iim_ldap.usergroupbynamesearchfilter=(|(&(|(objectclass=groupofuniquenames)
(objectclass=groupofurls)))(cn={0}))(&(objectclass=inetorgperson)(cn={0})))

iim_ldap.groupbrowsefilter=(|(objectclass=groupofuniquenames)(objectclass=g
roupofurls))

iim_ldap.groupclass=groupOfUniqueNames,groupOfURLs
```

The attribute and objectclass names are configurable.By default, the `memberOfUrls` attribute is used as the membership attribute of a dynamic group. If you want to use an attribute name other than `memberOfUrls`, set the `iim_ldap.groupmemberurlattr` option to the attribute name you want to use.

Backing Up Instant Messaging Data

Instant Messaging does not come with any disaster recovery tools. Use your site's backup system to backup the configuration and database directories periodically.

Backup Information

The Instant Messaging information that needs to be backed up are of the following types:

- Configuration Information
- Instant Messaging end user data
- Instant Messenger resources

The configuration information is stored in the Instant Messaging configuration directory as follows:

- Solaris: `/etc/opt/SUNWiim/default/config`
- Linux: `/etc/opt/soim/default/config`
- Windows: *instant-messaging-installation-directory*`\config`
- (Optional) If you customized any of the files mentioned in Customizing Sun Java System Instant Messenger, back them up from the resource directory.

The Sun Java System Instant Messaging end user data is stored in the following database directories:

- Solaris: `/var/opt/SUNWiim/default/db`
- Linux: `/var/opt/soim/default/db`
- Windows: *instant-messaging-installation-directory*`\db`

The Instant Messenger resources must be backed up if they have been customized. The location of the Instant Messenger resources are provided during installation.

Performing Backup

While the configuration information does not change frequently, the Instant Messaging end-user data changes rapidly and to prevent any loss of end-user data it is recommended that the Instant Messaging end-user data is backed up on a periodic basis. Backup needs to be performed before running the installation program and the uninstallation program.

To backup the end user data and the configuration information you do not have to stop the Instant Messaging server as all the disk commits by the server are automatically performed.

Restoring the Back Up Information

The back up of the end-user data and the configuration information needs to be restored when there is a disk failure and all the end-user data and the configuration information is lost.

To restore the backed up end-user data:

1. Change to the runtime directory. For example:

   `cd` *runtime-directory*

2. Grant read-only permission to the instant-messaging-database directory, type:

   ```
   chmod -R 400 db
   ```

3. Stop the Instant Messaging server, type:

   ```
   imadmin stop
   ```

4. Grant Write permission on the end-user data files for the server end user, type:

   `chmod -R 600` *runtime-directory*`/db/.`

5. To restore the data, copy the backed up data to the instant-messaging-database directory.

6. Start the Instant Messaging server, type:

   ```
   imadmin start
   ```

   On Solaris - the default value of *runtime-directory* is `/var/opt/SUNWiim/default.`

   On Linux - the default value of *runtime-directory* is `/var/opt/soim/default.`

Chapter 3

Managing Instant Messenger

This chapter describes how to customize and administer Instant Messenger in the following sections:

- Configuring Sun Java System Instant Messenger
- Invoking Instant Messenger
- Solving Web Server Issues
- Customizing Sun Java System Instant Messenger
- Instant Messenger Resource Files
- Administering Conference Rooms and News Channels
- Modifying Instant Messenger Proxy Settings
- Controlling the Exposed Messenger Feature Set
- Instant Messenger Data Stored in the End User's System

Configuring Sun Java System Instant Messenger

There are two ways to configure and invoke Sun Java System Instant Messenger:

Using Java Web Start In this configuration, Sun Java System Instant Messenger is launched as an application from the Java Web Start. The browser is no longer necessary once Sun Java System Instant Messenger is launched.

Using the Java Plug-in In this configuration, Sun Java System Instant Messenger is run as a Java applet. To keep the Instant Messenger session active, the browser window from which the applet was launched must remain open and cannot be used to locate any other URL.

For more information on how to configure the Java software that enables Sun Java System Instant Messenger, see the *Instant Messaging Installation Guide*.

Invoking Instant Messenger

You can invoke Sun Java System Instant Messenger using:

- The `index.html` file that provides you the options to launch both the Java Web Start and Java Plug-in versions of the Sun Java System Instant Messenger. This file also contains links to Sun Java System Instant Messenger documentation.
- The web page that you have designed with a link to Sun Java System Instant Messenger.
- A direct URL for either the `im.html` or `im.jnlp` files.

To Invoke Sun Java System Instant Messenger

Use the following URL to invoke the Instant Messenger.

`http://`*webserver***`:`***webserverport***`/`***subdirectory***`/`***filename*

In this URL,

webserver	Specifies the name of the web server where you have installed the Instant Messenger resources.
webserverport	(Optional) Specifies the web server port. The default value is `80`.
subdirectory	(Optional) Specifies the directory where the client files are installed. If the default *web-server-resource-directory* is selected during the installation, then no subdirectory is required to store the client files.
filename	Specifies the Sun Java System Instant Messenger file to use: `index.html` - This file is provided with the product. The file contains the links to launch both the Java Web Start and Java Plug-in versions of Instant Messenger. `im.jnlp` - The jnlp file to launch only the Java Web Start version of Sun Java System Instant Messenger. `im.html` - The page to launch only the Java Plug-in version of Sun Java System Instant Messenger.

You can also, do the following:

- Add the URL to your favorites.
- Launch the application using the Java Web Start icon on your desktop.
- Use the shortcut on your desktop. You can also create a shortcut by setting the target value as `Java-Web-Start/javaws.exe 'URL'`.
- On Solaris, to invoke Instant Messenger from the command-line, type:

  ```
  Java-Web-Start/javaws URL
  ```

Solving Web Server Issues

This section describes web server issues that apply to LDAP deployments and also to portal deployments, where Instant Messenger is not installed on the Portal Server host and uses a different Web Server to provision Sun Java System Instant Messenger.

Changing the Codebase

The web-server-resource directory can be the same directory as the instant-messaging-resource directory. However, they do not need to be the same. If they are not the same for your site, use the appropriate method from the following to enable the web server to download the Sun Java System Instant Messenger resources:

- Web server - You can configure the web server to enable access to the directory where the Sun Java System Instant Messenger files are installed, or create a symbolic link in the web-server-resource directory.

  For example, if the Instant Messaging server host is `iim.i-zed` and the Sun Java System Instant Messenger files are installed in the `/opt/SUNWiim/html` directory, you need to create a symbolic link such as `iim` which points to the `/opt/SUNWiim/html` directory within the web-server-resource directory.

NOTE If you are using a symbolic link, you need not change the web server configuration.

- URL to launch Sun Java System Instant Messenger - The URL that is used by end users to access the `index.html` (and `im.html` and `im.jnlp` files). This URL needs to reference the Sun Java System Instant Messenger installation directory.

  For example, if the Instant Messaging server host is `iim.i-zed` and the Sun Java System Instant Messenger files are installed in the `/opt/SUNWiim/html` directory, you need to create a symbolic link, such as `iim`, in the web-server-resource directory which points to `/opt/SUNWiim/html`. End users can access the Sun Java System Instant Messenger main page `index.html` using the following URL:

  `http://iim.i-zed.com/iim/`

  End users can also type the following URLs to launch Sun Java System Instant Messenger directly:

  For Java Plug-in:

  `http://iim.i-zed.com/iim/im.html`

  For Java Web Start:

  `http://iim.i-zed.com/iim/im.jnlp`

- Launch the Instant Messenger using Java Web Start- If the Instant Messaging Codebase specified during the installation is changed then you need to change the `codebase` parameter in the `im.jnlp` file to reference the web server and the Sun Java System Instant Messenger path. The following is the change to the `codebase` parameter:

  `codebase= http://`*servername:port/path/*

  You need to include the port number of the web server if it is not configured to the default value `80`.

  For example, if the Instant Messaging server host is `iim.i-zed` and the Sun Java System Instant Messenger files are installed in the `/opt/SUNWiim/html` directory, you can create a symbolic link such as `iim` which points to `/opt/SUNWiim/html` in the web-server-resource directory. Then change the `codebase` parameter in the `im.jnlp` file to the following:

  `codebase="http://iim.i-zed.com/iim/"`

NOTE The `im.jnlp` file is used for Java Web Start. If you are using Java Plug-in to launch Instant Messenger, you need not modify these files.

Changing Web Server Port

If your web server is installed on a port other than the default (80), you need to know the following details:

- Launching Instant Messenger using Java Web Start - Edit the `im.jnlp` file and change the `codebase` parameter to:

  `codebase="http://`*webserver*`:`*webserverport*`"`

  For example, if the Instant Messaging server host is `iim.i-zed and` the web server is running on port 8080, the `codebase` parameter in the `im.jnlp` file should be:

  ```
  codebase="http://iim.i-zed.com:8080"
  ```

- Launching Sun Java System Instant Messenger using URL - The URL for the `index.html` and `im.html` and `im.jnlp` files needs to reference the web server port.

  For example, if the Instant Messaging server host is `iim.i-zed and` the web server port is `8080`, the URL to access the Sun Java System Instant Messenger main page `index.html` will be:

  ```
  http://iim.i-zed.com:8080
  ```

Customizing Sun Java System Instant Messenger

Sun Java System Instant Messenger is customizable. HTML and JNLP files can be customized to suit an organization's specific needs.

You can customize the Instant Messenger to meet your requirements in the following ways:

- Customizing the index.html and im.html Files (Only LDAP Deployments)
- Customizing the Application (Java Web Start)
- Customizing User Name Display

This section describes the Instant Messaging server files you can modify to customize Sun Java System Instant Messenger. The files that you can customize are all located in the `html` directory. For example, on Solaris the HTML files are located in the instant-messaging-resource directory.

Instant Messenger Resource Files

The Instant Messenger resource files are located within the directory referred to as the instant-messaging-resource directory, which is also simply referred to as the resource directory.

Table 3-1 contains the list of Sun Java System Instant Messenger files in the instant-messaging-resource directory. It also contains the description and the customization information of these files.Within the instant-messaging-resource directory, is the locale subdirectory represented generically in a directory path as *lang*, but specifically as abbreviations of languages, such as, `en_US`, `jp`, and `fr_FR`.

Table 3-1 Sun Java System Instant Messenger Files

File	Description	Customizable?
lang/`im.html`	The initial page that launches the Java Plug-in version of Sun Java System Instant Messenger.	Yes.
`im.html.template`	The template version of `im.html`.	No. This file is used by the installation program to generate the `im.html` file.
`imdesktop.jar`	A client `jar` file, downloaded by `im.html` or `im.jnlp` files.	No.
lang/`im.jnlp`	The `jnlp` file to launch Java Web Start version of Sun Java System Instant Messenger.	Yes.
`im.jnlp.template`	The template version of `im.jnlp`.	No.
`imjni.jar`	A client `jar` file, downloaded by `im.html` or `im.jnlp`.	No.
`messenger.jar`	The main client jar file, downloaded by im.html or im.jnlp.	No
`icalendar.jar`	The icalendar parser used to process calendar reminders.	No
`imnet.jar`	A client `jar` file, downloaded by `im.html` or `im.jnlp`.	No.
lang/imbrand.jar	This file contains customizable properties, stylesheets, images and audio files.	Yes

Table 3-1 Sun Java System Instant Messenger Files

File	Description	Customizable?
lang/imssl.html	The Initial page that launches Java Plug-in version of Sun Java System Instant Messenger. It is used for running SSL between the client and the multiplexor.	Yes.
imssl.html.template	The template version of imssl.html	No.
lang/imssl.jnlp	This file launches Java Web Start version of Sun Java System Instant Messenger. This file is used for running SSL between the client and the multiplexor.	Yes.
imssl.jnlp.template	The Template version of imssl.jnlp file.	No.
jnlpLaunch.jsp	If an end user is already logged onto Sun Java System Sun Java System Identity Server, then this file can be used to allow single sign-on and to launch Sun Java System Instant Messenger using Java Web Start.	Yes
pluginLaunch.jsp	If an end user is already logged onto Sun Java System Sun Java System Identity Server, then this file can be used to allow single sign-on and to launch Sun Java System Instant Messenger using Java Plug-in.	Yes
index.html	The splash page for an LDAP deployment. It contains links to im.html and im.jnlp, as well as documentation links to windows.htm, solaris.htm, and quickref.htm. You can customize this page for your site's requirement.	Yes.
index.html.template	The template version of index.html.	No.
lang/imhelp/SunONE.jpg	The image used by quickref.htm, solaris.htm, and windows.htm.	Can be replaced.
javaws_not_installed.html	The page that appears when an end user tries to launch the Sun Java System Instant Messenger by using Java Web Start and Java Web Start has not been installed on the end user's system.	Yes.

Table 3-1 Sun Java System Instant Messenger Files

File	Description	Customizable?

`quickref.html`
`solaris.html`
`windows.html`
	Located in `lang/imhelp/`, they provide documentation on getting started with Sun Java System Instant Messenger.	Yes.

lang`/imhelp`	Instant Messenger Online Help directory.	No.
`icalendar.jar`	This jar file contains files that are used to display calendar notifications.	No.

Customizing the index.html and im.html Files (Only LDAP Deployments)

The Instant Messenger allows you to modify the “static” portion of the `index.html` and `im.html` files to produce a fully customized user interface. These HTML files contain both text and markups describing how the text is formatted and handled. Markup is implemented through a set of tags, which specify formats for headers, indents, font size, and font style.

Some of the page elements that can be modified are:

- Images and Banner
- Text on screen including title and field labels
- Background schemes

The `index.html` file launches both the Sun Java System Instant Messenger applet and the Java Web Start application. If you are running the Sun Java System Instant Messenger applet, modify the `im.html` file. The `im.html` file is called by `index.html`, and invokes the Instant Messenger applet. The `im.html` file is generated during the installation and contains an applet argument that points to the multiplexor.

NOTE The argument “`<PARAM NAME="server" VALUE="servername">`” represents the Instant Messaging multiplexor and its port in the `im.html` file. If you change the `iim_mux.listenport` parameter’s default value, you need to change the *servername* value to *host.domain*:*port*.

Launching Instant Messenger Using Sun Java System Identity Server SSO

To launch the Sun Java System Instant Messenger client using single sign-on with Sun Java System Identity Server use `jnlpLaunch.jsp` and `pluginLaunch.jsp`. These files are in the resource directory. To launch the Instant Messaging server enter the following in the browser:

`instant-messaging-codebase/jnlpLaunch.jsp?server=muliplexor-hostname:muliplexor-port`

or

`intant-messaging-codebase/pluginLaunch.jsp?server=www.example.com:49909`

where,

`intant-messaging-codebase` is the codebase from which the Instant Messenger resources are downloaded. For example, `http://www.example.com`.

`(multiplexor)-hostname` is the name for the mulitplexor. For example, http://www.compnay22.com.

`(multiplexor) port` is the multiplexor port number. For example, 49909

`jnlpLaunch.jsp` is used for launching Instant Messenger using Java Web Start.

`pluginLaunch.jsp` is used for launching Instant Messenger using Java Plug-in.

NOTE

- The `jnlpLaunch.jsp` and `pluginLaunch.jsp` files require an argument for the server.
- The `jnlpLaunch.jsp` and `pluginLaunch.jsp` files can be customized similar to `im.jnlp` and `im.html` files.

Customizing the Application (Java Web Start)

If you are running Sun Java System Instant Messenger using Java Web Start, you can modify the `im.jnlp`, `imres.jnlp`, and `imres.jar` files to customize the user interface. The following are modifications that can be made to these HTML files:

- `im.jnlp` - this file invokes the Java Web Start version of the Instant Messenger application. You can modify the codebase, title, vendor, and descriptions in the file.

Table 3-2 shows a sample `im.jnlp` file with the HTML code that can be customized in bold typeface.

Table 3-2 Sample `im.jnlp` file.

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Instant Messenger -->
<jnlp
  spec="1.0+"
  codebase="INSERT_CODEBASE_HERE"
  href="INSERT_LOCALE_HERE/im.jnlp">
  <information>
    <title>Title</title>
    <vendor>Name</vendor>
    <homepage href="http://home.htm"/>
    <description>Description</description>
    <description kind="short">Description Kind</description>
    <icon href="IM_JLF32x.gif"/>
    <offline-allowed/>
  </information>
  <security>
    <all-permissions/>
  </security>
  <resources>
    <j2se version="1.3+">
      <resources>
        <jar href="INSERT_LOCALE_HERE/imres.jar"/>
        <jar href="INSERT_LOCALE_HERE/imbrand.jar"/>
      </resources>
    </j2se>
    <jar href="messenger.jar"/>
    <jar href="imdesktop.jar"/>
    <jar href="imnet.jar"/>
    <jar href="icalendar.jar"/>
    <nativelib href="imjni.jar"/>
  </resources>
  <application-desc main-class="com.iplanet.im.client.iIM">
    <argument>server=INSERT_SERVER_HERE</argument>

<argument>help_codebase=INSERT_CODEBASE_HERE/INSERT_LOCALE_HERE</argument
>
  </application-desc>
</jnlp>
```

NOTE In the `im.jnlp file`, the argument `<argument>`*servername*`</argument>` represents the Instant Messaging multiplexor host and port. If you change the default value of `iim_mux.listenport` parameter, you need to change the *servername* value to *host.domain*:*port*.

- `imbrand.jar` - This file contains the image and audio files, and the properties that can be customized. You need Java Developers Kit 1.3(JDK) to extract the contents from the imres.jar file using the `jar` command. For more information on the `imbrand.jar` file contents, see Contents Listing of imbrand.jar file.

  The following is the syntax for the `jar` command:

  ```
  jar xvf imbrand.jar
  ```

  This command creates a directory tree where the resource files are copied. This directory structure has to be maintained when you modify the individual files in the `jar` file.

  You can substitute your version of `.gif` files or `.au` files, without changing the file names and then place the changed files back to the directory using the following `jar` command:

  ```
  jar -uf imbrand.jar com/Sun/im/client/images/*.gif
  ```

  This command updates the `imbrand.jar` file with the modified `.gif` files. The same is possible with the audio files (`.au` files).

Contents Listing of imbrand.jar

Table 3-3 lists the files in the `imbrand.jar` file and their description. The `imbrand.jar` file contains the image and audio files that can be used to re-brand the Sun Java System Instant Messenger.

Table 3-3 Contents Listing of imbrand.jar file.

File Name	Description
`Angry_16.gif`	An emoticon used to show angry emotion graphically.
`Devil_16.gif`	An emoticon used to show devilish emotion graphically.
`Laugh_16.gif`	An emoticon used to show laugh emotion graphically.
`Angel_16.gif`	An emoticon used to show angelic emotion graphically
`Smiley_16.gif`	An emoticon used to show smile emotion graphically.

Table 3-3 Contents Listing of imbrand.jar file.

File Name	Description
Love_16.gif	An emoticon used to show love emotion graphically
Grin_16.gif	An emoticon used to show grin emotion graphically.
Wink_16.gif	An emoticon used to show wink emotion graphically.
Sad_16.gif	An emoticon used to show sad emotion graphically.
Suprise_16.gif	An emoticon used to show suprise emotion graphically.
Away_13.gif	Icon for away status that appears in the Change Status menu.
Online_13.gif	Icon for online status that appears in the Change Status menu.
Offline_13.gif	Icon displayed when an end user is away or not connected that appears in the Change Status menu.
Idle_13.gif	Icon to show idle status, appears in the status bar and contact list.
Forwarded_13.gif	Icon displayed against end users when they are offline and have set alerts to be forwarded to email. This icon appears in the contact list.
Away_24.gif	Icon for away status that appears in the status bar.
Online_24.gif	Icon for online status that appears in the status bar.
Offline_24.gif	Icon for offline status that appears in the status bar.
tray_icon.ico	Instant Messenger icon that appears on the task bar.
app_icon.gif	The Instant Messenger application icon.
logon_splash.gif	The logo displayed in the Login and About boxes
alert.au	Sound when an end user receives an alert.
away.au	Sound when an end user changes status to away.
soundon.au	Sound when an end user exits Instant Messenger.
soundoff.au	Sound when an end user logs on to Instant Messenger.
send.au	Sound when an end user sends an instant message.
receive.au	Sound when an end user receives an instant message.

Rebranding Instant Messenger

The `imbrand.jar` file contains all images and the properties that control the look and feel of the Instant Messenger. You can customize the appearance of the Instant Messenger by modifying the images and the properties in the `imbrand.jar` file.

To re-brand the Instant Messenger:

1. Copy `imbrand.jar` file to a working directory and change to this directory. For example:

   `cp` *instant-messaging-resource-directory/lang/*`imbrand.jar` *working_directory*

2. Extract the `imbrand.jar` file.

   ```
   jar xf imbrand.jar
   ```

   This command creates a directory tree where the resource files are copied. This directory structure has to be maintained when you modify the individual files in the `jar` file.

3. Update the `imbrand.jar` file with the modified `.gif` files and `.au` files.

   ```
   jar cf imbrand.jar .
   ```

4. Copy the `imbrand.jar` file to the resource directory. For example:

   `cp imbrand.jar` *instant-messaging-resource-directory/lang/*`.`

NOTE If multiple locales are supported, the procedure for re-branding Instant Messenger should be followed for every supported locale.

Customizing User Name Display

The User Name display can be customized in the tooltip and the search results.

Customizing User Name Display in Search Results

When two end users have the same first name and last name, it is impossible to know which end user has to be added to the contact list. You can customize the Instant Messenger to display more information in the search results for the user search. For displaying more information in the user search results, in the `imbrand.jar` file you need to add `dialogs.searchresults.format` attribute to the `brand.properties` file at:

```
com/sun/im/client/
```

For more information on how to modify `imbrand.jar`, see Customizing the Application (Java Web Start).

More information can be displayed in the user search results by including additional LDAP attribute values in the `dialogs.searchresults.format` attribute.

The LDAP attributes are specified in the following format:

```
${attr:attribute-name}
```

The following example shows the LDAP attribute in `dialogs.searchresults.format` attribute:

```
dialogs.searchresults.format=(${attr:title})
```

To use arbitrary attributes from the LDAP user entry, the list of these custom attributes needs to be specified in the server configuration file `iim.conf`. These custom attributes need to be specified as values for the attribute `iim_ldap.userattributes`.

The following example shows the `iim_ldap.userattributes` with the list custom attributes as value:

```
iim_ldap.userattributes=title,department,telephonenumber
```

Customizing User Name Display in Tooltip

You can customize the Instant Messenger to display additional information in the Contact tooltip.

For example, to display the phone number of the Contact when the mouse is placed over the Contact:

1. Change to the following directory:

   `com/sun/im/client/`

2. Open the `brand.properties` file.
3. Add the `contact.tooltip.format.html` attribute to the file.
4. Save the changes to the file
5. Change to the following directory.

   `cd` *instant-messaging-resource-directory*

6. Add the `contact.tooltip.format.html` attribute and the `telephonenumber` attribute as its value in the HTML code of the `imbrand.jar` file:

   ```
   contact.tooltip.format.html=mailto: ${attr:mail} tel:
   ${attr:telephonenumber}
   ```

For information on customizing the `imbrand.jar` file, see Customizing the Application (Java Web Start).

Administering Conference Rooms and News Channels

Listed below are tasks that you can perform in Sun Java System Instant Messenger to administer the conference rooms and the news channels. For more information on performing these tasks, see the *Sun Java System Instant Messenger Online Help*.

- Administering conference rooms
- Administering and managing news channels
- Assigning conference room access levels to end users
- Assigning news channel access levels to end users
- Assigning end users to conference rooms
- Assigning end users to news channels (subscribing)
- Creating new conference rooms
- Creating new news channels
- Configuring end user settings
- Deleting conference rooms
- Deleting messages from news channels
- Deleting news channels
- Posting messages in news channels
- Removing end users from conference rooms
- Removing end users from news channels

Granting End Users the Privilege to Create Conference Rooms and News Channels

The administrator can create conference rooms and news channels for end users. However, with the proper privileges, end users can do this also. For more information about adding policies to give end users access to create conference rooms and news channels, see Chapter 4, "Managing Instant Messaging and Presence Policies" on page 67. End users who create a conference room or a news channel by default have Manage access, enabling them to administer the conference room or the news channel. For more information on managing end-user privileges, see "Managing End-User Privileges" on page 26.

Modifying Instant Messenger Proxy Settings

Sun Java System Instant Messaging messages can contain embedded URLs. For example, `http://stocks.yahoo.com?id=sunw`. If you are using proxy servers, you need to resolve such embedded URLs by modifying the Instant Messenger proxy settings in the Java Web Start configuration.

This is likely to happen if your organization has a firewall, and you need to go through the proxy server before connecting your client hosts to internet, and if Java Web Start has not been configured with the right proxy settings.

To Modify Instant Messenger Proxy Settings

Java Web Start can automatically configure the proxy settings by querying the system or the default browser. However, it is not possible for the Java Web Start to automatically configure these settings if the proxy settings are configured using a JavaScript file.

To set the proxy settings manually:

1. Invoke Java Web Start.
2. From the File menu, choose Preferences.
3. Select Manual option in the Preferences dialog.

4. Enter the following details:

   HTTP Proxy. Enter the Name or the IP address of the proxy server.

   HTTP Port. Enter the port number of the proxy server.

   No Proxy_Hosts. Enter the name of any domain that you can connect directly, bypassing the proxy server. Use commas to separate multiple host names.

5. Click OK to save the proxy settings.

Controlling the Exposed Messenger Feature Set

The exposed feature set of the Instant Messenger can be controlled by the administrator by configuring the Instant Messaging applet parameters in the applet descriptor files.

Table 3-4 shows the Instant Messenger applet parameters in the applet descriptor files. It also contains the description and the default values of these parameters.

Table 3-4 Instant Messenger Applet Parameters

Parameter	Default Value	Description
`server`	`127.0.0.1`	The Instant Messaging server host and port.
`debug`	`FALSE`	If this parameter is set to true, the applet records all the task performed on java console.
`uid`		This parameter is used for SSO.
`token`		This parameter contains SSO token and is used for auto-logon.
`secure`	`FALSE`	Indicates to the Instant Messenger that it is run in SRA mode. It displays a security indicator.
`usessl`	`FALSE`	Tells Instant Messenger to use SSL when connecting to server.
`allow_alert_only`	`FALSE`	Tells Instant Messenger to let end user display neither the contact list nor the news channel. This parameter is used in `CHAT` and `POPUP` flavors.
`allow_file_transfer`	`TRUE`	Allows file attachment and transfer.

Table 3-4 Instant Messenger Applet Parameters *(Continued)*

Parameter	Default Value	Description
`enable_moderator`	`TRUE`	If set to true, enables the moderated conference feature.
`messenger_bean`		This parameter contains a list of messenger beans to be used. You can enter multiple factory class names with each separated by a comma.
domain	null	This parameter is used in multi-domain Sun Java System Identity Server deployments. The value of this parameter should be the logical domain name of the organization in which this end user is present.
`gateway_url`	null	This parameter contains the URL of the gateway component of portal SRA.

Instant Messenger Data Stored in the End User's System

Instant Messenger caches a limited amount of information on the end user's system for auto-login. This information can be located at:

home-directory`/.sunmsgr`

home-directory is the end user's home directory. The home directory of the end user can be obtained from the `user.home` parameter in the Java system property.

Table 3-5 shows the directories and files containing the cached data. It also contains the description of the files and the directories.

Table 3-5 The directory and files containing the cached data

File/Directory Name	Type	Description
`.sunmsgr/messenger.properties`	file	The file containing the auto-logon properties
`.sunmsgr/`*<user_domain>*`/`	directory	Directory containing data specific to a particular {log-in name, domain name} combination.

Table 3-5 The directory and files containing the cached data *(Continued)*

File/Directory Name	Type	Description
`.sunmsgr/`*<user_domain>*`/messenger.properties`	file	This file contains auto-logon options specific to particular *<user_domain>*. This file is not used.
`.sunmsgr/`*<user_domain>*`/messages/`	directory	This directory contains cached messages. This directory is not used.

Table 3-6 shows the auto-logon properties for Instant Messaging. It also contains the description and the default values of these properties.

Table 3-6 The Auto-logon Properties

Parameter	Default Value	Description
`net.server`	`127.0.0.1`	Instant Messaging server host name and port.
`net.server.`*n* (Where *n* is a digit used to distinguish one entry from another)		The secondary servers' host names and port numbers.
`net.user`		The default user id
`net.pass`		The encoded user password that enables auto-logon.

Chapter 4

Managing Instant Messaging and Presence Policies

The Sun Java™ System Instant Messaging server provides various functional features such as chat, conferencing, polls, presence access, etc. A policy describes a set of access control privileges that can be associated with these features. In turn, end users and groups can be assigned to policies according to the needs of an organization.

This chapter describes how to define and use policies to manage the access that end users and administrators have to the Sun Java System Instant Messaging server features and privileges:

- Overview of Privacy, Security, and Site Policies
- Methods for Controlling End User and Administrator Privileges
- Managing Policies Using Access Control Files
- Managing Policies using Sun Java System Identity Server
- Migrating from Instant Messaging 6.0

Overview of Privacy, Security, and Site Policies

Instant Messaging provides the ability to control access to Instant Messaging features and preserve end-user privacy.

Site Policies

Site policies specify end-user access to specific functionality in Instant Messaging. It specifies:

- Ability to access the presence status of other end users
- Ability to send alerts to other end users
- Ability to save properties on the server
- Ability to create and manage conference rooms
- Ability to create and manage news channels

The Instant Messaging administrator has access to all Instant Messaging features. The administrator has `MANAGE` access to all conference rooms and news channels, can view presence information of any end user, and can view and modify properties such as Contact Lists and Instant Messenger Settings of any end user. The site policy settings have no impact on the administrator's privileges.

By default, the end user is provided with the privileges to access the presence status of other end users, send alerts to end users, and save properties to the server. In most of the deployments, the default values are not changed. These default values need to be changed when Instant Messaging is used exclusively for the pop-up functionality.

When Instant Messaging is used exclusively for the pop-up functionality, the end user will not be provided with the access privileges to presence information, chat, and news features.

NOTE Although certain privileges can be set globally, the administrator can also define exceptions for these privileges. For example, the administrator can deny certain default privileges to select end users, roles, or groups.

For more information on configuring site policies, see "Managing Instant Messaging and Presence Policies" on page 67.

Conference Room and News Channel Access Controls

End users can have the following access privileges on Conference rooms and News channels:

- `MANAGE` - full access, which includes the ability to set the conference room or the news channel privilege for other end users.
- `WRITE` - privilege to add contents to the conference room or the news channel.
- `READ` - privilege to read the conference room or the news channel contents.
- `NONE` - no access privileges.

End users with the `MANAGE` privilege can set the default privilege level for all the other end users. These end users can also define the exception rules to grant an access level that is different from the default access level permission given to specific end users or groups.

NOTE Setting the `WRITE` privilege, grants the end users the `READ` privilege.

User Privacy

End users can specify if other end users can see their presence or not. By default, all end users can access the presence information of another end user. End users can also set exceptions for denying this access to certain end user and groups.

If an end user has denied other end users from accessing the end user's presence status, then that end user's availability status appears as offline in others contact lists. No alerts or chat invitations can be sent to an end user whose presence status is offline.

User privacy can be configured using the User Settings window in the Instant Messenger. For more information on configuring user privacy, see *Instant Messenger Online Help.*

Methods for Controlling End User and Administrator Privileges

Different sites using Sun Java System Instant Messaging server have different needs in terms of enabling and restricting the type of access end users have to the Instant Messaging service. The process of controlling end user and administrator Sun Java System Instant Messaging server features and privileges is referred to as policy management. There are two methods of policy management available: through access control files or through Sun Java System Identity Server.

Introduction to Managing Policies Using Access Control Files

The access control file method for managing policies allows you to adjust end-user privileges in the following areas: news channel management, conference room management, the ability to change preferences in the User Settings dialog, and ability to send alerts. It also allows specific end users to be assigned as system administrators.

Introduction to Managing Policies Using Sun Java System Identity Server

Managing policies through Sun Java System Identity Server gives you control of the same privileges available with the access control file method; however it additionally allows more fine-tuned control over various features, such as: the ability to receive alerts, send polls, receive polls, etc. For a complete list, please refer to table Table 4-4 on page 78. Furthermore, managing policies using Sun Java System Identity Server gives you finer-tuned control over privileges.

Two types of policies exist: Instant Messaging policies and Presence policies. The Instant Messaging policies govern general Instant Messaging features, such as the ability to send or receive alerts; the ability to manage public conferences and news channels; and the ability to send files. Presence policies govern the control end users have over changing their online status, and in allowing or preventing others from seeing their online or presence information.

Managing Policies: The Method to Use

When choosing which method to use to manage policies, it is also necessary to choose where they will be stored. You select the method for managing policies by editing the `iim.conf` file and setting the `iim.policy.modules` parameter to either `identity` for the Identity Server method or `iim_ldap` for the access control file method, which is also the default method.

If you will use an LDAP-only deployment—therefore, you will not be using Sun Java System Identity Server—you must use the access control file method. If you are using Sun Java System Identity Server with the Sun Java System Instant Messaging server, and you have installed the Instant Messaging and Presence services components, you can use either policy management method. Please note that managing policies using Sun Java System Identity Server is a more comprehensive method. One advantage of this method is that it allows you to store all end-user information in the directory.

The specific steps for setting which method you want to use to manage policies are as follows:

1. Change directories to the directory that contains the `iim.conf` file.
2. Open the `iim.conf` file using an editor of your choice.
3. Edit the `iim.policy.modules` parameter by setting it to one of the following:
   - `iim_ldap` (the access control file method)
   - `identity` (the Identity Server method)
4. Edit the `iim.userprops.store` parameter and set it to either:
   - ldap (to store user properties in LDAP)
   - file (default, to store user properties in files)
5. Save your changes.
6. Refresh the configuration.

Policy Configuration Parameters

Table 4-1 lists and describes the new parameters available in the `iim.conf` file that relate to the increased role that Sun Java System Identity Server can play in Instant Messaging deployments:

Table 4-1 New Parameters Related to Identity Server in iim.conf File

Parameter Name	Use	Values
`iim.policy.modules`	Indicates if Sun Java System Identity Server is used for policy storage	iim_ldap (default) identity
`iim.userprops.store`	Indicates if the user properties are in user properties file or from LDAP	file (default) ldap

NOTE Currently the `iim.userprops.store` parameter is only significant when the service definitions for the Presence and Instant Messaging services have been installed.

Managing Policies Using Access Control Files

By editing access control files you control the following end-user privileges:

- To access the presence status of the other end users
- To send alerts to other end users
- To save properties on the server
- To create new conference rooms
- To create new news channels

By default, end users are provided the privileges to access the presence status of other end users, send alerts to end users, and save properties to the server. In most of the deployments, the default values need not be changed.

NOTE Although certain privileges can be set globally, the administrator can also define exceptions for these privileges. For example, the administrator can deny certain default privileges to select end users or groups.

The location of the access control files are:

- On Solaris:

  `/etc/opt/SUNWiim/default/config/acls`

- On Linux:

  `/etc/opt/soim/default/config/acls`

- On Windows, the default directory is:

  instant-messaging-installation-directory`\config\acls`

Table 4-2 lists the global access control files for Instant Messaging and the privileges these files provide end users.

Table 4-2 Access Control Files

ACL File	Privileges
`sysSaveUserSettings.acl`	Defines who can and cannot change their own preferences.
`sysTopicsAdd.acl`	Defines who can and cannot create News channels.
`sysRoomsAdd.acl`	Defines who can and cannot create Conference rooms.
`sysSendAlerts.acl`	Defines who can and cannot send alerts.
`sysWatch.acl`	Defines who can and cannot watch changes of other end users. The Sun Java System Instant Messenger window is not displayed for end users who do not have this privilege.
`sysAdmin.acl`	Reserved for administrators only.This file sets administrative privileges to all Sun Java System Instant Messaging features for all end users. This privilege overrides all the other privileges and gives the administrator MANAGE access to all conference rooms and news channels as well as to end user presence information, settings, and properties.

Access Control File Format

The access control file contains a series of entries that define the privileges. Each entry starts with a tag as follows:

- `d:` - default
- `u:` - user
- `g:` - group

NOTE The `d:` tag must be the last entry in an access control file. The server ignores all entries after a `d:` tag. If the `d:` tag is `true`, then all other lines are ignored. You cannot set the `d:tag` as `true` in an access control file and selectively disallow end users that privilege.

The tag is followed by a colon (`:`). In case of the default tag it is followed by `true` or `false`.

End-user and group tags are followed by the end-user or group name.

Multiple end users and groups are specified by having multiple end users (`u`) and groups (`g`) in lines.

If default is set to `true`, all other entries in the file are redundant. If default is set to `false`, only the end users and groups specified in the file will have that particular privilege.

The following are the default `d:` tag entries in the ACL files for a new installation:

- `sysAdmin.acl` - Contains `d:false`
- `sysTopicsAdd.acl` - Contains `d:false`
- `sysRoomsAdd.acl` - Contains `d:false`
- `sysSaveUserSettings.acl` - Contains `d:true`
- `sysSendAlerts.acl` - Contains `d:true`
- `sysWatch.acl` - Contains `d:true`

NOTE The format and also the existence of all the access control files might change in future releases of the product.

Access Control File Examples

This section shows a sample access control file that shows privileges set for, the `sysTopicsAdd.acl` file. For information about access control files at the conference room and news channel level (Therefore, *roomname*`.acl` and *newschannel*`.acl`) see “Conference Room and News Channel Access Controls” on page 26.

sysTopicsAdd.acl File

In the following example, the default `d:` tag entry for `sysTopicsAdd.acl` file is `false`. So the Add and the Delete news channels privileges are available to the end users and groups that appear before the default, namely `user1`, `user2`, and the `sales` group.

```
# Example sysTopicsAdd.acl file
u:user1
u:user2
g:cn=sales,ou=groups,o=siroe
d:False
```

Changing End User Privileges

To change end user privileges:

1. Change to the `config/acls` directory. For example, on Solaris:

   `cd /etc/opt/SUNWiim/default/config/acls`

2. Edit the appropriate access control file. For example:

   `vi sysTopicsAdd.acl`

3. Save the changes.
4. End users need to refresh the Sun Java System Instant Messenger window to see the changes.

Managing Policies using Sun Java System Identity Server

The Instant Messaging and Presence services in Sun Java System Identity Server provide another way to control end user and administrator privileges. Each service has three types of attributes: dynamic, user, and policy. A policy attribute is the type of attribute used to set privileges.

Policy attributes become a part of the rules when rules are added to a policy created in Identity Server to allow or deny administrator and end-user involvement in various Instant Messaging features, such as receiving poll messages from others.

When Sun Java System Instant Messaging server is installed with Sun Java System Identity Server, several example policies and roles are created. See the *Sun Java System Identity Server Getting Started Guide* and the *Sun Java System Identity Server Administration Guide* for more information about policies and roles.

Furthermore, if the example policies are not sufficient, you can create new policies and assign those policies to a role, group, organization, or end user as needed to match your site’s needs.

When the Instant Messaging service or the Presence service are assigned to end users, they receive the dynamic and user attributes applied to them. The dynamic attributes can be assigned to a Sun Java System Identity Server configured role or organization.

When a role is assigned to an end user or an end user is created in an organization, the dynamic attributes then become a characteristic of the end user. The user attributes are assigned directly to each end user. They are not inherited from a role or an organization and, typically, are different for each end user.

When end users log on, they get all the attributes that are applicable to them depending upon which roles are assigned to them and how the policies are applied.

Dynamic, user or policy attributes are associated with end users after assigning the Presence and Instant Messaging Services to these end users.

Instant Messaging Service Attributes

Table 4-3 lists the policy, dynamic, and user attributes that each service has:

Table 4-3 Identity Server Attributes for Instant Messaging

Service	Policy Attribute	Dynamic Attributes	User Attributes
sunIM	sunIMAllowChat	sunIMProperties	sunIMUserProperties
	sunIMAllowChatInvite	sunIMRoster	sunIMUserRoster
	sunIMAllowForumAccess	sunIMConferenceRoster	sunIMUserConferenceRoster
	sunIMAllowForumManage	sunIMNewsRoster	sunIMUserNewsRoster
	sunIMAllowForumModerate		
	sunIMAllowAlertsAccess		
	sunIMAllowAlertsSend		
	sunIMAllowNewsAccess		
	sunIMAllowNewsManage		
	sunIMAllowFileTransfer		
	sunIMAllowContactListManage		
	sunIMAllowUserSettings		
	sunIMAllowPollingAccess		
	sunIMAllowPollingSend		
sunPresence	sunPresenceAllowAccess	sunPresenceDefaultAcess	sunPresenceEntityDefaultAccess
	sunPresenceAllowPublish	sunPresenceAccessDenied	sunPresenceEntityAccessDenied
	sunPresenceAllowManage	sunPresenceAccessPermitted	sunPresenceEntityAccessPermitted
		sunPresenceDevices	sunPresenceEntityDevices

For each attribute in the preceding table, a corresponding label appears in the Identity Server admin console. The two following tables list each attribute with its corresponding label and a brief description. Table 4-4 lists and describes the policy attributes and Table 4-5 lists and describes the dynamic and user attributes.

Table 4-4 Sun Java System Identity Server Policy Attributes for Instant Messaging

Policy Attribute	Admin Console Label	Attribute Description
`sunIMAllowChat`	Ability to Chat	End users can be invited to join chat room and access normal chat functionality
`sunIMAllowChatInvite`	Ability to Invite others to Chat	End users can invite others to chat
`sunIMAllowForumAccess`	Ability to Join Conference Rooms	A conference tab shows up in Sun Java System Instant Messenger, allowing end users to join conference rooms
`sunIMAllowForumManage`	Ability to Manage Conference Rooms	End users are able to create, delete, and manage conference rooms
`sunIMAllowForumModerate`	Ability to Moderate Conference Rooms	End users can be conference moderators
`sunIMAllowAlertsAccess`	Ability to Receive Alerts	End users can receive alerts from others
`sunIMAllowAlertsSend`	Ability to Send Alerts	End users can send alerts to others
`sunIMAllowNewsAccess`	Ability to Read News	A News button is displayed in Sun Java System Instant Messenger that enables end users to list news channels in order to receive and send news messages
`sunIMAllowNewsManage`	Ability to Manage News Channels	End users can manage news channels and create, delete, and assign privileges to news channels
`sunIMAllowFileTransfer`	Ability to Exchange Files	End users can add attachments to alert, chat, and news messages
`sunIMAllowContactListManage`	Ability to Manage one’s Contact List	End users can manage their own contact lists; they can add and delete users or groups to and from the list; they can rename the folder in their contact list
`sunIMAllowUserSettings`	Ability to Manage Messenger	A Settings button is displayed in the Sun Java System Instant Messenger that enables end users to change their own Sun Java System Instant Messenger settings
`sunIMAllowPollingAccess`	Ability to Receive Polls	End users can receive poll messages from others, and they can respond to polls

Table 4-4 Sun Java System Identity Server Policy Attributes for Instant Messaging

Policy Attribute	Admin Console Label	Attribute Description
sunIMAllowPollingSend	Ability to Send Polls	A Poll button is displayed in Sun Java System Instant Messenger that enables end users to send poll messages to others and to receive the responses
sunPresenceAllowAccess	Ability to Access other's Presence	End users can watch the presence status of others. The contact list, in addition to showing the contact, reflects contacts' presence status changes by changing the status icon
sunPresenceAllowPublish	Ability to Publish Presence	End users can click to select their status (online, offline, busy, etc.) for others to watch
sunPresenceAllowManage	Ability to Manage Presence Access	An Access tab is displayed in the Settings of the Sun Java System Instant Messenger; end users can set up their own default presence access, presence permitted, or presence denied list

Modifying Attributes Directly

An end user can log into Sun Java System Identity Server admin console and view the values of attributes in the Instant Messaging and Presence service attributes. If the attributes have been defined as modifiable, end users can alter them. However, by default no attributes in the Instant Messaging service are modifiable, nor is it recommended that end users be allowed to modify them. However, from the standpoint of system administration, manipulating attributes directly can be useful.

For example, since roles do not affect some system attributes, such as setting conference subscriptions, system administrators might want to modify the values of these attributes by copying them from another end user (such as a from a conference roster) or modifying them directly. These attributes are listed in Table 4-5 on page 80.

In reference to table Table 4-5,user attributes can be set by end users through the Sun Java System Identity Server admin console. Dynamic attributes are set by the administrator. A value set for a dynamic attribute overrides or is combined with the corresponding user attribute value.

The nature of corresponding dynamic and user attributes influences how conflicting and complementing information is resolved. For example, Conference Subscriptions from two sources (dynamic and user) complement each other; therefore, the subscriptions are merged. Neither attribute overrides the other.

Table 4-5 Sun Java System Identity Server User and Dynamic Attributes for Instant Messaging

Admin Console Label	User Attribute	Dynamic Attribute	Attribute Description	Conflict Resolution
Messenger Settings	sunIMUser Properties	sunIMProperties	Contains all the properties for Sun Java System Instant Messenger and corresponds to the user.properties file in the file-based user properties storage	Merge-however, if a particular property has a value from both the user and dynamic attribute, the dynamic attribute overrides
Subscriptions	sunIMUserRoster	sunIMRoster	Contains subscription information (not in use yet)	The dynamic information is taken
Conference Subscriptions	sunIMUser ConferenceRoster	sunIMConference Roster	Contains conference room subscription information	Merge-dynamic and user subscriptions are merged
News Channel Subscriptions	sunIMNewsRoster	sunIMUserNews Roster	Contains news channel subscription information	Merge-dynamic and user subscriptions are merged
Default Presence Visibility	sunPresenceEntity DefaultAccess	sunPresenceDefaultAcc ess	Corresponds to the access setting in Sun Java System Instant Messenger. If checked, the presence status can be viewed by everyone, and if not checked, the presence status can be viewed by no one	The dynamic information is taken

Table 4-5 Sun Java System Identity Server User and Dynamic Attributes for Instant Messaging

Admin Console Label	User Attribute	Dynamic Attribute	Attribute Description	Conflict Resolution
Presence Deny List	`sunPresenceEntityAccessDenied`	`sunPresenceAccessDenied`	If the *default presence visibility* label (see preceding table entry) in the admin console is checked (viewed by everyone), end users can enter others to this list to deny them access to presence status	The dynamic information is taken
Presence Allow List	`sunPresenceEntityAccessPermitted`	`sunPresenceAccessPermitted`	If the *default presence visibility* label (see preceding two table entries) in the admin console is unchecked (viewed by nobody), end users can enter others to this list to allow them access to presence status	The dynamic information is taken
Presence Agents	`sunPresenceEntityDevices`	`sunPresenceDevices`	Not used in this release (for future use)	The dynamic information is taken

Pre-Defined Examples of Instant Messaging and Presence Policies

Table 4-6 lists and describes the seven example policies and roles that are created in Sun Java System Identity Server when the Instant Messaging service component is installed. You can add end users to different roles according to the access control you want to give them.

A typical site might want to assign the role IM Regular User (a role that receives the default Instant Messaging and Presence access) to end users who simply use Instant Messenger, but have no responsibilities in administering Instant Messaging policies. The same site might assign the role of IM Administrator (a role associated with the ability to administer Instant Messaging and Presence services) to particular end users with full responsibilities in administering Instant Messaging policies. Table 4-7 lists the default assignment of privileges amongst the policy attributes. If an action is not selected in a rule, the values *allow* and *deny* are not relevant as the policy then does not affect that attribute.

Table 4-6 Default Policies and Roles for Identity Sever

Policy	Role the Policy Applies to	Service the Policy Applies to	Policy Description
Default Instant Messaging and presence access	IM Regular User	sunIM, sunPresence	The default access that a regular Instant Messaging end user should have.
Ability to administer Instant Messaging and Presence Service	IM Administrator	sunIM, sunPresence	The access that an Instant Messaging Administrator has, which is access to all Instant Messaging features.
Ability to manage Instant Messaging news channels	IM News Administrator	sunIM	End users can manage news channels by creating, deleting, etc.
Ability to manage Instant Messaging conference rooms	IM Conference Rooms Administrator	sunIM	End users can manage conference rooms by creating, deleting, etc.
Ability to change own Instant Messaging user settings	IM Allow User Settings Role	sunIM	End users can edit settings by clicking the Setting button in theSun Java System Instant Messenger.
Ability to send Instant Messaging alerts	IM Allow Send Alerts Role	sunIM	End users can send alerts in Sun Java System Instant Messenger.
Ability to watch changes on other Instant Messaging end users	IM Allow Watch Changes Role	sunIM	End users can access the presence status of other Instant Messaging end users.

Table 4-7 Assignment of the Default Policies

	Policy						
Attribute	Default Instant Messaging and presence access	Ability to administer Instant Messaging and Presence Service	Ability to manage Instant Messaging news channels	Ability to manage Instant Messaging conference rooms	Ability to change own Instant Messaging end-user settings	Ability to send Instant Messaging alerts	Ability to watch changes on other Instant Messaging end-users
sunIMAllowChat	allow	allow					
sunIMAllowChatInvite	allow	allow					
sunIMAllowForumAccess	allow	allow		allow			
sunIMAllowForumManage	deny	allow		allow			

Table 4-7 Assignment of the Default Policies

	Policy						
Attribute	Default Instant Messaging and presence access	Ability to administer Instant Messaging and Presence Service	Ability to manage Instant Messaging news channels	Ability to manage Instant Messaging conference rooms	Ability to change own Instant Messaging end-user settings	Ability to send Instant Messaging alerts	Ability to watch changes on other Instant Messaging end-users
sunIMAllowForumModerate	deny	allow		allow			
sunIMAllowAlertsAccess	allow	allow				allow	
sunIMAllowAlertsSend	allow	allow				allow	
sunIMAllowNewsAccess	allow	allow	allow				
sunIMAllowNewsManage	deny	allow	allow				
sunIMAllowFileTransfer	allow	allow					
sunIMAllowContactListManage	allow	allow					
sunIMAllowUserSettings	allow	allow			allow		
sunIMAllowPollingAccess	allow	allow					
sunIMAllowPollingSend	allow	allow					
sunPresenceAllowManage	allow	allow					
sunPresenceAllowAccess	allow	allow					allow
sunPresenceAllowPublish	allow	allow					

Creating New Instant Messaging Policies

You can create new policies to fit the specific needs of your site.

To Create a New Policy

1. Log on to the Identity Server admin console at http://hostname:port/amconsole, for example http://imserver.company22.example.com:80/amconsole
2. With the Identity Management tab selected, select Policies in the View drop down list in the navigation pane (the lower-left frame).
3. Click New to bring up the New Policy page in the data pane (the lower-right frame).
4. Select Normal for the Type of Policy.

5. Enter a policy description in the Name field, such as Ability to Perform IM Task.
6. Click Create to make the name of the new policy appear on the policy list in the navigation pane and to make the page in the data pane change to the Edit page for your new policy.
7. In the Edit page, select Rules in the View drop down list to bring up the Rule Name Service Resource panel inside the Edit page.
8. Click Add to bring up the Add Rule page.
9. Select the Service that applies, either Instant Messaging Service or Presence Service.

   Each service enables you to allow or deny end users the ability to perform specific actions. For example, Ability to Chat is an action specific to the Instant Messaging service while Ability to Access other's Presence is an action specific to the Presence service.
10. Enter a description for a rule in the Rule Name field, such as Rule 1.
11. Enter the appropriate Resource Name (`IMResource` or `PresenceResource`):
    - `IMResource` for Instant Messaging Service
    - `PresenceResource` for Presence Service
12. Select the Actions that you want to apply.
13. Select the Value for each action: Allow or Deny.
14. Click Create to display this proposed rule in the list of saved rules for that policy.
15. Click Save to make this proposed rule a saved rule.
16. Repeat steps 8-15 for any additional rules that you want to apply to that policy. For each new rule, click Save to save the changes to the policy.

Assigning Policies to a Role, Group, Organization, or User

You can assign policies—the default policies for Instant Messaging or Instant Messaging policies that might have been created after Instant Messaging was installed—to a role, group, organization, or user.

To Assign a Policy

1. Log on to the Identity Server admin console at http://hostname:port/amconsole, for example http://imserver.company22.example.com:80/amconsole
2. With the Identity Management tab selected, select Policies in the View drop down list in the navigation pane (the lower-left frame).
3. Click the arrow next to the name of the policy you want to assign in order to bring up the Edit page for that policy in the data pane (the lower-right frame).
4. In the Edit page, select Subjects in the View drop down list.
5. Click Add to bring up the Add Subject page, which lists the possible subject types:
   - Identity Server Roles
   - LDAP Groups
   - LDAP Roles
   - LDAP Users
   - Organization
6. Select the subject type that matches the policy, such as Organization.
7. Click Next
8. In the Name field, enter a description of the subject.
9. If desired, select the Exclusive check box.

   The Exclusive check box is not selected as the default setting, which means that the policy applies to all members of the subject.

   Selecting the Exclusive check box applies the policy to everyone who is not a member of the subject.

10. In the Available field, search for entries that you want to add to your subject.
    a. Type a search for the entries you want to search for. The default search is *, which displays all the subjects for that subject type.
    b. Click search.
    c. Highlight entries in the Available text box that you want to add to the Selected text box.
    d. Click Add or Add All, whichever applies.
    e. Repeat steps a-d until you have added all the names you want to the Selected text box.
11. Click Create to display this proposed subject in the list of saved subjects for that policy.
12. Click Save to make this proposed subject a saved subject.
13. Repeat steps 5-12 for any additional subjects that you want to add to the policy. For each new subject, click Save to save the changes to the policy.

Creating New Suborganizations Using Identity Server

The ability to create suborganizations using Sun Java System Identity Server enables organizationally separate populations to be created within the Sun Java System Instant Messaging server. Each suborganization can be mapped to a different DNS domain. End users in one suborganization are completely isolated from those in another. The following describes minimal steps to create a new suborganization for Instant Messaging.

To Create a New Suborganization

1. Log on to the Identity Server admin console at `http://hostname:port/amconsole`, for example `http://imserver.company22.example.com:80/amconsole`
2. Create a new organization:
    a. With the Identity Management tab selected, select Organizations in the View drop down list in the navigation pane (the lower-left frame).
    b. Click New to bring up the New Organization page in the data pane (the lower-right frame).

c. Enter the following in the appropriate fields:
   - A suborganization name, such as `sub1`
   - A domain name, such as `sub1.company22.example.com`,

d. Click Create.

3. Register services for the newly created suborganization.

   a. Click the name for the new suborganization, such as `sub1`, in the navigation pane (Be certain to click the name, not the property arrow at the right.).

   b. Select Services from the View drop down list in the navigation pane

   c. Click Register to bring up the Register Services page in the data pane.

   d. Select the following services under the Authentication heading:
      - Core
      - LDAP

   e. Select the following services under the Instant Messaging Configuration heading:
      - Instant Messaging Service
      - Presence Service

   f. Click Register to bring up the newly selected services for this suborganization in the navigation pane.

4. Create service templates for the newly selected services:

   a. In the navigation pane, click the property arrow for a service, starting with the Core service.

      The Create Service Template page appears in the data pane.

   b. In the data pane, click Create, which replaces the Create Service Template page with a page of template options for the service you have selected.

      You should click Create for each service even when you do not want to modify the template options.

   c. Modify the options for the service template of each service as follows:

      I. **Core:** Generally, no options need to be modified; go to Step d.

II. **LDAP:** Add the prefix of the new suborganization to the *DN to Start User Search* field. After adding the prefix, the final DN should be in this format:

`o=sub1,dc=company22,dc=example,dc=com`

Enter the LDAP password in the *Password for Root User Bind* and *Password for Root User Bind (confirm)* fields.

Continue to Step d:

III. **Instant Messaging Service:** Generally, no options need to be modified; go to Step d.

IV. **Presence Service:** If you would like to make end-user presence information available to others by default (sites tend to choose this option), select the *Dynamic Default Presence Visibility* check box before going to Step d.

d. Click Save.

e. Repeat steps a through d until you have created service templates for each service.

Adding End Users to New Suborganizations

After new end users have been created in a suborganization they need to be assigned roles. Roles can be inherited from the parent organization as described in the following section.

To Add End Users to a New Suborganization:

1. Go to the parent organization and select Roles from the View drop down list. The specific steps are:

   a. Log on to the Identity Server admin console at `http://hostname:port/amconsole`, for example `http://imserver.company22.example.com:80/amconsole`

   b. With the Identity Management tab selected, select Roles in the View drop down list in the navigation pane (the lower-left frame).

2. Click on the property arrow to the right of the role you wish to assign in order to bring up a page for that role in the data pane (the lower-right frame).

3. Select Users from the View drop down list in the data pane.

4. Click Add to bring up the Add Users page.
5. Enter a matching pattern to identify users. For example, in the `UserId` field an asterisk,*, lists all users.
6. Click Filter to bring up the Select User page.
7. Display the parentage path in the Select User page:
    a. Select the *Show parentage path* check box.
    b. Click Refresh.
8. Select the users to be assigned to this role.
9. Click Submit.

Migrating from Instant Messaging 6.0

Non-Migration Option

If your site used the Sun Java System Instant Messaging 6.0 server with the Sun Java System Identity Server 5.1 software to deploy the Instant Messaging service, the old attributes will be honored by the Sun Java System Instant Messaging 6 software. Policy attributes from the Sun Java System Instant Messaging 6.0 server, such as `sunIMAllowFileTransfer` and `sunIMEnableModerator` will override the same policy attributes set in the Sun Java System Instant Messaging 6 server.

Migration Option

However, the preferable method for handling the differences in the two Instant Messaging services is to migrate from the Instant Messaging service used for the Sun Java System Instant Messaging 6.0 software and to modify or create a Sun Java System Identity Server policy which uses the Instant Messaging Service and Presence Service from the Sun Java System Instant Messaging 6 software. You should define the new policy in such a way that it provides the same access control to your site as the old policy did.

For example, you can modify a rule in the *Default Instant Messaging and presence access* policy to set the deny or allow status of each of the policy's attributes in order for the policy to demonstrate the same behavior that it demonstrated in the Sun Java System Instant Messaging 6.0 server or you can create a new policy with rules that will allow it to behave in the same manner as it did previously.

Migrating Access Control Files

If your site has been using an earlier version of Sun Java System Instant Messaging server (6.0 or earlier), but you have not used an Instant Messaging service—therefore, you have not set end-user privileges by setting policies through the Sun Java System Identity Server— but have instead set end-user privileges by editing access control files, two methods are available to you for replicating the policy set within the access control files and using this information to create Sun Java System Identity Server policies:

Migrate Access Control File Information Manually

Migrate Access Control File Information Automatically

Migrate Access Control File Information Manually

The high-level steps for this method are as follows:

1. Open each access control file (one at a time). For example, `sysTopicsAdd.acl` and `sysRoomsAdd.acl`.

   For more information about the location and format of access control files, see "Managing Policies Using Access Control Files" on page 72.

2. In each file, read the value for the default line. The default line starts with the letter d followed by a colon (`d:`).

3. In the Sun Java System Identity Server admin console within the *Default instant messaging and presence access* policy, set a rule to the same default value you read from the access control file.

4. Assign all the regular Instant Messaging end users the role of IM Regular User

5. For end users listed in these access control files who have different privileges, such as the ability to manage conference rooms or news channels, add them to the corresponding roles that have those privileges. See Table 4-6 on page 82 for the role that each default policy applies to.

Migrate Access Control File Information Automatically

Instead of transferring the access control file information manually, you can perform a one-time migration of this information by issuing a command.

Type the following command:

```
imadmin migrate
```

This command will transfer information from the global access control files to the corresponding policy and its subjects. See table Table 4-8 for a list of the global access control files and the policies to which they map.

Table 4-8 Access Control Files and the Policies They Map to

Access Control File	Policy
sysSaveUserSettings.acl	Ability to change own Instant Messaging user settings
sysTopicsAdd.acl	Ability to manage Instant Messaging news channels
sysRoomsAdd.acl	Ability to manage Instant Messaging conference rooms
sysSendAlerts.acl	Ability to send Instant Messaging alerts
sysWatch.acl	Ability to watch changes on other Instant Messaging end users
sysAdmin.acl	Ability to administerInstant Messaging and Presence Service

Migrate Sun Java System Instant Messenger Settings

For Sun Java System Instant Messaging 6.1 server, when the parameter `iim.userprops.store` is set to `ldap` in the `iim.conf` file, the Sun Java System Instant Messenger settings for end users is stored in the `sunIMUserProperties` user attribute.

If your site has used an earlier version of Sun Java System Instant Messaging server and the Sun Java System Instant Messenger settings have been stored in the `user.properties` file, after installing the Sun Java System Instant Messaging 6.1 server, the old settings will automatically be migrated to the `sunIMUserProperties` user attribute as end users log on, as long as the `iim.userprops.store` parameter is set to `ldap` in the `iim.conf` file.

When an end user first logs onto Sun Java System Instant Messaging 6.1 server, the server checks if the `sunIMUserProperties` user attribute exists and if it is storing the end user’s settings. If the end user’s settings are not found at that location, the server checks if a `user.properties` file exists for that end user. If the file exists, the server transfers information from the `user.properties` file to the `sunIMUserProperties` user attribute. However, if the `user.properties` file does not exist, the default Sun Java System Instant Messenger setting is the value assigned in the `sunIMUserProperties` user attribute for that end user.

Chapter 5

Managing The Instant Messaging Archive

This chapter explains how to manage and configure the Instant Messaging Archive.

This chapter contains the following sections:

Instant Messaging Archive Overview

The Instant Messaging archive captures instant messages and archives these messages in a Portal Server Search database. It enables the end user to query and retrieve these archived messages using the Search page on the Portal Server desktop.

Instant Messaging Archive contains the following components:

Archive and Retrieval Component. Portal Server Search component also known as Archive and Retrieval component is used to store the archived Instant Messages. The Instant Messaging archive data is indexed and can be assigned to categories and stored in the Portal Server Search database. For example, alert messages can be stored under the Alert category.

NOTE Storing data in separate categories helps in simplifying the search operation and enables quick retrieval of the archived data.

Instant Messaging Archive Search or Display Servlet. When the end user performs a search operation for documents matching certain criteria, the Portal Server Search fetches pages matching this criteria. These pages can be remote web pages or they could be Instant Messaging archive data also referred as Instant Messaging resource descriptors.

- For the remote web pages, the URL of the pages matching the criteria is listed in the Search Results List. When the end user clicks the URL of a web page in the Search Results List, the browser fetches this page from the remote web server.
- For the Instant Messaging Resource Descriptor, the archive data is stored in the Portal Server Search database and is not available as downloadable documents from the web server.

When the end user clicks the URL of the Instant Messaging resource descriptors to view the archive data, the Instant Messaging Archive Search or Display servlet is invoked. The Instant Messaging Archive Search servlet retrieves the information from the Portal Server Search database and generates a text or HTML response containing the Instant Messaging Archive data.

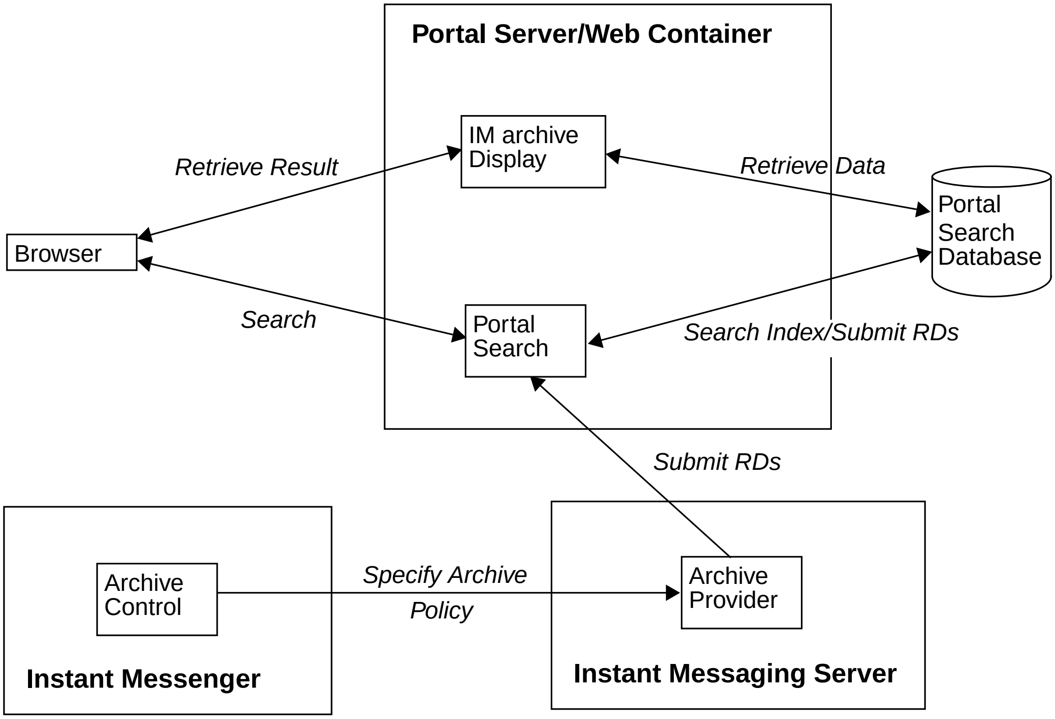
Instant Messaging Archive Provider. This component is invoked by the Instant Messaging server whenever Instant Messages are to be archived. The Instant Messaging Archive Provider builds the Summary Object Interchange Format (SOIF) complaint Resource Descriptors (RD) based on the data provided by the

Instant Messaging server. It uses Portal Server Search APIs to send these Resource Descriptors to Portal Server Search database. It also maintains a buffer of the records to be submitted to the Portal Server Search database, to reduce the performance hit.

Instant Messenger Archive Control. Instant Messaging data can be archived automatically without any interaction from the end user. To control the archive functionality the end user needs to enable the Instant Messenger Archive Control component. This component allows the end user to set default archive options, such as "archive all conferences", and change the default on a per-transaction basis. For example, the end user can choose not to archive the content of the conferences.

Figure 5-1 illustrates Instant Messaging Archive components.

Figure 5-1 Instant Messaging Archive Components



Archiving Instant Messages

All instant messages are divided into the following categories for the purpose of archiving:

Chat. All the messages in the private conference rooms.

Conference. All the messages in the public conference rooms.

Alerts. This category contains all the alert messages.

Poll. This category contains all poll messages.

News. This category contains all messages posted in the news channels.

The following are the features of Instant Messaging Archive Provider:

- It captures all the Instant Messaging traffic passing through the server.
- The archived data can be stored under separate categories on the Portal Server Search.
- Storing the data as separate categories helps in simplifying the search and retrieval of the archived data.
- The search can be performed using the Portal Server desktop.
- The security feature of Portal Server Search can be used to provide an access control list. The archive provider provides security features by which only a set of admin users can be allowed to access the archived data.
- The data can be managed using the Portal Server Search database management tools.

Enabling the Archive Provider

To enable archive provider in Instant Messaging:

1. Change to the `config` directory. For example, on Solaris:

   ```
   cd /etc/opt/SUNWiim/default/config
   ```

2. Open the `iim.conf` file.

   For example:

   ```
   vi iim.conf
   ```

3. Add the following line to the `iim.conf` file:

   For the default archive provider, add the following line:

   ```
   iim_server.msg_archive = true
   ```

   For a custom archive provider, add the following line:

   `iim_server.msg_archive.provider =` *provider_name*

   To use the Portal Server Search based archive, replace the *provider_ name* with the following:

   ```
   com.iplanet.im.server.IMPSArchive
   ```

4. Save the file.

5. Refresh the Instant Messaging server configuration. To refresh type:

   ```
   imadmin refresh
   ```

Instant Messaging server provides the APIs and SPIs that can be used to write custom archive providers. For more information on Instant Messaging APIs, see "Instant Messaging APIs" on page 139.

Configuring the Archive Provider

The archive provider stores the archived messages as resource descriptors (RD) in the Portal Server Search database. The archive provider uses the following fields of the Portal Server Search schema:

Title. This field contains the names of the public conference rooms for Conference category, names of the participants in a chat session for the Chat category, subject of the Alert messages and the names of the News Channels for alerts and news categories. The title field will contain "`Poll from` *Sender*" for the poll category, where *Sender* represents the display name of the sender of the poll.

Keyword. For conference and chat categories, this field will contain a list of all the participants in the conference room. For a public conference room, it will also contain the name of the conference room. For the Alert category, it will contain the display names of the sender and the recipients. For the News category, it will contain the name of the channel. For the Polls category, it will contain the list of sender and recipients. For all categories, in addition to the above values this field also contains a unique ID for the categories.

Table 5-1 shows the unique ID and gives a description for each category in the archive provider.

Table 5-1 Unique ID for each category and their description

Category	Unique ID
Conference	`RoomName-StartTime`
Chat	Where: `RoomName -` Name of the public or private conference room `StartTime` - Is the timestamp of the creation of RD
Alert	`Alert-messageID` Where: `messageID` - Message Id of the message which will be archived. Message Id has importance when the RD contains only one message. For example, News message and Alert message.
Poll	`Poll-pollID`
News	`TopicName-messageID`

ReadACL. For the Conference and News categories, the value for this field is taken from the access control files of the respective conference rooms and news channels. For the Chat category, this field contains the DN of the participants. For the Alert category, this field contains the sender's DN and the recipient's DN. For the Poll category, the archiver will provide a new access control file.

The search access to the RDs is controlled by the value in the ReadACL field. If the document level security is enabled, the end user has access to the search results only if the ReadACL field has the end user's DN. If the Instant Messenger Archive control is enabled, for the chat messages, the end user DN added to the ReadACL field depends on the end-user selection.

Description. This field contains the archived message without the HTML formatting.

Full-Text.This field contains the HTML formatted archived messages.

Classification. This field contains the category of the archived message.

Archive Provider Configuration Parameters

Table 5-2 lists and describes the archive provider configuration parameters that can be added to the iim.conf file:

Table 5-2 Archive Provider parameters added to the iim.conf file.

Parameter	Default Value	Description
iim_arch.title.attr	Title	This parameter contains the name of the field equivalent to the Title field in the default schema of the Portal Server Search.
iim_arch.keyword.attr	Keyword	This parameter contains the name of the field equivalent to the Keyword field in the default schema of the Portal Server Search.
iim_arch.readacl.attr	ReadACL	This parameter contains the name of the field equivalent to the ReadACL field in the default schema of the Portal Server Search.
iim_arch.description.attr	Description	This parameter contains the name of the field equivalent to the Description field in the default schema of the Portal Server Search.
iim_arch.fulltext.attr	Full-Text	This parameter contains the name of the field equivalent to the Full-Text field in the default schema of the Portal Server Search.
iim_arch.category.attr	Category	This parameter contains the name of the field equivalent to the Category field in the default schema of the Portal Server Search.
iim_arch.readacl.admin	None	This parameter contains the administrator's DN. Multiple values should be separated by ";"

Table 5-2 Archive Provider parameters added to the `iim.conf` file.

Parameter	Default Value	Description
`iim_arch.readacl.adminonly`	`false`	This parameter will contain `true` or `false`. `true` - Only the administrator's DN specified by the parameter `iim_arch.readacl.admin` will be added to the `ReadACL` field overwriting the default behavior of the `ReadACL` field. `false` - The administrator's DN specified by the parameter `iim_arch.readacl.admin` will be added to the ReadACL field in addition to the default behaviour.

`iim_arch.categories`	`all`	This parameter contains a list of message types that can be archived.
		The value can be:
		`poll`
		`alert`
		`chat`
		`conference`
		`news`
		Multiple values can be specified separated by commas("`,`").

`iim_arch.categoryname`	None	If a category name is not assigned for any of the categories then the value of this parameter is taken as the category name.
`iim_arch.alert.categoryname`	None	This parameter contains the name of the category containing the archived alert messages. Note: It is not required to dedicate a category to alert messages.
`iim_arch.poll.categoryname`	None	This parameter contains the name of the category containing the archived poll messages. Note: It is not required to dedicate a category to poll messages.
`iim_arch.conference.categoryname`	None	This parameter contains the name of the category containing the archived conference messages. Note: It is not required to dedicate a category to conference messages.

Table 5-2 Archive Provider parameters added to the `iim.conf` file.

Parameter	Default Value	Description
`iim_arch.chat.categoryname`	Name	This parameter contains the name of the category containing the archived chat messages. Note: It is not required to dedicate a category to chat messages.
`iim_arch.news.categoryname`	None	This parameter contains the name of the category containing the archived news messages. Note: It is not required to dedicate a category to news messages.
`iim_arch.conference.quiettime`	`5`	This parameter contains the maximum duration of silence between two consecutive messages in a room (both public and private) after which the RD expires and a new RD is created for archiving the message. The value is in minutes.
`iim_arch.poll.maxwaittime`	`15`	This parameter contains the (maximum) time for which poll data is buffered in the server. The value is in minutes.
`iim_arch.ignoreexplicitdeny`	`true`	This parameter will contain `true` or `false`. `true` - For Poll and Conference category the data with explicit deny access will not be archived. Each time when these messages are not archived this information will be logged into the `server.log` file. `false` - For Poll and Conference category the data with explicit deny access will not be archived and the message will be added to the Portal Server Search database. Note: If you do not explicitly deny access to a room or a news channel then the default access is either READ or WRITE or MANAGE. Some end users can also be granted NONE access.

Table 5-2 Archive Provider parameters added to the iim.conf file.

Parameter	Default Value	Description
iim_arch.portal.search	None	The value of the this parameter should be the URL of the Portal Server Search servlet. For example: http://www.example.com/portal/search If this parameter is not present then the Archive Provider determines the value of the Portal Server Search URL based on the AMConfig.properties file present on the system.
iim_arch.portal.admindn	None	The value of this parameter should be the dn of the admin user. For example: uid=amadmin,ou=People,o=internet This parameter is required when the Document level Security in the Portal Search Server is on.
iim_arch.portal.adminpassword	None	The value of this parameter should be the password of the admin user as specified by the iim_arch.portal.admindn parameter. This parameter is required when the Document level Security in the Portal Search Server is on.
iim_arch.portal.search.database	None	The value of this parameter should be the name of the database where Sun Java System Instant Messaging server stores archived messages. If this parameter is not defined then all messages are stored in the default database of Sun Java System Portal Server Search.

Storing Archived Messages in a Non-default Database

To store Sun Java System Instant Messaging archived messages in a non-default Portal Server Search database instead of a default database, follow these steps:

1. Modifying the `iim.conf` file

   a. Change to the `config` directory. For example, on Solaris:

   ```
   cd /etc/opt/SUNWiim/default/config
   ```

   b. Open the `iim.conf` file using an editor of your choice.

      For example, you could type:

      ```
      vi iim.conf
      ```

   c. For the default archive provider, add the following line:

      `iim_arch.portal.search.database =` *database-name*

      where ***database-name*** is the name of your non default database.

   d. Save the file.

2. Modify the Portal Server Search Channel

Change the Portal Server Search Channel to add an option for searching the data in another database. See the *Sun Java System Sun Java System Portal Server Desktop Customization Guide* for more information.

3. Modify the `IMArchiveDisplay.jsp` file:

   a. Change to the following directory:

   ```
   /etc/opt/SUNWps/desktop/default/IMProvider/
   ```

   b. Create a back up of the `IMArchiveDisplay.jsp` file.

   c. Edit the `IMArchiveDisplay.jsp` file with an editor of your choice. For example, you could type the following:

      ```
      vi IMArchiveDisplay.jsp
      ```

   d. Search through the `IMArchiveDisplay.jsp` file and locate the following two lines of code:

Code Example 5-1 Search Code from `IMArchiveDisplay.jsp` File, Before Editing

```
<search:setQuery query = "<%= scope %>"/>
<search:setRDMType rdmType = "rd-request"/>
```

e. Between the two lines of code shown in Code Example 5-1, add the following line of code:

`<search:setDatabase database = "`*database-name*`"/>`

After you add the new line of code, that section of code should look like Code Example 5-2:

Code Example 5-2 Search Code from `IMArchiveDisplay.jsp` File, After Editing

```
<search:setQuery query = "<%= scope %>"/>
 <search:setDatabase database = "database-name"/>
<search:setRDMType rdmType = "rd-request"/>
```

where ***database-name*** is the name of the non-default database.

Managing Archived Data in the Portal Server Search Database

NOTE These instructions are Solaris specific as Portal Server is supported on Solaris only.

The Instant Messaging data is archived in the form of Resource Descriptors (RDs) in the Portal Server Search database. The individual entries in the Portal Server Search database are called resource descriptors (RDs). An RD is a specific set of information about a single resource. The fields of each RD are determined by the Portal Server Search database schema.

To manage the archived data, you need to manage the Resource Descriptors (RDs) in the Portal Server Search database. This section explains some of the frequently performed maintenance tasks on the Portal Server Search database.

For more information on managing data in the Portal Server Search database, see the *Portal Server Administrator's Guide*.

rdmgr Command

The `rdmgr` command is the main command used to work with the Search service. It gives the administrator two types of subcommands: one that is used to work with resource descriptors (RDs); and the other that is used for database maintenance. The `rdmgr` command is normally run in a search-enabled Portal Server instance directory.

To invoke the `rdmgr` command:

1. Change to the following directory:

   ```
   cd /var/opt/SUNWps/https-servername/
   ```

2. Type the following in the command-line:

   ```
   run-cs-cli portal-server-install-dir/SUNWps/bin/rdmgr args
   ```

   where *portal-server-install-dir* is the directory in which Portal Server is installed.

For more information on `rdmgr` command, see Command-Line Utilities in *Portal Server Administrator's Guide*.

Searching Resource Descriptors (RD)

Running `rdmgr` command with the argument value `-Q` generates a list of RDs that refines the search operation.

For example:

- To search for resource descriptors (RDs) containing the text `testing`, type:

  ```
  run-cs-cli portal-server-install-dir/SUNWps/bin/rdmgr -Q testing
  ```

- To search for resource descriptors (RDs) belonging to a particular category, type:

```
run-cs-cli portal-server-install-dir/SUNWps/bin/rdmgr -Q
"classification=Archive:Chat:January"
```

Deleting Resource Descriptors

The following are the examples for deleting resource descriptors (RDs) from the Portal Server Search database:

To delete all resource descriptors (RD) containing the text `testing`, type:

run-cs-cli *portal-server-install-dir*/SUNWps/bin/rdmgr -d -Q testing

To delete all resource descriptors (RD) from a category `Archive:Chat:January`, type:

```
run-cs-cli portal-server-install-dir/SUNWps/bin/rdmgr -d -Q
"classification=Archive:Chat:January"
```

Enabling Instant Messenger Archive Control

The Instant Messenger Archive Control component enables the end user to control the archived instant messages. This component allows the end user to search for the archived instant messages stored in the Portal Server Search database by clicking the Archive button in the Instant Messenger main window. It also enables the end user to set default archive options, such as “archive all conferences” in the Archive tab of the Instant Messenger. The Instant Messenger Archive Control feature is provided by two optional Instant Messenger modules.

The Instant Messenger Archive Control component can be enabled by setting the `archive_control` applet parameter in the applet descriptor file.

The applet descriptor files for the Instant Messaging LDAP deployment that need to be changed are:

- `im.jnlp, imssl.jnlp and jnlpLaunch.jsp (portal only)` for Java Web Start
- `im.html, imssl.html and pluginLaunch.jsp (portal only)` for Java Plugin

Changes for JNLP files and jnlpLaunch.jsp files:

If you are using Java Web Start to launch the Instant Messenger, perform the following steps to enable the Instant Messenger Archive Control feature in the Instant Messenger:

1. Go to the Instant Messenger documentation root directory to locate the im.jnlp and imssl.jnlp files

   The jnlpLaunch.jsp file can be found at:

   /etc/opt/SUNWps/desktop/default/IMProvider

2. Edit the jnlp or jsp file, and add or edit the following line:

```
<argument>archive_control=true</argument>
```

Changes for html applet pages and pluginLaunch.jsp files:

If you are using Java Plug-in to launch the Instant Messenger, perform the following steps to enable the Instant Messenger Archive Control feature in the Instant Messenger:

1. Go to the messenger documentation root directory to locate the im.jnlp and imssl.jnlp files

   The jnlpLaunch.jsp file can be found at:

   /etc/opt/SUNWps/desktop/default/IMProvider

2. Edit the jnlp or jsp file, and add or edit the following line:

```
<PARAM NAME="archive_control" VALUE="true" />
<EMBED archive_control=true;/>
```

NOTE Instant Messenger Archive Control should not be enabled if the value of iim_server.msg_archive.auto is set to true in the iim.conf file of the Instant Messaging Server, as end users’ messenger settings will not have any effect.

Changing the Display of the Archived Data

The data that is archived is deployed using the `IMArchiveDisplay.jsp` file. The `IMArchiveDisplay.jsp` file is installed in the folder `/etc/opt/SUNWps/desktop/default/IMProvider` by default. The file can be modified to change the style and the resource strings of the archived data.

For example, to replace the default system message displayed when an end user joins the room “joe has joined the room” to “joe has entered the room;” perform the following:

1. Edit the `IMArchiveDisplay.jsp` file with an editor of your choice. For example, you could type the following:

   `vi IMArchiveDisplay.jsp`

2. Replace the code line in Code Example 5-3 with Code Example 5-4 in the file `IMArchiveDisplay.jsp`:

Code Example 5-3 Modifying the default system message.

```
....
ht.put("has_joined_the_room","<span class='user'> {0} </span>
<span class='headervalue'> has joined the room.</span>");
....
```

Code Example 5-4 After replacing the default system message.

```
....
ht.put("has_joined_the_room","<span class='user'> {0} </span>
<span class='headervalue'> has entered the room.</span>");
....
```

Similarly, the resource strings for the other keys and the style for displaying the key information can also be modified.

If the attribute name of Title and Full-Text in the default schema of the Portal Server Search is changed, then these changes should also be reflected in the `IMArchiveDisplay.jsp` file.

Sample Deployment Scenario for Archive Provider

This sample deployment scenario explains how to archive the related Instant Messaging data collectively.

To archive the related Instant Messaging data collectively:

Create separate categories for each type of data. For example, in the Archive category where all the archived Instant Messaging data are stored, create a subcategory Chat for storing chat messages. You can also create subcategories for archiving data based on time. For example, to archive chat data for the month of December 2002 the subcategory will be:

```
Archive:Chat:2002:12
```

To archive all the chat data based on time, do the following:

1. Change to the `config` directory. For example, on Solaris type:

   ```
   cd /etc/opt/SUNWiim/default/config
   ```

2. Edit the `iim.conf` file. For example:

   ```
   vi iim.conf
   ```

3. Add the following value for the parameter `iim_arch.chat.categoryname`:

   ```
   iim_arch.chat.categoryname = Archive:Chat:%Y:%M
   ```

   The archive provider automatically assigns the current year for %Y and current month for %M. These values are taken from the system date and time.

To archive and back up the chat data the month of December 2002 to the subcategory, type:

1. `rdmgr -Q "classification=Archive:Chat:2002:12" > archive.soif`

2. Store the `.soif` file to your backup system.

To remove the archived chat data for the month of December 2002 from the Portal Server Search database, type:

```
rdmgr -d "classification=Archive:Chat:2002:12"
```

Chapter 6

Troubleshooting Instant Messaging

This chapter lists the common problems that might occur during installation and deployment of Sun Java System Instant Messaging. The log information generated by the various system components on their operation can be extremely useful when trying to isolate or troubleshoot a problem. For details and more information on logging, refer to "Managing Logging" on page 24. This section lists the various log files with their default locations on Solaris.

The Multiplexor and Server logs are in the files mux.log and server.log respectively, by default these files are in the directory /var/opt/SUNWiim/default/log. The logging level for Multiplexor and Server log files is controlled in the iim.conf configuration file using the properties iim.log.iim_mux.severity and iim.log.iim_mux.severity. These properties can have the following values:

- fatal
- error
- warning
- notice
- info
- debug

Logging configuration in portal deployments is determined by the `com.iplanet.services.debug.level` property. This property can contain the following values:

- `message`
- `warning`
- `error`
- `off`

Table 6-1 shows the location for the desktop and archive log files.

Table 6-1 The Location for the Desktop and Archive Log Files

Log File	Default Location
`desktop.debug`	`/var/opt/SUNWam/debug/`
`IMArchiveSearch.log`	`/var/opt/SUNWam/debug/`
`IMArchiveSubmit.log`	`/var/opt/SUNWam/debug/`

Logging information for the Messenger client can be obtained by enabling logging output from the Java Web Start application manager or the Java plug-in manager.

Problems and Solutions

Listed below are some problems and their possible causes and the clues for troubleshooting these problems:

- The Messenger client does not load or start
- Connection refused and timed out
- Authentication errors
- IM channel display error
- Instant Messaging content is not archived
- Server-to-server communication fails to start
- Catastrophic Error Leaves Server in an Inconsistent State

The Messenger client does not load or start

The following are the possible causes for this problem:

- Wrong codebase in the applet page.
- Application / x-java-jnlp-file MIME type not defined in the web server configuration.
- Plug-in of Java Web Start not installed or functional.
- No compatible Java version available.

Where to get the necessary information:

- In the Java Web Start or plug-in errors (exception stack trace, launch page.)
- In the applet page source on the browser.

Connection refused and timed out

The following are the possible causes for this problem:

- Either the Instant Messaging server or the Multiplexor is not running.
- Incorrect Multiplexor host or port names used in the Applet descriptor file (`.jnlp` or `.html`.)
- Different SSL settings used between the Instant Messenger and the Multiplexor.
- Client and server version mismatch.

Where to get the necessary information:

- Instant Messaging server and Multiplexor log files.

Authentication errors

The following are the possible causes for this problem:

- Problems while accessing the LDAP server.
- End user not found.
- Invalid credentials.
- Invalid Identity Server session.

Where to get the necessary information:

- Instant Messaging server, Identity authentication and LDAP log files.

IM channel display error

The following are the possible causes for this problem:

- Authentication error when the server cannot validate the session token.
- Instant Messaging channel is not configured properly. For example, incorrect Instant Messaging server host and / or port.
- Plug-in or Java Web Start is not installed or is not functional.
- End user not found and the Instant Messaging server cannot find the end user in the LDAP lookup.

Where to get the necessary information:

- Instant Messaging server and Instant Messaging channel logs.

Instant Messaging content is not archived

The following are the possible causes for this problem:

- Content is actually archived but the end user has insufficient rights to access it.
- The content has not yet been committed to the Compass database.
- The archive provider has been disabled in the Instant Messaging server.

Where to get the necessary information:

- In the Instant Messaging server and the archive log files.

Server-to-server communication fails to start

The following are the possible causes for this problem:

- Incorrect server identification.
- Mismatch in the SSL settings.

Where get the necessary information:

The necessary information can be obtained from the two Instant Messaging server log files.

Catastrophic Error Leaves Server in an Inconsistent State

If a catastrophic error occurs while installing or uninstalling Sun Java System Instant Messaging, the system might be left in an inconsistent state. This results in both install and uninstall being unable to complete. In this circumstance, you must manually remove all the Sun Java System Instant Messaging components so that a fresh install can be attempted. The clean up procedure consists of removing packages and registry information.

1. Back up any information you might need in a future installation. See "Backing Up Instant Messaging Data" on page 44.
2. Manually edit the product registry information.

   For Solaris 9, issue the following command:

   `prodreg(1)`

   For all other systems:

   a. Access and edit the `productregistry` XML file from the following locations:

      - Solaris: `/var/sadm/install/productregistry`
      - Linux: `/var/tmp/productregistry`
      - Windows: `%SystemRoot%/system32/productregistry`

b. From the preceding files, perform the following:

on all platforms, remove

- all Sun Java System Instant Messaging XML elements:

on Unix, remove the following packages or RPMs if they are still present:

- SUNWiim
- SUNWiimm
- SUNWiimd
- SUNWiimid
- SUNWiimc
- SUNWiimjd

on Windows, remove the following registry key and its subkeys:

`HKEY_LOCAL_MACHINE\\Software\\Sun Microsystems\\`Instant Messaging`\\6.`

Appendix A

Instant Messaging Configuration Parameters

This chapter explains the Instant Messaging configuration parameters.

This chapter contains the following sections:

- Using the iim.conf file
- General Configuration Parameters
- User Source Configuration Parameters
- Logging Configuration Parameters
- Instant Messaging Server Configuration Parameters
- Multiple Server Configuration Parameters
- Multiplexor Configuration Parameters

Using the iim.conf file

Instant Messaging stores configuration settings in the `iim.conf` file within the instant messaging configuration directory as follows:

- On Solaris:

  `/etc/opt/SUNWiim/config/iim.conf`

- On Windows:

  instant-messaging-installation-directory`\config\iim.conf`

This file is a plain ASCII text file, with each line defining a server parameter and its value(s):

- A parameter and its value(s) are separated by an equal sign (=) with spaces and tabs allowed before or after the equal sign.
- A value can be enclosed in double quotes (" "). If a parameter allows multiple values, the entire value string must be enclosed in double quotes.
- A comment line must have an exclamation point (`!`) as the first character of the line. Comment lines are for informational purposes and are ignored by the server.
- If a parameter appears more than once, the value of the last parameter listed overrides the previous value.
- A backslash (`\`) is used for continuation and indicates the value(s) are longer than one line.
- Each line is terminated by a line terminator (`\n`, `\r`, or `\r\n`).
- The key consists of all the characters in the line starting with the first non-whitespace character and up to the first ASCII equal sign (=) or semi-colon (`;`). If the key is terminated by a semi-colon, it is followed by "`lang-`" and a tag that indicates the language in which this value is to be interpreted. The language tag is followed by an equal sign (=). All whitespace characters before and after the equal sign are ignored. All remaining characters on the line become part of the associated value string.
- Multiple values in the value string are separated using commas (`,`).
- Within a value, if any special characters like comma, space, newline, tab, double quotes, or backslash are present, the entire value needs to be within double quotes. In addition, every carriage return, line feed, tab, backslash, and double quotes within the value must specified with a backslash (\).

- If you make changes to the iim.conf file, you must refresh the Instant Messaging server in order for the new configuration settings to take effect.

NOTE The iim.conf file is initialized by the installation process and should be modified only as described in this guide.

General Configuration Parameters

Table A-1 lists and describes the general configuration parameters.

Table A-1 General Configuration Parameters

Parameter	Default Value	Description
iim.comm.modules	iim_server,iim_mux	The communication modules used. The values are iim_server and iim_mux. The default value is iim_server, iim_mux, which means both the server and multiplexor are used. The iim_mux value is useful for multiplexor.
iim.smtpserver	localhost	SMTP server to send mail to end users who have set the option for forwarding their messages as emails or to pagers.
iim.instancedir	On Unix: /opt On Windows: c:\Program Files\Sun\InstantMessaging	The installation directory root.
iim.instancevardir	On Solaris: /var/opt/SUNWiim/default On Linux: /var/opt/soim/default On Windows: iim.conf\	Sets the directory to contain runtime files, including the end-user profile database, logs, and other files created by the server and multiplexor at runtime.
iim.user	inetuser for LDAP deployments. root for portal deployment.	The end-user name which the server processes run. Used only on Unix platforms.

Table A-1 General Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim.group`	`inetgroup` for LDAP deployments. `root` for portal deployment.	The group using which the server processes run. Used only on Solaris platform.
`iim.jvm.maxmemorysize`	`256`	The maximum number heap size in MB the JVM running the server is allowed to use. Used to construct the `-mx` argument of the Java command.
`iim.mail.charset`	None	This parameter specifies if the headers of the mail are in ascii and not encoded. It contains the name of the charset to be used to encode the headers of the mail message sent out for offline alerts. For example: `iim.mail.charset=iso-2022-jp`
`iim.jvm.command`	`/usr/j2se/bin/java`	The location of the Java Runtime Executable (JRE).
`iim.identity.basedir`	`/opt`	The default installation directory—or what's also referred to as the base directory—for Sun Java System Sun Java System Identity Server.
`iim.identity.jre`	`/usr/java_1.3.1_04`	The location of the JRE used by the Identity Server to run all it's processes.
`iim.portal.deployuri`	`/portal`	The URI using which the Portal Server `war` files are deployed in the Identity Server.
`iim.portal.host`	`imhostname`	The host name of the server on which the Portal Server is running. Specify the port number if a non default port number is used.
`iim.portal.protocol`	`http`	The protocol used to access the Portal Server.
`iim.policy.resynctime`	`720`	The Instant Messaging server clears all cached end-user information on a regular basis in order to eliminate old end-user information. This parameter specifies the frequency, in minutes, at which the cached end-user information is cleared.

User Source Configuration Parameters

Table A-2 lists and describes the user source configuration parameters.

Table A-2 User Source Configuration Parameters

Parameter	Default Value	Description
`iim_ldap.host`	`localhost:389`	LDAP server name and port used by Instant Messaging server for end-user authentication.
`iim_ldap.searchbase`	`o=internet`	The string used as base to search for the end users and groups on the LDAP server.
`iim_ldap.usergroupbinddn`	None (the server performs anonymous searches)	Specifies the `dn` to use to bind to the LDAP server for searches.
`iim_ldap.usergroupbindcred`	None (the server performs anonymous searches)	Specifies the password to use with the `iim_ldap.usergroupbinddn` dn for LDAP searches.
`iim_ldap.loginfilter`	`(&(|(objectclass=inetorgperson)(objectclass=webtopuser))(uid={0}))`	Search filter used during end-user login.
`iim_ldap.usergroupbyidsearchfilter`	`(|(&(objectclass=groupofuniquenames)(uid={0}))(&(|(objectclass=inetorgperson)(objectclass=webtopuser))(uid={0})))`	The search filter used to search for end users and groups in the directory, under the base specified by ID.

`iim_ldap.usergroupbynamesearchfilter`	`(|(&(objectclass=groupofuniquenames)(cn={0}))`
	`(&(|(objectclass=inetorgperson)(objectclass=webtopuser))(cn={0})))`
		The search filter used to search for end users and groups in the directory, under the base specified by name.

`iim_ldap.allowwildcardinuid`	`False`	Determines if wildcards should be enabled for UIDs while performing a search. As most directory installations have UIDs indexed for exact searches only, the default value is `False`. Setting this value to `True` can impact performance unless UIDs are indexed for substring search.
`iim_ldap.userclass`	`inetOrgPerson,webtopuser`	The LDAP class that indicates that an entry belongs to an end user.
`iim_ldap.groupclass`	`groupOfUniqueNames`	The LDAP class that indicates that an entry belongs to a group.

Table A-2 User Source Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_ldap.groupbrowsefilter`	`(objectclass=groupofuniquenames)`	The search filter used to browse all groups in the directory, under the specified search base.
`iim_ldap.searchlimit`	`40`	Maximum number of entries to be returned by a search. A value of `-1` means search is disabled on this server and a value of `0` indicates unlimited search.
`iim_ldap.userdisplay`	`cn`	LDAP attribute to use for display name of end users.
`iim_ldap.groupdisplay`	`cn`	LDAP attribute to use for display name of groups.
`im_ldap.useruidattr`	`uid`	LDAP attribute used as end users' UID.
`im_ldap.groupmemberattr`	`uniquemember`	LDAP attribute that gives the list of members of a group.
`iim_ldap.usermailattr`	`mail`	LDAP attribute that should contain end users' provisioned email addresses. Used when the email message sent to an offline end user.
`iim_ldap.userattributes`	None	LDAP attribute that contains the list of custom attributes from the LDAP user entry.
`iim_ldap.groupattributes`	None	LDAP attribute that contains the list of custom attributes from the LDAP group entry.
`iim_ldap.groupmemberurlattr`	None	The membership attribute of a dynamic group, which contains the LDAP filter or the LDAP URL.
`iim_ldap.useidentityadmin`	The default value is `true,` if Identity Server Instant Messaging Service Definition component is installed. The default value is `false,` if Identity Server Instant Messaging Service Definition component is not installed.	If the value is `true` then the Identity Server Administrator credentials will be used to bind to the Directory Server.

Logging Configuration Parameters

Table A-3 lists and describes the logging configuration parameters.

Table A-3 Logging Configuration Parameters

Parameter	Default Value	Description
iim.log.iim_server.severity	NOTICE	Level of logging required for the server module. The possible values from highest to lowest are: FATAL, ERROR, NOTICE, WARNING, INFO, and DEBUG. If a lower level of logging is chosen, it is implied that you get the higher levels too. That is, if you choose WARNING you get FATAL, ERROR, NOTICE, and WARNING.
iim.log.iim_server.url	On Solaris: /var/opt/SUNWiim/default/log/server.log On Linux: /var/opt/soim/default/log/server.log On Windows: *instant-messaging-installation-directory*\log\server.log	Location of the server log file. This file needs to be periodically trimmed to prevent disk space from filling up.
iim.log.iim_mux.severity	NOTICE	Level of logging required for the multiplexor module. The possible values from highest to lowest are: FATAL, ERROR, NOTICE, WARNING, INFO, and DEBUG. If a lower level of logging is chosen, it is implied that you get the higher levels too. That is, if you choose WARNING you get FATAL, ERROR, NOTICE, and WARNING.

Table A-3 Logging Configuration Parameters *(Continued)*

Parameter	Default Value	Description

`iim.log.iim_mux.url`	On Solaris:
	`/var/opt/SUNWiim/default/log/mux.log`
	On Linux:
	`/var/opt/soim/default/log/mux.log`
	On Windows:
	instant-messaging-installation-directory`\log\mux.log`
		Location of the multiplexor log file. This file needs to be periodically trimmed to prevent disk space from filling up.

`iim.log.iim_server.maxlogsize`		This parameter contains the maximum size of a server log file. If the log files exceeds the size specified in this parameter then server creates a new file to log in the details.

Instant Messaging Server Configuration Parameters

Table A-4 lists and describes the Instant Messaging server configuration parameters.

Table A-4 General Instant Messaging server Configuration Parameters

Parameter	Default Value	Description
`iim_server.domainname`	*host's domain name*	The logical Instant Messaging server domain name you want this server to support. This is the name that is used by other servers in the network to identify this server. It is also the name used by this server to identify its end users to other servers. This is not necessarily the Fully Qualified Domain Name of the system running the Instant Messaging server. For example, if the system `iim.xyz.com` is the only Instant Messaging server for a company `xyz.com`, then the domain name is likely to be `xyz.com`.
`iim_server.port`	49919	IP address and port for the server to bind to, and to listen for connections from other servers. IP address setting is useful for multi homed machines when you want to use only one particular IP address. If no IP address is listed, this indicates a value of `INADDR_ANY` on `localhost`.
`iim_server.useport`	TRUE	Indicates whether the server should listen on the server-to-server communication port. The possible values are `TRUE` and `FALSE`. If `TRUE`, the server listens on the port defined by `iim_server.port` or on port 9919, if that is not explicitly defined.

Table A-4 General Instant Messaging server Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_server.sslport`	`49910`	Server's SSL port used for secure server-to-server communication. Note: The value format is `IPaddress:port`. If no IP address is listed, this indicates a value of `INADDR_ANY` on `localhost`.
`iim_server.usesslport`	`FALSE`	Indicates if the server should listen on the server-to-server SSL communication port. The possible values are `TRUE` and `FALSE`. If `TRUE`, the server listens on the port defined by `iim_server.sslport` or on port 9910, if that is not explicitly defined.
`iim_server.clienttimeout`	`15`	Specifies the time, in minutes, before the server discards client connections that are no longer active. For example, when a machine is turned off. The minimum accepted value is 5.

Table A-4 General Instant Messaging server Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_server.usesso`	`0`	This parameter tells the server whether or not depend on the SSO provider during authentication. An SSO provider is a module which the server uses to validate a session id with a SSO service. In portal deployment, Portal Server Session API provides the IM server with the ability to validate session ids sent by the client. The value for this parameter can either be `0`, `1`,or `-1`. `0` - do not use the SSO provider (default). `1` - use the SSO provider first and default to LDAP when the SSO validation fails. `-1`- use SSO provider only without attempting LDAP authentication even when the SSO validation fails. The `iim_server.usesso` parameter is used in conjunction with the `iim_server.ssoprovider` parameter.
`iim_server.ssoprovider`	None	This parameter specifies the class implementing the SSO Provider. If `iim_server.usesso` is not equal to `0` and this option is not set, the server uses the default Portal Server based SSO Provider.
`iim_server.msg_archive`	`false`	This parameter specifies whether the archive provider should be enabled or disabled.

Table A-4 General Instant Messaging server Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_server.msg_archive.provider`	None	This parameter contains the list of custom archive providers. This parameter allows multiple values and each value is separated by a comma(`,`).
`iim_server.msg_archive.auto`	false	This parameter tells the server whether the end-users' archive control settings can be considered. If the value for this parameter is true, it is equivalent to selecting `archive everything` option in the User Settings.
`iim_server.conversion`	`false`	This parameter specifies whether message conversion should be enabled. It specifies whether the configured list of Message Conversion Providers should be used for message conversion.
`iim_server.conversion.provider`	None	This parameter contains the list of Message Conversion Providers to be used for message conversion. This parameter allows multiple values with each value is separated by a comma(`,`).

Table A-4 General Instant Messaging server Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_server.servertimeout`	`-1`	The server can be configured to automatically close the connection opened by a remote server, if the remote server is inactive. This is performed by periodically measuring the time the last request was made by the remote server to the server. The connection to the remote server is terminated, if the time of the last request made by the remote server exceeds the value of the `iim_server.servertimeout` parameter. The parameter value is in minutes.
`iim_server.enable`	`true`	This value should contain whether or not the Instant Messaging server should be enabled. This parameter is set false to enable the Instant Messaging multiplexor.
`iim_server.conversion.external.command`	None	This parameter contains the external command used for message conversion.
`iim_server.stat_frequency`	`1`	This parameter contains the frequency at which the server logs the summary of activities to the log file. The server logs the summary of activities to the log file only if the server minimum log severity is set to `NOTICE` or lower. The value is in minutes.
`iim_server.secconfigdir`	`/etc/opt/SUNWiim/default/config`	This directory contains the key and certificate databases. It usually contains the security module database.

Table A-4 General Instant Messaging server Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_server.keydbprefix`	None	This value should contain the key database filename prefix. The key database file name must always end with `key3.db.` If the Key database contains a prefix, for example `This-Database-key3.db`, then value of this parameter is `This-Database`.
`iim_server.certdbprefix`	None	This value should contain the certificate database filename prefix. The certificate database file name must always end with `cert7.db`. If the certificate database contains a prefix, for example `Secret-stuff-cert7.db`, then value of this parameter is `Secret-stuff`.
`iim_server.secmodfile`	`secmod.db`	This value should contain the name of the security module file.
`iim_server.certnickname`	`Server-Cert`	This value should contain the name of the certificate you entered while installing the certificate. The certificate name is case-sensitive.
`iim_server.keystorepasswordfile`	`sslpassword.conf`	This value should contain the relative path and the name of the file containing the password for the key database. This file should contain the following line: `Internal (software) Token:`*password* Where *password* is the password protecting the key database.
`iim_server.trust_all_cert`	false	If this value is true than the server will trust all certificates and will also add the certificate information into the log files.

Multiple Server Configuration Parameters

For communication between multiple Instant Messaging servers in your network, you need to configure your server to identify itself with the other servers and identify itself with each coserver, or cooperating server, which will have a connection to your server. The coserver identifies itself with its Instant Messaging domain name, host and port number, serverID, and password.

Each cooperating server is given a symbolic name, which is a string consisting of letters and digits, for example, `coserver1`. Using the symbolic naming convention you can specify multiple servers.

When Instant Messaging servers are configured in this manner, you can form a larger Instant Messaging community. Thus:

- End users on each server can communicate with end users on every other server
- Use conferences rooms on other servers
- Subscribe to news channels on other servers (subject to access privileges)

Table A-5 lists and describes the multiple server configuration parameters.

Table A-5 Multiple Server Configuration Parameters

Parameter	Default Value	Description
`iim_server.serverid`	None	String used by this server to identify itself to all other servers.
`iim_server.password`	None	Password used by this server to authenticate itself to all other servers.

`iim_server.coservers`	None	Comma separated list containing symbolic names of the servers that can connect to this server. Any meaningful names are allowed, but they must match what you use for the `.serverid`, `.password`, and `.host` parameters. Examples:
		`iim_server.coservers=coserver1,coserver2`
		or
		`iim_server.coservers=abc,xyz,ntc`

Table A-5 Multiple Server Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_server.`*coserver1*`.serverid`	None	String that identifies the cooperating server represented by the name, *coserver1* to authenticate to this server. Note: If you had used `abc` in the `iim_server.coservers` list, then the corresponding name for its *serverid* would be `iim_server.abc.serverid`.
`iim_server.`*coserver1*`.password`	None	Password used by cooperating server represented by the name, *coserver1* to authenticate to this server. Note: If you had used `abc` in the `iim_server.coservers` list, then the corresponding name for its password would be `iim_server.abc.password`.
`iim_server.`*coserver1*`.host`	None	IP address and the port to connect to, for end users on this server to communicate to end users on the server represented by the name `coserver1`. Note: If you had used `abc` in the `iim_server.coservers` list, then the corresponding name for its host would be `iim_server.abc.host`. Note: The value format is `name:port` or `IPaddress:port`.
`iim_server.`*coserver1*`.usessl`	`False`	Indicates if this server should use SSL to talk to the server identified by *coserver1*. The possible values are `TRUE` and `FALSE`.

Multiplexor Configuration Parameters

Table A-6 lists and describes the multiplexor configuration parameters.

Table A-6 Multiplexor Configuration Parameters

Parameter	Default Value	Description
`iim_mux.listenport`	49909	IP address and listening port for the multiplexor, to listen for Sun Java System Instant Messenger. The value format is *IP_address:port*. If no IP address is listed, this indicates a value of `INADDR_ANY` on localhost. Note: If you change this value, also change the `im.html` and `im.jnlp` files so that they match the port value.

Table A-6 Multiplexor Configuration Parameters *(Continued)*

Parameter	Default Value	Description
iim_mux.serverport	49999	The IM server and port the multiplexor talks to. The value format is *servername*:*port* or *IP_address*:*port*.
iim_mux.numinstances	1	Number of instances of the multiplexor. This parameter is valid only for Solaris platforms.
iim_mux.maxthreads	5	Maximum number of threads per instance of the multiplexor.
iim_mux.maxsessions	2000	Maximum number of concurrent connections per multiplexor process.
iim_mux.usessl	off	If the value is set to on, the multiplexor requires an SSL handshake for each connection it accepts, before exchanging any application data.
iim_mux.secconfigdir	/etc/opt/SUNWiim/default/config	The /etc/opt/SUNWiim/default/config is the value of the iim_mux.secconfigdir parameter. This directory contains the key and certificate databases. It usually contains the security module database.
iim_mux.keydbprefix	None	This value should contain the key database filename prefix. The key database file name must always end with key3.db. If the Key database contains a prefix, for example This-Database-key3.db, then value of this parameter is This-Database.
iim_mux.certdbprefix	None	This value should contain the certificate database filename prefix. The certificate database file name must always end with cert7.db. If the certificate database contains a prefix, for example Secret-stuff-cert7.db, then value of this parameter is Secret-stuff.
iim_mux.secmodfile	secmod.db	This value should contain the name of the security module file.
iim_mux.certnickname	Server-Cert	This value should contain the name of the certificate you entered while installing the certificate. The certificate name is case-sensitive.

Table A-6 Multiplexor Configuration Parameters *(Continued)*

Parameter	Default Value	Description
`iim_mux.keystorepasswordfile`	`/etc/opt/SUNWiim/default/config/sslpassword.conf`	This value should contain the relative path and the name of the file containing the password for the key database. This file should contain the following line: `Internal (software) Token:`*password* Where *password* is the password protecting the key database.
`iim_mux.stat_frequency`	`600`	This value should contain the frequency at which the multiplexor logs the summary of activities to the log file.The minimum value is 10 seconds.
`iim_mux.enable`	true	If the value is true then the multiplexor will run for this instance. If the value is false then the multiplexor will not run for this instance.

Appendix B

Instant Messaging imadmin Tool Reference

This chapter explains the `imadmin` command used to administer Instant Messaging.

imadmin

You can use the `imadmin` utility to start, stop, and refresh the Instant Messaging server and multiplexor. On the Solaris platform, run `imadmin` as `root` or the end user specified during the installation.

Requirements:

You must invoke the `imadmin` utility from the host on which Instant Messaging server is installed.

Location:

- On Solaris: *instant-messaging-installation-directory*`/SUNWiim/sbin`
- On Windows: *instant-messaging-installation-directory*`\sbin`

Table B-1 lists and describes commands related to the `imadmin` command.

Table B-1 The imadmin Commands with Descriptions

Command	Description
`imadmin start`	Starts the enabled server and/or multiplexor component(s).
`imadmin stop`	Stops the enabled server and/or multiplexor component(s).
`imadmin refresh`	Refreshes the enabled server and/or multiplexor component(s).

Table B-1 The imadmin Commands with Descriptions *(Continued)*

Command	Description
`imadmin start server`	Starts only the server.
`imadmin stop server`	Stops only the server.
`imadmin refresh server`	Refreshes only the server.
`imadmin start multiplexor`	Starts only the multiplexor.
`imadmin stop multiplexor`	Stops only the multiplexor.
`imadmin refresh multiplexor`	Refreshes only the multiplexor.
`imadmin migrate`	Generates Sun Java System Sun Java System Identity Server policies based on current policy access control files.
`imadmin version`	Prints version

Synopsis

`imadmin` [*options*] [*action*] [*component*]

Options

Table B-2 lists and describes options (Solaris platform only) for the `imadmin` command.

Table B-2 Options for imadmin command

Option	Description
`-c` *alt-config-file*	Used with the `start` and `refresh` actions, to specify a different configuration file other than `/etc/opt/SUNWiim/config/iim.conf` file
`-h`	Displays help on the `imadmin` command.

Actions

Table B-3 lists and describes actions performed after various imadmin commands are issued.

Table B-3 Actions for imadmin Command

Option	Description
start	Sets the classpath, the Java heap size and starts all the specified components.
stop	Stops all the specified component's daemons.
refresh	Stops and starts the specified component(s). Useful after a configuration change.

Components

Table B-4 lists and describes the components for the imadmin command.

Table B-4 Components for imadmin Command

Option	Description
server	Indicates the Instant Messaging server.
multiplexor	Indicates the multiplexor alone.

Appendix C

Instant Messaging APIs

This chapter explains the APIs used by Instant Messaging.

Instant Messaging APIs Overview

Instant Messaging provides Java APIs which can be used to develop extension or integration modules. Detailed documentation of these APIs are provided with the installed Instant Messenger component, in the form of HTML files generated by Javadocs. The Javadoc files are installed in the *instant-messaging-resource-directory*/apidocs/ directory. To view the API documentation, point your browser to *imcodebase*/apidocs where the codebase is the Instant Messenger resources codebase.

The following are the Instant Messaging APIs:

- Instant Messaging Service API
- Messenger Beans
- Service Provider Interfaces
- Authentication Provider API

Instant Messaging Service API

The Instant Messaging API is used by the applications located on the same host or in the remote host to access Instant Messaging services, such as Presence, Conference, Notification, Polls and News channels.

The Instant Messaging Service API can be used for:

- A Java-based or web-based client, such as a portal channel
- A Bridge or a Gateway to enable another class of clients.
- Integration of Instant Messenger and Presence in to the existing applications
- Displaying news feeds as Instant Messenger news.

Messenger Beans

A Messenger bean is a dynamically loaded module used to extend the messenger functionality. Messenger beans can add action listeners, such as buttons and menu items, and item listeners, such as check boxes and toggle buttons in the existing Instant Messenger window. The item listeners are invoked when an end-user input is received and bean-specific actions are based on the end-user input. Beans have the ability to add their own settings panel and save bean-specific properties on the server. Beans can be notified of any event received by the Instant Messenger. for example, a new alert message.

The applications that use Messenger Beans are:

- Ability for end users to share application and conference along with voice or video.
- Ability to retrieve and process the transcript of a conference For example, the contents of a received or sent alert, for archiving purposes.

NOTE The Instant Messenger Archive control functionality is provided through a Messenger Bean.

Service Provider Interfaces

The Service Provider Interface APIs provide the ability to extend the Instant Messaging server functionality. The Service Provider Interface is composed of the following independent APIs:

- The Archive Provider API
- The Document Converter API
- The Authentication Provider API

Archive Provider API

An Archive Provider is a software module usually providing integration with the archive or auditing system. Each configured Archive Provider is invoked for each server process.

The Archive Provider is invoked for the following server processes:

- When a instant message is sent. The Instant Messages, such as alert, poll, chat, news or conference.
- During an authentication event, such as login or logout.
- When there is a change in the presence status.
- During a subscription event. For example, when someone joins or leaves a conference, or subscribes or unsubscribes to a news channel.

The applications that use the Archive Provider API are as follows:

- Instant Messaging Archive

  The default Instant Messaging archive in Instant Messaging is based on the Archive Provider API. For more information on Instant Messaging Archive, see Managing The Instant Messaging Archive.
- The application that records the usage statistics for sizing purposes

Message Conversion API

A Message Converter is invoked for every message or each message part going through the server. The Message Converter may leave the message part intact or modify or remove the message part. The text parts are processed as Java String Objects. The Message Converter processes other attachment as a stream of bytes and returns a potentially different stream of bytes, or nothing at all if the attachment is to be removed.

The applications that uses Message Conversion API are:

- Virus checking and removal
- Translation engine integration
- Message content filtering

Authentication Provider API

The Authentication Provider API provides ability to deploy Instant Messaging in environments that are not using Identity Server password-based or token-based authentication service. This API is invoked whenever an end user requests authentication, and it can be used in conjunction with the LDAP authentication.

Single Sign-on (SSO) with Identity Server is performed using the Authentication Provider API. This API can also be used to integrate with other authentication systems.

Appendix D

Legacy Instant Messaging 6.0

This service is deprecated. If you had Instant Messaging software, and are now installing version 6 2004Q2, you might want to be aware that the service attributes listed in this section are still effective and supersede version 6 2004Q2 attributes.

When you deploy Sun Java System Instant Messaging server with Sun Java System Sun Java System Identity Server, an Instant Messaging service is added to the Sun Java System Sun Java System Identity Server. The Instant Messaging service enables the administrator to enforce policy mechanisms for accessing Sun Java System Instant Messaging server.

For more information on policies managed through Sun Java System Sun Java System Identity Server, see "Overview of Privacy, Security, and Site Policies" on page 68.

Table D-1 lists and describes the Instant Messaging service attributes.

Table D-1 Instant Messaging Service Attributes

Service Attributes	Description
`sunIMEnable`	This is a boolean attribute. When enabled it has Access and Deny permissions for an organization. These attributes will be added as dynamic attributes.
`sunIMAllowAlertOnly`	This is a boolean attribute. When enabled the instant messenger only displays the alerts. The contact list or the news is not displayed. This attribute is used in CHAT and POPUP flavors. By default this attribute is disabled.
`sunIMAllowFileTransfer`	This is a boolean attribute. When enabled it allows files to be attached to the messages. By default this attribute is enabled.
`sunIMEnableModerator`	This is a boolean attribute. It enables the moderated conference feature in Sun Java System Instant Messenger. By default, this attributed is enabled.

Table D-1 Instant Messaging Service Attributes

Service Attributes	Description
`sunIMFlavor`	This attribute can be selected from a drop down list. It describes the message type to be enabled. The values are `ALL`, `IM,` `NEWS`, CHAT and `POPUP`. The default selected value is `ALL`.

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