

Oracle® Communications Delegated Administrator

Installation and Configuration Guide

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Preface

This guide provides instructions for installing and configuring Oracle Communications Delegated Administrator.

Audience

This document is intended for system administrators or software technicians who install and configure Delegated Administrator. This guide assumes you are familiar with the following topics:

- Oracle Communications Unified Communications Suite component products
- Oracle Directory Server Enterprise Edition and LDAP
- System administration and networking

Related Documents

For more information, see the following documents in the Delegated Administrator documentation set:

- *Delegated Administrator System Administrator's Guide*: Provides instructions for administering Delegated Administrator.
- *Delegated Administrator Security Guide*: Provides guidelines and recommendations for setting up Delegated Administrator in a secure configuration.
- *Delegated Administrator Release Notes*: Describes the fixes, known issues, troubleshooting tips, and required third-party products and licensing.

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Document Revision History

The following table lists the revision history for this guide:

Version	Date	Description
E54918-02	February 2016	Minor formatting and text changes.
E54918-01	August 2014	Initial release.

Delegated Administrator Installation Overview

This chapter provides an overview of the Oracle Communications Delegated Administrator installation process.

Overview of Delegated Administrator Installed Components

During the installation process, you install and configure the following components:

- Java
- Oracle GlassFish Server
- Delegated Administrator

Delegated Administrator depends on Oracle Directory Server Enterprise Edition for LDAP services. If your site does not currently have Directory Server deployed and you need to install it, see the Oracle Directory Server Enterprise Edition documentation for instructions at:

http://docs.oracle.com/cd/E29127_01/index.htm

Overview of the Delegated Administrator Installation Procedure

The installation procedure follows these steps:

1. Plan your installation. When planning your installation, do the following:
 - Determine the scale of your implementation, for example, a small development system, or a large production system.
 - Determine how many physical machines you need, and which software components to install on each machine.
 - Plan the system topology, for example, how the system components connect to each other over the network.
2. Review system requirements. System requirements include:
 - Hardware requirements, such as disk space.
 - System software requirements, such as operating system (OS) versions and OS patch requirements.
 - Information requirements, such as IP addresses and host names.
3. Install and configure software upon which Delegated Administrator is dependent, including Java. You also need to install GlassFish Server.

4. Prepare the Directory Server schema, either schema 1 or schema 2, by installing and running the most current **comm_dssetup** script from the Communications Suite distribution.
5. Install and configure Delegated Administrator.
6. Perform post-installation configuration tasks.
7. Verify the installation.

After Delegated Administrator is installed, you might perform additional security-related tasks. For more information, see *Delegated Administrator Security Guide*.

Delegated Administrator Installation Options

You install Delegated Administrator by running the Unified Communications Suite installer in either interactive or silent mode. When you run the Communications Suite installer in silent mode, you are running a non-interactive session. The installation inputs are taken from the following sources:

- A silent installation file
- Command-line arguments
- Default settings

You can use silent mode to install multiple instances of the same software component and configuration without having to manually run an interactive installation for each instance.

For more information, see ["Installing Delegated Administrator in Silent Mode."](#)

Ensuring a Successful Delegated Administrator Installation

Only qualified personnel should install the product. You must be familiar with the UNIX operating system. You should be experienced with installing Java-related packages.

Follow these guidelines:

- As you install each component, for example, verify that the component installed successfully before continuing the installation process.
- Pay close attention to the system requirements. Before you begin installing the software, make sure your system has the required base software. In addition, ensure that you know all of the required configuration values, such as host names and port numbers.
- As you create new configuration values, write them down. In some cases, you might need to re-enter configuration values later in the procedure.

Directory Placeholders Used in This Guide

[Table 1–1](#) lists the placeholders that are used in this guide:

Table 1–1 Delegated Administrator Directory Placeholders

Placeholder	Directory
<i>DelegatedAdmin_home</i>	Specifies the installation location for the Delegated Administrator software. The default for both Solaris and Linux is /opt/sun/comms/da .

Table 1–1 (Cont.) Delegated Administrator Directory Placeholders

Placeholder	Directory
<i>DelegatedAdmin_cfg</i>	Specifies the installation location for the configuration directory. The default for both Solaris and Linux is /var/opt/sun/comms/da/config .
<i>DelegatedAdmin_database</i>	Specifies the location for the database directory, if you are using a file-based property store. The default for both Solaris and Linux is /var/opt/sun/da/default/db .
<i>DelegatedAdmin_runtime</i>	Specifies the location for the configurable directory for the files generated by the server at runtime. The default for both Solaris and Linux is /var/opt/sun/da/default .
<i>GlassFish_home</i>	Specifies the location of the GlassFish server directory. The GlassFish Server base installation directory is /opt/glassfish3/glassfish .

Planning Your Delegated Administrator Installation

This chapter provides information about planning your Oracle Communications Delegated Administrator installation. It also describes the Delegated Administrator logical and physical architectures.

About Delegated Administrator

Delegated Administrator provisions the directory to support Oracle Communications Messaging Server, Oracle Communications Calendar Server, Oracle Communications Instant Messaging Server, and Oracle Communications Contacts Server.

With Delegated Administrator, you can distribute provisioning tasks to lower-level administrators who have the authority to manage specified organizations in the LDAP directory.

Delegated Administrator provides two interfaces for provisioning users and organizations in the directory:

- Delegated Administrator utility
- Delegated Administrator console

Delegated Administrator Utility

The Delegated Administrator utility is a set of command-line tools for provisioning Messaging Server, Calendar Server, Instant Messaging Server, and Contacts Server organizations. It also provisions users, groups, and Calendar resources.

Note: The Delegated Administrator utility does not offer commands for creating the Service Provider roles and organizations described in this book. To create and manage these new roles and organizations, you must use the Delegated Administrator console.

You invoke the utility with the **commadmin** command.

For information about the syntax and options available with the **commadmin** command, see the discussion about this command in *Delegated Administrator System Administrator's Guide*.

Note: When using the Delegated Administrator utility or the Delegated Administrator console, you should also run the Referential Integrity plug-in because the Referential integrity plug-in ensures that when entries are removed, all attributes that contain their DN are also removed, see *Maintaining Referential Integrity in Oracle Fusion Middleware Administration Guide for Oracle Directory Server Enterprise Edition 11*.

Delegated Administrator Console

The Delegated Administrator console is a graphical user interface (GUI) for provisioning Messaging Server, Calendar Server, Instant Messaging Server, and Contacts Server organizations. It also provisions users, groups, and Calendar resources.

For information on how to use the console, see the Delegated Administrator console online help.

Delegated Administrator LDAP Attributes

Delegated Administrator enables you to provision users by modifying the LDAP directory. You do not need to modify the directory directly. However, it can be useful to understand the Delegated Administrator attributes added to user entries and higher-level nodes in the directory.

Delegated Administrator Components

From a planning standpoint, you can install a server process separate from a console process.

For information about the LDAP schema object classes and attributes that support Delegated Administrator, see Communications Suite Delegated Administrator LDAP Object Classes and Attributes in *Communications Suite Schema Reference*.

Communications Suite Schema Reference also defines the object classes and attributes that support the other Communications Suite components: Messaging Server, Calendar Server, Instant Messaging Server, Contacts Server, and Convergence.

Components Related to Delegated Administrator

The software components discussed in this section work with Delegated Administrator, but are installed separately. See ["Planning your Delegated Administrator Installation"](#) for more information on how these components interact with Delegated Administrator.

Directory Server

(Required) To store user, group, and domain data that Delegated Administrator provisions for the Communications Suite components. It is recommended that 11gR1 be used. To enforce unique values for mail attributes, you must install either Oracle Directory Server Enterprise Edition 11gR1, Oracle Directory Server Enterprise Edition 7 or Directory Server 6.x. It is not required that Delegated Administrator be installed on a local host when using one of these components.

Directory Server Setup Script (comm_dssetup.pl)

(Required) To prepare the LDAP directory for Delegated Administrator. The **comm_dssetup.pl** script is included in the Delegated Administration software. It is not required that Delegated Administrator be installed on a local host when using this component. The component must be on the same host as the Directory Server.

GlassFish Server

(Required) Delegated Administrator must be deployed to either Oracle iPlanet Web Server (at least Versions 6.1 or 7), Application Server (at least Versions 7, 8, or 9) or Oracle GlassFish Server 3. Also, Delegated Administrator must be installed on a local host when using one of these components.

The following table shows the Web Containers that support Delegated Administrator.

Table 2–1 Web Containers Supported By Delegated Administrator

Component Product	GlassFish Server 3	GlassFish Server 2.1.1	Application Server 9.1 Update 2	Application Server 8	Application Server 7	Oracle iPlanet Web Server 7.0 Update 2
Delegated Administrator 7.0.0.10	Supported	Supported	Supported	Supported	Supported	Supported

Note: The default installation paths for GlassFish Server 3 are the following:

Base installation directory: **/opt/glassfish3/glassfish**

Domain directory: **/opt/glassfish3/glassfish/domains/domain1**

Document root directory:

/opt/glassfish3/glassfish/domains/domain1/docroot

With GlassFish Server, you might see an expired CA certificate error in your **server.log**. Since this error does not impact the functionality of GlassFish Server, you may ignore it. Or you may remove the certificate by using **keytool**:

```
#keytool -list -keystore install
dir/glassfish/domains/domain-name/config/keystore.jks -alias gtecybertrust5ca
```

You are prompted for the domain's master password to grant access to the truststore.

GlassFish Server 3.1.2.6 requires that you have either Java 6 or Java 7 installed.

Messaging Server 6 through 6.3, 7.0, 7 Update 1-5

(Required) To provide mail server for users and groups provisioned by Delegated Administrator. It is not required if you do not provision calendar users. It is recommended that Messaging Server 7 Update 5 be used. This component does not need to be installed on a local host.

Calendar Server 6.x

(Required) To provide calendar service for users and groups provisioned by Delegated Administrator 6.4 or greater. This component is not required if you do not provision calendar users. This component does not need to be installed on a local host.

Calendar Server 7

(Required) To provide calendar service for users and groups provisioned by Delegated Administrator 7. This component is not required if you do not provide mail users. If you are deciding between Calendar Server 7 and Calendar Server 6, Calendar Server 7 is recommended. This component does not need to be installed on a local host.

Planning your Delegated Administrator Installation

When you install Delegated Administrator, you must install both the Delegated Administrator server and the **commadmin** command on the same host. If you choose, you can also install the Delegated Administrator administration console on the same host, or on a separate host. That is, you can install the Delegated Administrator server and console on separate hosts.

See "[Choosing Which Components to Configure](#)" for more information.

About Installing a Secure System

In conjunction with the SSL protocol, Delegated Administrator provides client-to-server and server-to-server encrypted communications as well as certificate-based authentication between servers. For information about secure installation and configuration of Delegated Administrator, see *Delegated Administrator Security Guide*.

Delegated Administrator System Requirements

This chapter describes the hardware, operating system, software, and database requirements for installing Oracle Communications Delegated Administrator.

Software Requirements

Delegated Administrator is installed in a web container. It uses an LDAP database for data storage.

Supported Operating Systems

[Table 3–1](#) lists operating systems that support Delegated Administrator.

Table 3–1 Delegated Administrator Operating System Requirements

Operating System	CPU	Required Patches
Solaris OS 11 SPARC 64-bit	SPARC, X64	See the Solaris 11 Release and Installation documentation for more information.
Solaris OS 11 x86 64-bit	SPARC, x64	See the Solaris 11 Release and Installation documentation for more information.
Solaris OS 10 SPARC 64-bit	SPARC, x64	See the Solaris 10 Release and Installation documentation for more information.
Solaris OS 10 x86 32-bit	SPARC, x64	See the Solaris 10 Release and Installation documentation for more information.
Solaris OS 10 x86 64-bit	SPARC, x64	See the Solaris 10 Release and Installation documentation for more information.
Red Hat Enterprise Linux 4 32-bit	x86	See the Red Hat Enterprise Linux documentation for more information.
Red Hat Enterprise Linux 4 64-bit	x64	See the Red Hat Enterprise Linux documentation for more information.
Red Hat Enterprise Linux 5 Server 64-bit	x64	See the Red Hat Enterprise Linux documentation for more information.
Red Hat Enterprise Linux 6 Server 64-bit	x64	See the Red Hat Enterprise Linux documentation for more information.
Oracle Linux 5 64-bit	x64	See Oracle Linux documentation for more information.
Oracle Linux 6 64-bit	x64	See Oracle Linux documentation for more information.

Client Requirements

Table 3–2 shows the supported browsers for Delegated Administrator clients.

Table 3–2 Supported Browsers for Delegated Administrator

Browser	Windows 7	Windows Vista	Windows XP	Windows 2000	Solaris
Microsoft Internet Explorer	9.x	9.x	6.0 SPI and 7.x	6.0 XPI and 7.x	NA
Firefox	13	13	2.0	2.0	2.0

Hardware Requirements

The number and configuration of the systems that you employ for your Delegated Administrator installation depends on the scale and the kind of deployment you have planned.

Note: The sizing estimates in this section assume proper application configuration and tuning, in a manner consistent with leading practices of Oracle Communications consulting and performance engineering. This information is provided for informational purposes only and is not intended to be, nor shall it be construed as a commitment to deliver Oracle programs or services. This document shall not form the basis for any type of binding representation by Oracle and shall not be construed as containing express or implied warranties of any kind. You understand that information contained in this document will not be a part of any agreement for Oracle programs and services. Business parameters and operating environments vary substantially from customer to customer and as such not all factors, which may impact sizing, have been accounted for in this documentation.

Memory and Disk Space Requirements

The memory and disk space requirements for Delegated Administrator on a single managed server in a GlassFish Server domain are the same as those of the web container to which Delegated Administrator is deployed. For information about the web container's hardware requirements, see the current release notes for this component.

Additional Software Requirements

The following components, tools, and LDAP schema version are required for this release of Delegated Administrator.

Directory Server 6.x, 7, or 11gR1

To enforce unique values for mail attributes, you must install one of these releases:

- Oracle Directory Server Enterprise Edition 11gR1
- Oracle Directory Server Enterprise Edition 7
- Directory Server 6.x

Java Enterprise System web container

You must deploy Delegated Administrator to one of the following web containers:

- Oracle iPlanet Web Server (at least Versions 6.1 or 7)
- Application Server (at least Versions 7, 8, or 9)
- Sun GlassFish Enterprise Server 2.1.1
- Oracle GlassFish Server 3.1.2

Directory Server Setup script, `comm_dssetup.pl`

Use the version that is bundled with the current version of the Communications Suite installer.

Information Requirements

During Delegated Administrator installation, you must enter values for configuration items such as host names and port numbers. This section shows the information that you must provide during the installation and initial configuration process.

Configuration Worksheet

[Table 3–3](#) shows a configuration worksheet. Print and fill out this worksheet to use when responding to the **config-commmda** script configuration options. You use **config-commmda** to configure Delegated Administrator console and utility.

Note: Support for Access Manager is deprecated. For more information, see Access Manager Support Deprecation in *Unified Communications Suite Release Notes*.

Table 3–3 *config-commmda* Script Configuration Options

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Directory to store the configuration and data files	<code>/var/opt/sun/comms/da</code>	NA
DA Server Host	FQDN of your host	NA
DA Server Port	8080	NA
Default Domain	your domain	NA
Default SSL Port	443	NA
Web Container	Web Server 6.x	NA
Install Root Directory (for DA Console)	(Default depends on web container selected)	NA
Instance Root Directory	(Default depends on web container selected)	NA
Server Instance Identifier	FQDN of your host	NA
Virtual Server Identifier	FQDN of your host	NA
Web Server HTTP Port	80	NA
Administration Server Port	4849	NA

Table 3–3 (Cont.) config-commda Script Configuration Options

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Administrator User ID	admin	NA
Administrator Password	NA	NA
Secure Administration Server Instance?	Unchecked	NA
Default Domain Separator	@	NA
Directory Access Mode	Direct LDAP	NA
DA Server Web Container (if Direct LDAP is chosen)	Web Server 6.x	NA
Access Manager Base Directory (if AM Mode is chosen)	/opt/SUNWam	NA
Install Root Directory (Default depends on web container selected in Direct LDAP mode or derived from Access Manager install in AM Mode)	NA	NA
Access Manager Base Directory	/opt/SUNWam	NA
Web Container Install Root Directory (for DA Server)	Web Server 6.x	NA
Instance Root Directory	(Default depends on web container selected)	NA
Server Instance Identifier	FQDN of your host	NA
Virtual Server Identifier	FQDN of your host	NA
Web Server HTTP Port	80	NA
Administration Server Port	8800	NA
Administrator User ID	admin	NA
Administrator Password	NA	NA
Secure Administration Server Instance?	Unchecked	NA
URL of Directory Server	ldap://FQDN-of-your-host:389	NA
Bind As	cn=Directory Manager	NA
Password	NA	NA
DA Server Internal LDAP Username	daAdmin	<i>this value is hard-coded</i>
DA Server Internal LDAP Password	NA	NA
AM Top level admin	amadmin	<i>this value is hard-coded by Access Manager</i>
AM admin password	NA	NA
Access Manager Internal LDAP Auth Username	amldapuser	<i>this value is hard-coded by Access Manager</i>
AM Internal LDAP Auth Password for amldapuser	NA	NA
Organization DAN	o=yourDefaultDomain,o=ugrootsuffix	NA

Table 3–3 (Cont.) config-commda Script Configuration Options

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Top Level Admin for Delegated Administrator	admin	NA
Password	NA	NA
Load Sample Service Packages	Y	NA
Load Sample Organizations	Y	NA
Preferred Mailhost for Sample	FQDN of your host	NA

Delegated Administrator Pre-Installation Tasks

This chapter describes the pre-installation tasks that you must complete before you can install Oracle Communications Delegated Administrator.

Pre-installation and configuration tasks include:

- [Installing Java](#)
- [Installing GlassFish Server](#)
- [Installing Directory Server](#)

Installing Java

Oracle GlassFish Server is a Java application and needs a Java environment in which to run.

The 32-bit and 64-bit JDKs require manual installation. Install both JDKs, rather than the JRE, on your front-end hosts.

To get the Java software, go to the Java SE Downloads at:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

To install and configure Java, see the Java documentation at:

<http://docs.oracle.com/javase/7/docs/webnotes/install/>

Installing GlassFish Server

Delegated Administrator requires at least GlassFish Server Version 2.1.1. Download the patch from My Oracle Support, at:

<https://support.oracle.com>

To install and configure GlassFish 3 Server, see *Oracle GlassFish Server 3.1.2 Installation Guide*.

Installing Directory Server

Delegated Administrator uses Oracle Directory Server Enterprise Edition to store and access LDAP data for individual users, groups, and domains.

If you need to install Directory Server (that is, your site does not currently have Directory Server deployed), see the Oracle Directory Server Enterprise Edition documentation at:

http://docs.oracle.com/cd/E29127_01/index.htm

Prior to installing and configuring Delegated Administrator, you must also prepare the Directory Server LDAP schema by running the **comm_dssetup.pl** script. This script, which is provided as part of the Delegated Administrator software, adds the necessary Communications Suite schema to the LDAP.

Some additional LDAP object classes were added to the Communications Suite schema specifically to support Delegated Administrator. To understand the schema that is used by Delegated Administrator, refer to *Communications Suite Schema Reference*.

Installing and Configuring Delegated Administrator

This chapter describes how to install and configure Oracle Communications Delegated Administrator. After you install the Delegated Administrator software you must configure Delegated Administrator to complete the installation. You use the Delegated Administrator configuration command-line utility, **config-commda**, to perform this initial runtime configuration.

Before installing Delegated Administrator, read these chapters:

- [Delegated Administrator Installation Overview](#)
- [Planning Your Delegated Administrator Installation](#)
- [Delegated Administrator System Requirements](#)
- [Delegated Administrator Pre-Installation Tasks](#)

Installation Assumptions

The instructions in this chapter assume:

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

Note: Support for Access Manager is deprecated. For more information, see Access Manager Support Deprecation in *Unified Communications Suite 7.0.6 Release Notes*.

Installing Delegated Administrator

The tasks to install Delegated Administrator are as follows:

- [Downloading the Delegated Administrator Software](#)
- [Preparing Directory Server](#)
- [Installing the Delegated Administrator Software](#)

Downloading the Delegated Administrator Software

1. Download the Delegated Administrator software from the Oracle software delivery website, located at:
<http://edelivery.oracle.com/>
2. Copy the Delegated Administrator distribution ZIP file to a temporary directory on your Delegated Administrator hosts and extract the files.

Preparing Directory Server

You prepare your Directory Server by running the **comm_dssetup.pl** script against it. You can run the **comm_dssetup.pl** script in either interactive or silent mode. For silent mode instructions, see "[Running the comm_dssetup.pl Script in Silent Mode.](#)"

Downloading the comm_dssetup.pl Script

1. Download the **comm_dssetup.pl** script from the Oracle software delivery website, located at:

<http://edelivery.oracle.com/>

You can either download the Oracle Communications Directory Server Setup (**comm_dssetup.pl**) file separately, or as part of the Delegated Administrator software.

2. Copy the Directory Server Setup ZIP file to a temporary directory on your Directory Server hosts and extract the files.

Running the comm_dssetup.pl Script in Interactive Mode

1. On the host where Directory Server is installed, log in as root or become the superuser (**root**).
2. Start Directory Server, if necessary.
3. Change to the directory where you extracted the Directory Server Setup ZIP file.
4. Run the Installer.

```
./commpkg install
```

For more information about running the Installer, see "[commpkg Reference.](#)"

5. Select **Comms DSsetup** and proceed with the installation.
6. Run the **comm_dssetup.pl** script without any arguments then enter your choices when prompted.

```
/usr/bin/perl comm_dssetup.pl
```

For more information, see "[comm_dssetup.pl Reference.](#)"

Note: You can use either LDAP Schema 2 or Schema 1.

7. If necessary, provision users in the Directory Server.

If Directory Server is already installed at your site, users have already been provisioned. If you have just installed Directory Server at your site, then you need to provision users. For information about provisioning users and schema, see *Communications Suite Schema Reference*.

Installing the Delegated Administrator Software

Choose one of the following methods to install Delegated Administrator software:

- [Installing Delegated Administrator Software in Interactive mode](#)
- [Installing Delegated Administrator in Silent Mode](#)

Note: A bug in the Linux RPM for Delegated Administrator inadvertently requires the NSS packages. They are not needed by Delegated Administrator. In addition, the **config-commda** command assumes certain directories have already been created. If you are performing a new installation of Delegated Administrator 7.0.0.11.0 on Linux, you must do the following:

1. Install the RPM and override the dependency check.

```
cd Linux_x86/DA/Packages
rpm -i --prefix /opt/sun/comms/da --nodeps
sun-commda-7.0-11.00.i386.rpm
```

2. Before running **config-commda**, create the following directories if they do not already exist.

```
mkdir -p /opt/sun/comms/da/install
mkdir -p /var/opt/sun/install
```

After completing this procedure, you can run the Delegated Administrator configuration **config-commda** command.

Installing Delegated Administrator Software in Interactive mode

To install the Delegated Administrator software in interactive mode:

1. Go to the directory where you extracted the Delegated Administrator files.
2. Run the Installer.

```
./commpkg install
```

For more information about running the Installer, see "[commpkg Reference](#)."

3. Select **Delegated Administrator** and proceed with the installation.

About Silent Installations

The Delegated Administrator utility initial runtime configuration program automatically creates a silent installation state file (called **saveState**). This file contains internal information about the configuration program, and is used for running silent installs.

The silent installation **saveState** file is stored in the *DelegatedAdmin_home/data/setup/commda-config_YYYYMMDDHHMMSS/* directory, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the *saveState* file.

For example, once you have run the **config-commda** program once, you can run it in silent install mode:

```
DelegatedAdmin_home/sbin/config-commda -nodisplay -noconsole -state
fullpath/saveState
```

The *fullpath* variable is the full directory path of where the **saveState** file is located.

Installing Delegated Administrator in Silent Mode

When you run the installer in silent mode, you are running a non-interactive session. The installation inputs are taken from the following sources:

- A silent installation file (also known as a state file)
- Command-line arguments
- Default settings

You can use silent mode to install multiple instances of the same software component and configuration without having to manually run an interactive installation for each instance.

To run a silent installation:

1. Obtain the state file by one of the following means.
 - Use a state file that was previously created from an interactive installation session. State files are created in the `/var/opt/CommsInstaller/logs/` directory. The state file name is similar to `silent_CommsInstaller_20070501135358`. A state file is automatically created every time you run the `commpkg install` command.
 - Create a silent state file without actually installing the software during the interactive session by running the `commpkg install --dry-run` command.
2. Copy the state file to each host and modify the file as needed.

The state file is formatted like a property file: blank lines are ignored, comment lines begin with a number sign (#), and properties are key/value pairs separated by an equals (=) sign. [Table 5–1](#) lists the state file options.

Table 5–1 State File Options

Option	Description	Example
VERB	Specifies which function to perform. For a silent install, this is set to install .	VERB=install
ALTDISTROPATH	Specifies an alternate distro path.	ALTDISTROPATH=SunOS5.10_i86pc_DBG.OBJ/release
PKGOVERWRITE	Specifies a boolean indicating whether to overwrite the existing installation packages.	PKGOVERWRITE=YES
INSTALLROOT	Specifies the installation root.	INSTALLROOT=/opt/sun/comms
ALTROOT	Specifies a boolean indicating whether this is an alternate root install.	ALTROOT=yes
EXCLUDEEOS	Specifies to not upgrade operating system patches.	EXCLUDEEOS=YES
EXCLUDEESC	Specifies to exclude shared component patches.	EXCLUDEESC=no
COMPONENTS	A space separated list of mnemonics of the components to be installed. You can precede the mnemonic with a ~ to indicate that only the shared components for that product be installed.	To specify Delegated Administrator: COMPONENTS=JISS To view a list of mnemonic product names, run the commpkg info --listPackages command.
ACCEPTLICENSE	This option is no longer used.	NA

Table 5–1 (Cont.) State File Options

Option	Description	Example
UPGRADESC	Specifies whether to upgrade all shared components without prompting.	UPGRADESC=no
INSTALLNAME	The friendly name for the INSTALLROOT.	INSTALLNAME=
COMPONENT_VERSIONS	This option is unused.	NA

3. Run the silent installation on each host.

```
commpkg install --silent input_file
```

where *input_file* is the path and name of the silent state file, for example `/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358`.

For more information about the `--silent` option, see ["install Verb Syntax."](#)

Note: Command-line arguments override the values and arguments in the state file.

Upgrading Shared Components in Silent Installation

By default, shared components that require user acceptance for upgrading are not upgraded when you run a silent installation. The option to upgrade shared components in the state file is automatically disabled (the **UPGRADESC** option is set to **No**.) This is true even if you explicitly asked to upgrade shared components when you ran the interactive installation that generated the state file. That is, you ran either **commpkg install --upgradeSC y** or you answered “yes” when prompted for each shared component that needed upgrading.

Disabling upgrading shared components in the silent state file is done because the other hosts on which you are propagating the installation might have different shared components installed, or different versions of the shared components. Therefore, it is safer to not upgrade the shared components by default.

You can upgrade shared components when you run a silent installation by performing either of the following actions:

- Use the **--upgradeSC y** option when you run the silent installation. (The command-line argument overrides the argument in the state file.)
- Edit the **UPGRADESC=No** option in the silent state file to: **UPGRADESC=Yes**.

Caution: If you do not upgrade shared components your installation might not work properly.

Installing Delegated Administrator on Solaris Zones

This section explains how to install Delegated Administrator on Solaris 10 Zones.

Installing on Solaris 10 Zones: Best Practices

You can install Delegated Administrator components in the global zone, whole root non-global zones, and sparse non-global zones. Follow these guidelines:

- Treat the global zone as an “administration zone.”

Install shared components and OS patches in the global zone that are to be shared among all zones. However, do not install and run products from the global zone.

- Use whole root non-global zones to run Delegated Administrator.

Do not use the global zone or sparse zones. A whole root zone can have versions that are different from other whole root zones, thus giving it a measure of being “self-contained.”

Be aware of the following zone aspects:

- You can have different shared component versions in the whole root non-global zone, but it is not entirely insulated. If you do a packaging or patching operation in the global zone for a shared component, that operation is also attempted in the whole root zone. Thus, to truly have different shared component versions, use an alternate root.
- To avoid affecting whole root zones you can attempt to never install and patch shared components in the global zone. However, it might not be realistic to never have to install or patch a shared component in the global zone. For example, Network Security Services (NSS) is a shared component, but it is part of Solaris. So to expect to never install and patch NSS in the global zone seems unrealistic, especially given it is a security component.
- Although it is not a recommended best practice, you can use Delegated Administrator in sparse non-global zones. Shared components cannot be installed into the default root because many of them install into the read-only shared file system (**/usr**). Thus, you must run the installer in the global zone to install shared components into the default root. Prepend your selection with ~ in the global zone to install only the dependencies (that is, shared components). You do not have to install in the global zone first before installing in the sparse zone. The installer enables you to continue even when you do not install all the dependencies. However, upgrading the shared components in the global zone affects the sparse non-global zones, thus requiring downtime for all affected zones simultaneously.

Installing into a Non-Global Whole Root Zone

The non-global whole root zone scenario is the equivalent of installing Delegated Administrator on a single box with no zones. Simply install Delegated Administrator as described in ["Installing Delegated Administrator."](#)

Caution: Any operations performed in the global zone (such as installations, uninstallations, and patching) affect the whole root zones.

Installing into a Non-Global Sparse Root Zone

Although it is not a recommended best practice, you can use Delegated Administrator in a non-global sparse root zone. To install Delegated Administrator in a non-global sparse root zone, you first must install or upgrade the applicable operating system patches and shared components in the global zone. You are unable to do so in the sparse root zone, because the **/usr** directory (where the shared components reside) is a read-only directory in the sparse root zone.

1. Follow the pre-installation requirements as described in ["Delegated Administrator Pre-Installation Tasks."](#)

2. Verify that you are about to install the shared components and operating system patches in the global zone and not the sparse root zone. To verify you are in the global zone, run **zonename**. The output should be global.
3. Run the installer in the global zone and only install or upgrade the operating system patches and the Shared Components. Do not install Delegated Administrator components in the global zone. To do this, add a ~ (tilde) to the component number you want to install in the sparse zone.

For example, if you plan to install Delegated Administrator in the sparse zone, you select ~1 during the global zone installation. The installer knows to only install dependencies and not the product itself.

4. Once you have installed the shared components and operating system patches, install Delegated Administrator components in the sparse root zone as described in ["Installing Delegated Administrator."](#)

Configuring Delegated Administrator

After you install the Delegated Administrator software by using the installer, you must configure Delegated Administrator to complete the installation. You use the Delegated Administrator configuration command-line utility, **config-commdda**, to perform this initial runtime configuration.

The Delegated Administrator configuration program (**config-commdda**) creates a new configuration with your specific requirements. This initial runtime configuration program performs minimal configuration.

After you run the program, complete the initial configuration by following the steps described in ["Delegated Administrator Post-Installation Tasks."](#)

You can further customize your Delegated Administrator configuration by performing the tasks described in Customizing Delegated Administrator in *Delegated Administrator System Administrator's Guide*.

You might need to perform additional configuration, as described in *Delegated Administrator System Administrator's Guide*.

Note: Support for Access Manager is deprecated. For more information, see Access Manager Support Deprecation in *Unified Communications Suite Release Notes*.

This section includes information on the following topics:

- [Upgrading from a Previous Release of Delegated Administrator](#)
- [Choosing Which Components to Configure](#)
- [Running the Configuration Program](#)

Upgrading from a Previous Release of Delegated Administrator

If you are configuring Delegated Administrator for the first time, you can skip this section and go directly to the section, ["Choosing Which Components to Configure."](#)

If you are upgrading to this release of Delegated Administrator from an earlier release, and you have customized your configuration, you might have to take steps to preserve your customizations.

For instructions on how to upgrade Delegated Administrator from a previous version, see ["Upgrading Delegated Administrator."](#)

To learn how to preserve your customized configuration, see ["Preserving Customized Data When You Upgrade Delegated Administrator."](#)

Choosing Which Components to Configure

The third panel in the configuration program asks which Delegated Administrator components you want to configure:

- **Delegated Administrator Utility (client):** The command-line interface invoked with `commadmin`.
- **Delegated Administrator Console:** The Delegated Administrator graphical user interface (GUI).
- **Delegated Administrator Server:** The Delegated Administrator server components required to run the Delegated Administrator utility and console.

The configuration program displays different panels depending on which components you select.

The following steps summarize the configuration choices. Each summary step links you to a section that walks you through the actual configuration panels.

Summary of Configuration Choices

The following shows the configuration choices you have when you run the configuration program.

1. Starting the Configuration

Enter the information requested in these panels to begin the configuration.

2. Configuring the Delegated Administrator utility

These panels follow directly after the **Selected Components to Configure** panel. They ask for information used to configure the Delegated Administrator utility. You can either use the command line utility or the GUI console to configure Delegated Administrator.

- The standard approach is to configure the Delegated Administrator utility with the other two components, the server and console, on the same machine.

You must configure the Delegated Administrator utility or the GUI console to configure Delegated Administrator.

- You can also configure the Delegated Administrator utility and console on a separate machine. On the machine on which you configure the utility and console, you would select only those components on the **Selected Components to Configure** panel.

In this case, you must run the configuration program again on the machine where you configure the server.

3. Configuring the Delegated Administrator Console

These panels follow the panels that configure the utility.

You can choose whether or not to configure the Delegated Administrator console.

- If you configure the Delegated Administrator console and server on the same machine, you would select both the console and the server in **Select Components to Configure** panel.

- You also can configure the Delegated Administrator console and server on different machines. On the machine on which you configure the console, you would select only the console on the **Select Components to Configure** panel. The utility is selected by default; be sure it remains selected. In this case, you must run the configuration program again on the machine on which you configure the server.
- If you have not configured the server when using the command line utility, then a dialogue box cautions that you must configure the Delegated Administrator Server on another machine. The server must be configured to enable the Delegated Administrator utility and console to work. If you are using the GUI to configure, then no warning will be displayed. If you configure the console and server on different machines, the utility is configured on *both* machines. To select a component, enter the number (1,2, or 3) or 0 to deselect it. The configuration program displays different panels depending on which Web container you select for the console. You can deploy to one of the following Web containers:
 - Oracle iPlanet Web Server 6.x [WEB]
 - Oracle iPlanet Web Server 7.x [WEB7]
 - Sun Java System Application Server 7.x [APP7]
 - Sun Java System Application Server 8.x or higher[APP8]

If you are configuring the Delegated Administrator server and console on one machine, you will go through these instructions *twice* (once for the server, once for the console).

4. Configuring the Delegated Administrator Server

These panels follow the panels that configure the console.

You can choose whether or not to configure the Delegated Administrator server on a given machine.

If you do not choose to configure the server on a given machine, the configuration program warns you that you must configure it on another machine. The server component is required for running the utility and console.

All other considerations for deploying the server are the same as those for the console (as described in "[Configuring the Delegated Administrator Console](#)").

You can select Access Mode of either Direct LDAP or Access Manager.

Note: The Delegated Administrator server uses the same Web container as Access Manager. The configuration program asks for Web container information after it asks for the Access Manager base directory. This is applicable only if you have chosen Access Manager Access Mode.

5. Completing the Configuration

Enter the information requested in these panels to complete the configuration.

Running the Configuration Program

The steps described in this section walk you through configuring Delegated Administrator.

Note: *DelegatedAdmin_home* is **/opt/sun/comms/da** by default on all platforms; use this value unless you chose a different path during installation..

To run the configuration program, log in as (or become) root and go to the *DelegatedAdmin_home/sbin* directory. Then enter the **config-commdda** command.

Once you run the **config-commdda** command, the configuration program starts.

The sections that follow lead you through the configuration panels.

Starting the Configuration

You must enter the information requested in the first configuration-program panels.

To start the configuration:

1. Welcome

The first panel in the configuration program is a welcome page. Click **Next** to continue or **Cancel** to exit.

2. Select directory to store configuration and data files

Select the directory where you want to store the Delegated Administrator configuration and data files. The default configuration directory is */var/DelegatedAdmin_home*. This directory should be separate from the *DelegatedAdmin_home* directory, (which is **/opt/sun/comms/da** by default).

Enter the name of the directory, or keep the default and click **Next** to continue.

If the directory does not exist, a dialog appears asking if you want to create the directory or select a new directory. Click **Create Directory** to create the directory or click **New** to enter a new directory.

If the directory exists, a dialog appears asking you to choose a new directory or to upgrade the existing installation. Click **Choose New** to choose a new directory or click **Upgrade** to upgrade the existing installation.

A dialog appears indicating that the components are being loaded. This may take a few minutes.

3. Select components to configure

Select the component or components you want to configure on the **Components** panel.

- **Delegated Administrator Utility (client):** The command-line interface invoked with **commadmin**. This component is required and is selected by default. It cannot be deselected.
- **Delegated Administrator Console:** The Delegated Administrator graphical user interface (GUI).
- **Delegated Administrator Server:** The Delegated Administrator server components required to run **commadmin** or the Delegated Administrator console.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

For more information about how to choose components, see ["Choosing Which Components to Configure."](#)

If you choose not to configure the Delegated Administrator server, a dialog box cautions you that you must configure the Delegated Administrator Server on another machine. The server must be configured to enable the Delegated Administrator utility and console to work.

Configuring the Delegated Administrator Utility

You must configure the Delegated Administrator utility on all machines on which you install a Delegated Administrator component (server or console).

To Configure the Delegated Administrator Utility:

1. DA Server host name and port number

Enter the DA server host name and port number. If you are installing the Delegated Administrator server component, you must install it on the same host as Access Manager.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

2. Default domain

Enter the default domain for the Top-Level Administrator. This is the domain used when a domain is not explicitly specified by the **-n** option when executing the **commadmin** command-line command. This is also known as the default organization. If the domain specified does not exist in the directory, it will be created.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

3. Default SSL port for client

Enter the default SSL port that the Delegated Administrator utility uses.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

- If you chose to configure only the **Delegated Administrator** utility, go on to ["Completing the Configuration."](#)
- If you chose to configure both the Delegated Administrator console and the server, or if you chose to configure the console only, go on to ["Configuring the Delegated Administrator Console."](#)
- If you chose to configure the Delegated Administrator server only (together with the required Delegated Administrator utility), go on to ["Configuring the Delegated Administrator Server."](#)

Configuring the Delegated Administrator Console

The configuration program now displays the following panel:

Select a Web Container for Delegated Administrator

Select the Web container on which you will deploy the Delegated Administrator console. You can configure Delegated Administrator on

- Oracle iPlanet Web Server 6.x [WEB]
- Oracle iPlanet Web Server 7.x [WEB7]
- Sun Java System Application Server 7.x [APP7]
- Sun Java System Application Server 8.x or higher [APP8]

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

This panel and the panels that follow gather information about the Web container for the Delegated Administrator console. Follow the instructions in the appropriate section:

- [Configuring Web Server 6.x](#)
- [Configuring Web Server 7.x](#)
- [Configuring Application Server 7.x](#)
- [Configuring Application Server 8.x or Higher](#)

You can deploy the Delegated Administrator console and server on two different Web containers, on two different instances of the Web container, or on the same Web container.

If you chose to configure both the Delegated Administrator console and Delegated Administrator server in Panel 3, a second series of panels will ask for Web container information for the server.

Thus, you will see the Web container configuration panels twice. Follow the appropriate instructions for deploying each of the Delegated Administrator components.

When you complete the Web container configuration panels, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to "[Configuring the Delegated Administrator Server.](#)"
- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to "[Completing the Configuration.](#)"

Configuring Web Server 6.x

If you are deploying the Delegated Administrator server or console on Web Server 6.x, follow the steps described in this section.

To Configure Web Server 6.x:

1. Web Server 6.x Configuration Details

The panel text tells you if you are providing Web Server 6.x configuration information for the Delegated Administrator server or console.

- Enter the Web Server 6.x root directory. You can browse to select the directory.
- Enter the Web Server 6.x instance identifier. This can be specified by a *host.domain* name such as **west.sesta.com**.
- Enter the virtual server identifier. This can be specified by a **https-host.domain** name such as **https-west.sesta.com**.

For more information about the Web Server 6.x instance identifier and virtual server identifier, see the Web Server documentation.

Files for the Web Server 6.x instance are stored in the **https-host.domain** directory under the Web Server 6.x installation directory, for example **/opt/SUNWwbsvr/https-west.sesta.com**.

- Enter the HTTP port number that the specified virtual server listens to.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if the values you specified are valid. If a directory or identifier is invalid or does not exist, a dialog box tells you to choose a new value.

Next, the configuration program checks if a Web Server 6.x instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Web Server 6.x configuration values.

2. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container.

Enter the default domain separator to be used for authentication when the user logs on. For example: @.

- If you are configuring the Delegated Administrator console, take one of the following actions:
 - If you chose to configure both the Delegated Administrator console and the server, go on to ["Configuring the Delegated Administrator Server."](#)
 - If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to ["Completing the Configuration."](#)
 - If you are configuring the Delegated Administrator server, go on to ["Directory \(LDAP\) Server."](#)

Configuring Web Server 7.x

If you are deploying the Delegated Administrator Server or console on Web Server 7.x, follow the steps described in this section.

To configure Web Server 7.x:

1. Web Server 7.x Configuration Details

The panel text tells you if you are providing Web Server 7.x configuration information for the Delegated Administrator server or console.

- Enter the Web Server 7.x server root directory. The Web Server software files are installed in this directory. You can browse to select the directory. The default value is **/opt/SUNWwbsvr7**.
- Enter the Web Server 7.x configuration root directory. The Web Server configuration files are installed in this directory. You can browse to select the directory. The default value is **/var/opt/SUNWwbsvr7**.
- Enter the Web Server 7.x instance identifier. This can be specified by a *host.domain* name such as **west.sesta.com**.
- Enter the virtual server identifier. This can be specified by a *host.domain* name such as **west.sesta.com**.

For more information about the Web Server 7.x instance identifier and virtual server identifier, see the Web Server documentation.

Files for the Web Server 7.x instance are stored in the **https-host.domain** directory under the Web Server 7.x configuration directory, for example **/var/opt/SUNWwbsvr7/https-west.sesta.com**.

- Enter the HTTP port number that the specified virtual server listens to. For example: **80**.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if the values you specified are valid. If a directory or identifier is invalid or does not exist, a dialog box tells you to choose a new value.

Next, the configuration program checks if a Web Server 7.x instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Web Server 7.x configuration values.

2. Web Server 7.x: Administration Instance Details

- Enter the Administration Server port number. For example: **8800**.
- Enter the Administration Server administrator user ID. For example: **admin**.
- Enter the administrator user password.

If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

3. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container.

Enter the default domain separator to be used for authentication when the user logs on. For example: **@**.

If you are configuring the Delegated Administrator console, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to ["Configuring the Delegated Administrator Server."](#)
- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to ["Completing the Configuration."](#)

If you are configuring the Delegated Administrator server, go on to ["Configuring the Delegated Administrator Server."](#)

Configuring Application Server 7.x

If you are deploying the Delegated Administrator server or console on Application Server 7.x, follow the steps described in this section.

To configure Application Server 7.x:

1. Application Server 7.x Configuration Details

The panel text tells you if you are providing Application Server 7.x configuration information for the Delegated Administrator server or console.

Enter the Application Server installation directory. By default, this directory is **/opt/SUNWappserver7**.

Enter the Application Server domain directory. By default, this directory is `/var/opt/SUNWappserver7/domains/domain1`.

Enter the Application Server document root directory. By default, this directory is `/var/opt/SUNWappserver7/domains/domain1/server1/docroot`.

You can browse to select any of these directories.

Enter the Application Server instance name. For example: **server1**.

Enter the Application Server virtual server identifier. For example: **server1**.

Enter the Application Server instance HTTP port number.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.

Next, the configuration program checks if an Application Server instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or select new Application Server configuration values.

2. Application Server 7.x: Administration Instance Details

Enter the Administration Server port number. For example: **4848**.

Enter the Administration Server administrator user ID. For example: **admin**.

Enter the administrator user password.

If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

3. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container.

Enter the default domain separator to be used for authentication when the user logs on. For example: **@**.

4. If you are configuring the Delegated Administrator console, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to ["Configuring the Delegated Administrator Server."](#)
- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator console only (together with the required Delegated Administrator utility), go on to ["Completing the Configuration."](#)

5. If you are configuring the Delegated Administrator server:

Go on to, ["Configuring the Delegated Administrator Server."](#)

Configuring Application Server 8.x or Higher

If you are deploying the Delegated Administrator server or console on Application Server 8.x or higher, follow the steps described in this section.

To configure Application Server 8.x or higher:

1. Application Server 8.x or higher Configuration Details

The panel text tells you if you are providing Application Server 8.x or higher configuration information for the Delegated Administrator server or console.

Enter the Application Server installation directory. By default, this directory is **/opt/SUNWappserver/appserver**.

Enter the Application Server domain directory. By default, this directory is **/var/opt/SUNWappserver/domains/domain1**.

Enter the Application Server document root directory. By default, this directory is **/var/opt/SUNWappserver/domains/domain1/docroot**.

You can browse to select any of these directories.

Enter the Application Server target name. For example: **server**.

Enter the Application Server virtual server identifier. For example: **server**.

Note: If you are running the **config-commdda** program to upgrade Delegated Administrator, and you also have upgraded Application Server from version 7 to version 8.x, specify the following values for the Application Server target name and virtual server identifier:

- Target name: **server1**
- Virtual server identifier: **server1**

You must specify these values because the **asupgrade** command migrates the Application Server 7 **server1** instance into the Application Server 8.x or higher **server1** target running under a **nodeagent**. However, **asupgrade** changes the value of the virtual server from **server1** in Application Server 7 to **server** in Application Server 8.x or higher.

Enter the Application Server target HTTP port number.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.

Next, the configuration program checks if an Application Server target connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or select new Application Server configuration values.

Note: If you are deploying the Delegated Administrator server or console on Application Server 9.x, please note that the default installation directories are different from those for Application Server 8.x as follow:

Enter the Application Server installation directory. By default, this directory is **/opt/SUNWappserver**.

Enter the Application Server domain directory. By default, this directory is **/opt/SUNWappserver/domains/domain1**.

Enter the Application Server document root directory. By default, this directory is **/opt/SUNWappserver/domains/domain1/docroot**.

2. Application Server 8.x or higher: Administration Instance Details

Enter the Administration Server port number. For example: **4849**.

Enter the Administration Server administration user ID. For example: **admin**.

Enter the administrator user password.

If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

3. Default Domain Separator

This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container.

Enter the default domain separator to be used for authentication when the user logs on. For example: **@**.

4. If you are configuring the Delegated Administrator console, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to "[Configuring the Delegated Administrator Server](#)."
- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to "[Completing the Configuration](#)."
- If you are configuring the Delegated Administrator server, go on to "[Configuring the Delegated Administrator Server](#)."

Configuring the Delegated Administrator Server

If you chose to configure the Delegated Administrator server, the configuration program displays the following panels.

To configure Delegated Administrator Server:

1. Select the Access Mode from the following options:

- **Direct LDAP:** If you select Direct LDAP, you must choose the web container for the server.
- **Access Manager base directory**

Enter the Access Manager Base Directory. The default directory is **/opt/SUNWam**.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

The configuration program checks if a valid Access Manager base directory is specified. If not, a dialog box is displayed indicating that an existing Access Manager base directory must be selected.

2. Next, a Web container **Configuration Details** panel is displayed.

If you chose to configure the console and server, this is the second time a Web container **Configuration Details** panel appears.

The Delegated Administrator server is deployed to the same Web container as Access Manager. (You cannot choose a Web container for the Delegated Administrator server.)

Follow the instructions in the appropriate section:

- [Configuring Web Server 6.x](#)
- [Configuring Application Server 7.x](#)
- [Configuring Application Server 8.x or Higher](#)

3. Directory (LDAP) Server

This panel asks for information about connecting to the LDAP Directory Server for the user/group suffix.

Enter the User and Group Directory Server LDAP URL (**LdapURL**), Directory Manager (**Bind As**), and password in the text boxes.

The Directory Manager has overall administrator privileges on the Directory Server and all Sun Java System servers that make use of the Directory Server (for example, Delegated Administrator) and has full administration access to all entries in the Directory Server. The default and recommended Distinguished Name (DN) is **cn=Directory Manager**.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

4. DA Server Internal LDAP

Enter the username and the password for DA Server Internal LDAP. The username is hardcoded and cannot be changed. The default username is **daAdmin**.

5. Access Manager Top-Level Administrator

Enter the username and password for the Access Manager Top-Level Administrator. The user ID and password are created when Access Manager is installed. The value, **amadmin**, is hard-coded in AM.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

6. Access Manager internal LDAP authentication password

Enter the password for the Access Manager Internal LDAP authentication user.

The authentication user name is hard-coded as **amldapuser**. It is created by the Access Manager installer and is the Bind DN user for the LDAP service.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

7. Organization Distinguished Name (DN)

Enter the Organization DN for the default domain. For example, if your organization DN is **o=siroe.com**, all the users in that organization will be placed

under the LDAP DN **o=siroe.com, o=usergroup**, where **o=usergroup** is your root suffix.

By default, the configuration program adds the default domain under the root suffix in the LDAP directory.

If you want to create the default domain at the root suffix (not underneath it), delete the organization name from the DN that appears in the **Organization Distinguished Name (DN)** text box.

For example, if your organization DN is **o=siroe.com** and your root suffix is **o=usergroup**, delete "**o=siroe.com**" from the DN in the text box; leave only **o=usergroup**.

If you choose to create the default domain at the root suffix, and if you later decide to use hosted domains, it can be difficult to migrate to the hosted-domain configuration. The **config-commda** program displays the following warning:

"The Organization DN you chose is the User/Group Suffix. Although this is a valid choice, if you ever decide to use hosted domains, there will be difficult migration issues. If you do wish to use hosted domains, then specify a DN one level below the User/Group suffix."

For more information, see Directory Structure Supporting a One-Tiered Hierarchy in *Delegated Administrator System Administrator's Guide*.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

8. Top-Level Administrator for the default organization

Enter the user ID and password for the Top-Level Administrator that is to be created in the default domain (organization).

A **Confirm Password** field asks you to enter the password a second time.

Click **Next** to continue, **Back** to return to the previous panel, or **Cancel** to exit.

9. Service Package and Organization Samples

You can choose to add sample service packages and sample organizations to your LDAP directory.

Load sample service packages: Select this option if you want to use or modify sample service package templates to create your own Class-of-Service packages.

Load sample organizations: Select this option if you want your LDAP directory tree to contain sample provider organization nodes and subordinate organization nodes.

10. You can select

- Both the sample service packages and the sample organizations
- Only one of these
- Neither option

Preferred Mailhost for Sample: Enter the name of the machine on which Messaging Server is installed. For example: **mymachine.siroe.com**

If you chose to load the sample organizations into your LDAP directory, you must enter a preferred mail host name for these samples.

For information about service packages and organizations, see Delegated Administrator Overview in *Delegated Administrator System Administrator's Guide*.

After you run the configuration program, you must modify the service package templates to create your own Class-of-service packages. For information about this post-configuration task, see "[Creating Service Packages](#)."

Completing the Configuration

Take the steps described in this section to finish running the configuration program.

To complete the configuration:

1. Ready the Configure

The verification panel displays the items that will be configured.

Click **Configure Now** to begin the configuration, **Back** to return to any previous panel to change information, or **Cancel** to exit.

2. Task Sequence

A sequence of tasks being performed is displayed on the Task Sequence Panel. This is when the actual configuration takes place.

When the panel displays **All Tasks Passed** you can click **Next** to continue or **Cancel** stop the tasks from being performed and exit.

A dialog box appears reminding you to restart the Web container in order for configuration changes to take effect.

3. Installation Summary

The Installation Summary panel displays the product installed and a **Details** button that displays more information about this configuration.

A log file for the **config-commda** program is created in the *DelegatedAdmin_home/install* directory. The name of the log file is **commda-config_YYYYMMDDHHMMSS.log**, where YYYYMMDDHHMMSS identifies the 4-digit year, month, date, hour, minute, and second of the configuration.

Click **Close** to complete the configuration.

Restarting the Web Container

After you complete the Delegated Administrator configuration, you must restart the Web container to which Delegated Administrator is deployed.

Configuration Files Deployed by the config-commda Program

Using the information you provided in the panels, the config-commda program deploys the following configuration files for the three Delegated Administrator components:

- Delegated Administrator utility: **cli-usrprefs.properties**
Location: *DelegatedAdmin_home/data/config*
- Delegated Administrator Server: **resource.properties**
- Delegated Administrator console:
 - **daconfig.properties**
 - **Resources.properties**
 - **Security.properties**
 - **logger.properties**

(The **logger.properties** file specifies the location of log files and whether or not logging is enabled. It is a configuration file, not a log file.)

The **config-commdda** deploys the configuration files to the application repository of the Web container where you deployed Delegated Administrator. For a list of the deployed locations of the files, see Customizing Delegated Administrator in *Delegated Administrator System Administrator's Guide*.

For information about the properties contained in the configuration files and how to edit these properties to customize your configuration, see Customizing Delegated Administrator in *Delegated Administrator System Administrator's Guide*.

Log Files Deployed by the config-commdda Program

The Delegated Administrator console creates a runtime log [file:]

Default log file name: **da.log**

Default location: *DelegatedAdmin_home/log*

For more information about this and other Delegated Administrator log files, see Troubleshooting Delegated Administrator in *Delegated Administrator System Administrator's Guide*.

Delegated Administrator Post-Installation Tasks

This chapter provides the following instructions for performing Oracle Communications Delegated Administrator post-installation tasks:

- [Adding Mail and Calendar Services to the Default Domain](#)
- [Enforcing Unique Values for Mail Attributes](#)
- [Creating Service Packages](#)

Perform the following task only if you are using an LDAP directory in Schema 2 compatibility mode:

- [Adding ACIs for Schema 2 Compatibility Mode](#)

Adding Mail and Calendar Services to the Default Domain

The **config-commda** program creates a default domain.

If you want to create users with mail service or calendar service in the default domain, you first must add mail service and calendar service to the domain.

To perform this task, use the **commadmin domain modify** command with the **-s mail** and **-s cal** options.

The following example shows how you can use **commadmin domain modify** to add mail and calendar services to the default domain:

```
commadmin domain modify -D chris -w bolton -n sesta.com -d siroe.com -S mail, cal  
-H test.siroe.com
```

Note that adding IM and contacts services to the default domain is required.

For **commadmin** command syntax and details, see Delegated Administrator Reference in *Delegated Administrator System Administrator's Guide*.

Enforcing Unique Values for Mail Attributes

Messaging Server uses the following mail attributes to identify a user's email address and alternate email address:

- **mail**
- **mailAlternateAddress**
- **mailEquivalentAddress**

Each user's mail attributes should be unique across the directory.

The following procedure shows how to modify a Directory Server LDIF file to enforce the uniqueness of these attributes. Whenever Delegated Administrator (or any LDAP tool) adds an entry or modifies a mail attribute, the ldif plug-in checks that the mail attribute values are unique. If an operation would cause two entries to have the same mail-attribute values, it is terminated.

For definitions of mail attributes, see Messaging Server and Calendar Server Attributes in *Communications Suite Schema Reference*.

To enforce the uniqueness of mail attributes:

1. Create a text file with the following lines. Replace the parameters shown in the file with values specific to your installation.

For DSEE 7/ODSEE 11gR2:

```
dn: cn=Uniqueness in Messaging Attribute Set,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Uniqueness in Messaging Attribute Set
nsslapd-pluginPath: /opt/SUNWdsee7/lib/amd64/uid-plugin.so
nsslapd-pluginInitfunc: NSUniqueAttrSet_Init
nsslapd-pluginType: preoperation
nsslapd-pluginEnabled: on
nsslapd-pluginarg0:
attributeset=mail,mailalternateaddress,mailequivalentaddress
nsslapd-pluginarg1: dc=siroe,dc=com
nsslapd-plugin-depends-on-type: database
nsslapd-pluginId: NSUniqueAttrSet
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Oracle Corporation
nsslapd-pluginDescription: Enforce unique values among an attribute set
```

For DSEE 6.3.1 (64-bit Solaris x86):

```
dn: cn=Uniqueness in Messaging Attribute Set,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Uniqueness in Messaging Attribute Set
nsslapd-pluginPath: /opt/SUNWdsee/ds6/lib/amd64/uid-plugin.so
nsslapd-pluginInitfunc: NSUniqueAttrSet_Init
nsslapd-pluginType: preoperation
nsslapd-pluginEnabled: on
nsslapd-pluginarg0:
attributeset=mail,mailalternateaddress,mailequivalentaddress
nsslapd-pluginarg1: dc=siroe,dc=com
nsslapd-plugin-depends-on-type: database
nsslapd-pluginId: NSUniqueAttrSet
nsslapd-pluginVersion: 6.3.1
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Enforce unique values among an attribute set
```

Change the following parameters:

- These examples show specific paths for **nsslapd-pluginPath**. If necessary, replace the directory underneath which your Directory Server is installed. For

example: `/var/opt/mps/server_root`

- These examples show a specific **ugldapbasedn** for **nsslapd-pluginarg1**. If necessary, replace with your root suffix. Uniqueness checking is performed on all entries underneath this suffix.

2. Stop Directory Server.

3. Add your modified text file to the Directory Server **dse.ldif** file.

The **dse.ldif** file is located in the following directory:

```
server_root/slapd-machine-name-config
```

where *server_root* is the directory underneath which Directory Server is installed. For example `/var/opt/mps/server_root` *machine_name* is the name of the host machine where Directory Server is installed.

Add your text file after the **uid uniqueness** section of the **dse.ldif** file. The first line of this section (the **dn**) is as follows:

```
dn: cn=uid uniqueness,cn=plugins,cn=config
```

4. Restart Directory Server.

When Directory Server starts, it installs the modified **dse.ldif** file in the directory.

Troubleshooting

If Directory Server does not start because the **dse.ldif** file has generated an error, check the values you used to replace the parameters in the sample text file. Your LDAP root suffix and the Directory Server installation path and host machine must be correct for your installation.

If Directory Server still does not start, you can, as a last resort, remove the text file from the **dse.ldif** file and restart Directory Server.

Creating Service Packages

Each user and group provisioned in the LDAP directory with Delegated Administrator should have a service package. A user or group can have more than one service package. For more information, see *Creating Your Own Service Packages* in *Delegated Administrator System Administrator's Guide*.

Adding ACIs for Schema 2 Compatibility Mode

If you are using an LDAP directory in Schema 2 compatibility mode, you must manually add ACIs to the directory to enable Delegated Administrator to provision in your directory.

To add ACIs for Schema 2 compatibility mode with Access Manager, for example:

1. Add the following two ACIs to the OSI root. You can find the following two ACIs in the **usergroup.ldif** file, located in the *DelegatedAdmin_home/config* directory.

Be sure to replace **ugldapbasedn** with your usergroup suffix. Add the edited **usergroup.ldif** into the LDAP directory.

```
#
# acis to limit Org Admin Role
#
#####
```

```
# dn: local.ugldapbasedn
#####
dn: ugldapbasedn
changetype: modify
add: aci
aci: (target="ldap:///($dn),ugldapbasedn") (targetattr="*")
(version 3.0; acl "Organization Admin Role access deny to org node";
deny (write,add,delete) roledn = "ldap:///cn=Organization Admin
Role,($dn),ugldapbasedn");)

dn: ugldapbasedn
changetype: modify
add: aci
aci: (target="ldap:///($dn),ugldapbasedn") (targetattr="*")
(version 3.0; acl "Organization Admin Role access allow read
to org node";
allow (read,search) roledn = "ldap:///cn=Organization Admin
Role,($dn),ugldapbasedn");)
```

2. Add the following two ACIs to the DC Tree root suffix. You can find the following two ACIs in the **dctree.ldif** file, located in the *DelegatedAdmin_home/lib/config-templates* directory.

Be sure to replace **dctreebasedn** with your DC Tree root suffix and **ugldapbasedn** with your **usergroup** suffix. Add the edited **dctree.ldif** into the LDAP directory.

```
#
# acis to limit Org Admin Role
#
#####
# dn: dctreebasedn
#####
dn: dctreebasedn
changetype: modify
add: aci
aci: (target="ldap:///($dn),dctreebasedn") (targetattr="*")
(version 3.0; acl "Organization Admin Role access deny to dc node";
deny (write,add,delete) roledn = "ldap:///cn=Organization Admin
Role,($dn),ugldapbasedn");)

dn: dctreebasedn
changetype: modify
add: aci
aci: (target="ldap:///($dn),dctreebasedn") (targetattr="*")
(version 3.0; acl "Organization Admin Role access allow read to dc
node"; allow (read,search) roledn = "ldap:///cn=Organization Admin
Role,($dn),ugldapbasedn");)
```

3. Add the following additional ACIs to the DC Tree root suffix. (These ACIs are not in the **dctree.ldif** file.)

```
dn:dctreebasedn
changetype:modify
add:aci
aci: (target="ldap:///dctreebasedn") (targetattr="*")
(version 3.0; acl "SIIS Proxy user rights"; allow (proxy)
userdn = "ldap:///cn=puser,ou=DSAME Users,ugldapbasedn");)

dn:dctreebasedn
changetype:modify
add:aci
```

```
aci: (target="ldap:///dctreebasedn")(targetattr="*")
(version 3.0; acl "S1IS special dsame user rights for all under the
root suffix"; allow (all) userdn ="ldap:///cn=dsameuser,ou=DSAME
Users,ugldapbasedn";)
```

```
dn:dctreebasedn
changetype:modify
add:aci
aci: (target="ldap:///dctreebasedn")(targetattr="*")
(version 3.0; acl "S1IS Top-level admin rights";
allow (all) roledn = "ldap:///cn=Top-level Admin
Role,ugldapbasedn";)
```

4. Set the **com.ipplanet.am.domaincomponent** property in the **AMConfig.properties** file to your DC Tree root suffix.

For example, modify the following lines in the *AM_base_directory/lib/AMConfig.properties* [file:]

from

```
com.ipplanet.am.domaincomponent=o=isp
```

to

```
com.ipplanet.am.domaincomponent=o=internet
```

5. Enable Access Manager to use compatibility mode.

In the Access Manager Console, in the Administration Console Service Page, check (enable) the **Domain Component Tree Enabled** check box.

6. Add the **inetdomain** object class to all the DC Tree nodes (such as **dc=com,o=internet**), as shown in the following example:

```
/var/mps/server_root/shared/bin 298% ./ldapmodify
-D "cn=Directory Manager" -w password
dn: dc=com,o=internet
changetype: modify
add: objectclass
objectclass: inetdomain
```

7. Restart the Web container.

Verifying the Delegated Administrator Installation

This chapter describes how to verify the Oracle Communications Delegated Administrator installation by running the Delegated Administrator console and utility.

Launching the Delegated Administrator Console

The Delegated Administrator console is launched by accessing the Web container to which it is deployed.

To launch the Delegated Administrator Console:

1. Go to the following URL:

`http://host:port/da`

Where *host* is the Web container host machine and *port* is the Web container port.

For example:

`http://siroe.com:8080/da`

The Delegated Administrator console log-in window appears.

Note: In previous releases of Delegated Administrator, the console was launched from the following url: **`http://host:port/da/DA/Login`**. You can continue to use this URL in the current release.

2. Log in to the Delegated Administrator console.

You could use the Top-Level Administrator (TLA) user ID and password specified in the Delegated Administrator configuration program. This information was requested in the following panel:

Top-Level Administrator for the default organization

Note: Values set in Access Manager can determine session time-outs when you are running the Delegated Administrator console. For information on the session time-out values, see Session Service Attributes in *Sun Java System Access Manager Administration Guide*. For information on viewing these values in the Access Manager console, see Current Sessions in *Sun Java System Access Manager Administration Guide*.

Running the Command-Line Utility

You can run the Delegated Administrator utility by entering the command name, **commadmin**, from a terminal window.

To run the command-line utility:

1. Go to the *DelegatedAdmin_home/bin/* directory.
2. Enter the **commadmin** command.

For example, in Solaris: **/opt/sun/comms/bin/commadmin**

Example: Using **commadmin** to search for users, the following command searches for users in the **varrius.com** domain:

```
commadmin user search -D chris -w bolton -d varrius.com -n sesta.com
```

For details about the **commadmin** command, see Delegated Administrator Reference in *Delegated Administrator System Administrator's Guide*.

commadmin Return Codes

When a **commadmin** operation succeeds, an **OK** message is displayed on the command line.

If a fail occurs, the following message appears:

```
FAIL
```

```
message
```

Where *message* displays the error text.

Upgrading Delegated Administrator

This chapter explains how to upgrade to Delegated Administrator 7.0.0.10 starting with Delegated Administrator 6.4. For versions prior to 6.4, you need to first upgrade to version 6.4 before being able to upgrade to version 7.0.0.10.

While updating Delegated Administrator, you may wish to upgrade GlassFish Server. See Extending and Upgrading GlassFish Server in *Oracle GlassFish Server Administration Guide* for more information.

Preserving Delegated Administrator for Oracle Communications Unified Communications Suite Customizations During Upgrades

If you are configuring Delegated Administrator for the first time, you can skip this topic. If you have not yet performed initial configuration of Delegated Administrator, see ["Configuring Delegated Administrator."](#) If you are upgrading to this release of Delegated Administrator from an earlier release, you will have to perform the following tasks:

- [Preserving Delegated Administrator for Oracle Communications Unified Communications Suite Customizations During Upgrades](#)
- [Upgrading Customized Service Packages in Delegated Administrator 6.4](#)

For instructions on how to upgrade Delegated Administrator from a previous Sun Java version, see ["Upgrading Delegated Administrator."](#)

Preserving an Existing Customized Configuration

This section concerns you only if you have previously installed and configured Delegated Administrator and have customized the Delegated Administrator configuration.

When you upgrade Delegated Administrator, the Delegated Administrator configuration program, **config-commmda**, runs automatically. The properties in the configurations files are reset to the default values for the new release. However, you can replace the default values with your earlier, customized configuration by following the instructions in this section.

This section contains the following topics:

- ["How it Works: Merging Your Customized Configuration With the New Release"](#) describes the concepts and operations for preserving your customization.
- ["Preserving an Existing Configuration"](#) tells you how to preserve your customization.

- ["Delegated Administrator Property Files"](#) lists the Delegated Administrator configuration files.

For information about how you can customize Delegated Administrator, see the discussion about customizing Delegated Administrator in *Delegated Administrator System Administrator's Guide*.

How it Works: Merging Your Customized Configuration With the New Release

You can run a **merge** command to preserve your customized configuration after you upgrade Delegated Administrator and run the Delegated Administrator configuration program. The merge process works as follows:

When you upgrade Delegated Administrator to the latest release, the upgrade patch process takes a snapshot of the existing configuration *before* the software is upgraded. Two versions of the existing configuration (the configuration of the earlier release) are saved:

- A snapshot of the default configuration of the earlier release is saved in the *DelegatedAdmin_home/data/staging/base* directory. (For example: **var/opt/sun/comms/da/staging/base**.)
- A snapshot of the customized configuration of the earlier release is saved in the *DelegatedAdmin_home/data/staging/current* directory.

Next, the upgrade process installs the new release, including the new configuration files.

When you run **config-commdda** after the upgrade, the configuration files are installed in the *DelegatedAdmin_home/data* directory. These files contain the default values for the new release, not your customized values.

Next, you can run the **damerge** command which merges your customized files with the new configuration. Specifically, the command copies the *DelegatedAdmin_home/data* directory into a staging area: *DelegatedAdmin_home/data/staging/new*. The command then performs a three-way **diff** on the following file sets:

- *DelegatedAdmin_home/data/staging/current*. Your customized configuration.
- *DelegatedAdmin_home/data/staging/base*. The default configuration of the earlier release.
- *DelegatedAdmin_home/data/staging/new*. The copy of the default configuration of the current release.

The **damerge** command saves the merged files in *DelegatedAdmin_home/data/staging/new*.

The command preserve your customization in the merged files. In rare instances, a conflict might occur between a particular customization and the default functioning of Delegated Administrator. The command reports on these conflicts so that you can resolve them.

For details about how to run the **merge** command, check for conflicts, and complete the preservation of your customized configuration, see ["Preserving an Existing Configuration."](#)

Preserving an Existing Configuration

Note: Before you begin, it is assumed that you have upgraded Delegated Administrator to the latest release and run **config-commdda**.

To preserve an existing configuration:

1. Run the **damerge** command to merge your customized files with the default configuration files installed in the latest release.

Log in as **root** and go to the *DelegatedAdmin_home/sbin* directory (for example, */opt/sun/comms/da/sbin*). Enter the **damerge** command.

The command asks whether you want to proceed with the merge operation. Type **y**.

To bypass the interactive prompt, use the **-s** option with the **damerge** command. For example:

```
# damerge --s
```

The command merges your customized files into a new directory: *DelegatedAdmin_home/data/staging/new*.

2. Examine the merge reports to check if any conflicts occurred between your customized files and the newly installed configuration files.

[Table 8–1](#) shows the **damerge** command options and their descriptions.

Table 8–1 *damerge* command Options

Option	Description
all.list	Lists all files processed by the damerge command. Shows the status of each file, as follows: Merge indicates that the customized and newly released files were merged successfully. Skip indicates that a file was not merged; typically, a binary file would be skipped. Text files such as the properties files are merged. Conflict indicates that a conflict remains between the customized files and a newly released file.
conflict.list	Lists the names of the files in which a conflict occurred.

3. If a merged file contains a conflict, resolve it by editing the differing lines.
 - a. Open the merged file in the *DelegatedAdmin_home/data/staging/new* directory.
 - b. Search for each **diff**.

The merged file lists both your original customized line and the line derived from the new release. Both lines are bracketed in angle brackets:

```
<conflicting line>
```

```
<conflicting line>
```

- c. Delete one line and remove the angle brackets from the remaining line. You could also edit the remaining line to resolve the conflict correctly.
 - d. Repeat these steps for each conflict in the file.
4. Repeat Step 3 for each file that contains conflicts until all files are successfully merged.

5. Copy the customized configuration files from:

DelegatedAdmin_home/data/staging/new

to:

DelegatedAdmin_home/data

6. Redeploy the merged files to the Web container (or containers) used by the Delegated Administrator server and console.

Before the customized values can take effect, you must run the script that deploys the resolved files to your Web container.

For instructions on how to deploy customized files to a particular Web container, see Deploying a Customized Configuration File in *Delegated Administrator System Administrator's Guide*.

Note: If you run **config-commdda** a second time without upgrading the software, the default configuration of the new release again replaces your customized configuration. You can run **damerge** again to restore your customization from the earlier release. However, **damerge** cannot restore any customization performed since the upgrade.

Delegated Administrator Property Files

Table 8–2 displays the property files that Delegated Administrator installs:

Table 8–2 Installed Property Files

Property File Type	Name of Property File(s)	Location
Delegated Administrator Utility	cli-usrprefs.properties	<i>DelegatedAdmin_home/data/config</i>
Delegated Administrator console	daconfig.properties logger.properties Resources.properties Security.properties	For the default location of the delegated Administrator console files, see Original (Standard) Locations of the Configuration Files in <i>Delegated Administrator System Administrator's Guide</i> .
Delegated Administrator server	resource.properties	For the default location of the Delegated Administrator console files, see Original (Standard) Locations of the Configuration Files in <i>Delegated Administrator System Administrator's Guide</i> .

For more information, see Delegated Administrator Files and Directories in *Delegated Administrator System Administrator's Guide*.

Upgrading Customized Service Packages in Delegated Administrator 6.4

This information applies only if you are upgrading from Communications Services 6 2005Q4 Delegated Administrator to Delegated Administrator 6.4, and you created customized service packages in the previous release (6 2005Q4).

In Delegated Administrator 6.4, service package templates are located in a different node in the directory than they were in the 6 2005Q4 release.

For more information about preserving customized configurations during upgrades, see ["Upgrading Delegated Administrator."](#)

Sample Class-Of-Service Templates

When you run the Delegated Administrator configuration program, the previously installed sample Class-of-Service templates installed by the Delegated Administrator configuration program are upgraded automatically. (In the configuration program, you should select **Load sample service packages** in the **Service Package and Organization Samples** panel.)

If you use only the sample templates to assign service packages to users and groups, no action is required.

Customized Service Packages

The configuration program does not upgrade customized service packages created in the 6 2005Q4 release. You must upgrade your customized service packages manually.

For information on how customized service packages are created, see Service Packages in *Delegated Administrator System Administrator's Guide*.

Upgrading Customized Service Packages

To upgrade customized service packages, perform the following operations on the LDAP directory:

1. Copy your service package templates from the **o=cosTemplates,o=rootsuffix** directory node to the **o=service_target,o=cosTemplates,o=rootsuffix** directory node, where *service_target* is one of the following:

```
mailuser
calendaruser
mailcalendaruser
mailgroup
calendargroup
mailcalendargroup
```

For example, if a service package template is called **myservicepackage**, and it provides mail service to users, the service package template's new dn would be **o=myservicepackage,o=mailuser,o=cosTemplates,o=rootsuffix**.

2. Remove the entries for your service package templates from the original directory node:

```
o=cosTemplates,o=rootsuffix
```

3. Edit each customized service package by adding the following line to the LDIF file defining the service package:

```
daServiceType:service type target
```

Note: If your LDIF file already contains the **daServiceType** attribute, you can skip this step.

The **daServiceType** attribute defines the type of service provided by the service package and the target for the service package. The *service* can be **mail** or **calendar**. The *target* can be **users** or **groups**. For example:

```
daServiceType: mail user
```

The following example shows what the edited LDIF file might look like:

```
dn: cn=myservicepackage,o=mailuser,o=cosTemplates,o=mycompanysuffix
changetype: modify
replace: daServiceType
daServiceType: mail user
```

4. Use the LDAP **ldapmodify** command to update the service package in the directory.

For example:

```
ldapmodify -D directory_manager -w password -f myservicepackagemodldif
```

where:

- *directory_manager* is the name of the Directory Server administrator.
- *password* is the password of the Directory Service administrator.
- *myservicepackagemodldif* is the name of the LDIF file containing the modifications described in the preceding steps.

Upgrading to Delegated Administrator 7.0.0.10

To upgrade to Delegated Administrator 7.0.0.10:

1. Upgrade and run **comm_dssetup.pl** included in the Communications Suite 7.0.6 against the Directory Server.

See **commdssetup.pl** in *Oracle Communications Unified Communications Suite Upgrade Guide Version 7.0.5.0.0* for more information.

2. Run the **commpkg upgrade** command.

Preserving Customized Data When You Upgrade Delegated Administrator

If you are upgrading to this release of Delegated Administrator, you might have to perform the following tasks before you configure Delegated Administrator with the **config-commdda** program:

- [Preserving an Existing Customized Configuration](#)
- [Upgrading Customized Service Packages in Delegated Administrator for Oracle Communications Unified Communications Suite Version 7.0.0.10](#)

Preserving an Existing Customized Configuration

This section concerns you only if you previously have installed and configured Delegated Administrator and have customized the Delegated Administrator configuration.

If you have a customized configuration and you reran the Delegated Administrator configuration program, **config-commdda**, the properties in the configuration files are reset to their default values. These files are listed in "[Delegated Administrator Properties Files](#)."

For information about how you can customize Delegated Administrator, see Customizing Delegated Administrator in *Delegated Administrator System Administrator's Guide*.

You should preserve your customized configuration before you run the Delegated Administrator configuration program, (**config-commdda**) for any reason, including:

- Upgrading Delegated Administrator
- Patching Delegated Administrator
- Rerunning the Delegated Administrator configuration program for any other reason

Delegated Administrator Properties Files

Delegated Administrator installs the following properties files:

- Delegated Administrator utility
 - **cli-usrprefs.properties**
Location: *DelegatedAdmin_home/data/config*
- Delegated Administrator console
 - **daconfig.properties**
 - **logger.properties**
 - **Resources.properties**
 - **Security.properties**
For the default location of the Delegated Administrator console files, see Delegated Administrator Files and Directories in *Delegated Administrator System Administrator's Guide*.
- Delegated Administrator server
 - **resource.properties**
 - **serverconfig.properties**
Most of the configuration related properties are moved from **resource.properties** to the **serverconfig.properties** file.

For the default location of the **resource.properties** file, see Delegated Administrator Files and Directories in *Delegated Administrator System Administrator's Guide*.

Preserving an Existing Customized Configuration

To preserve an existing customized configuration:

1. Back up the properties files you have customized.
For a list of the properties files, see "[Delegated Administrator Properties Files](#)."
2. Run the **config-commdda** program, as described in "[Running the Configuration Program](#)."
The remaining steps use the **resource.properties** file as an example. Repeat these steps for each file you have customized.
3. Edit the new **resource.properties** file created by the **config-commdda** program, as follows:
 - a. Open the new **resource.properties** file.
 - b. Open your back-up copy of the **resource.properties** file.
 - c. Locate the properties that were customized in the back-up copy. Apply the customized values to the corresponding properties in the new **resource.properties** file.

Do not simply overwrite the new **resource.properties** file with the entire back-up copy. The new file may contain new properties created to support this release of Delegated Administrator.

4. Redeploy the edited **resource.properties** file to the Web container used by the Delegated Administrator server.

Before the change can take effect, you must run the script that deploys the customized **resource.properties** file to your Web container.

For instructions on how to deploy a customized properties file to a particular Web container, see Delegated Administrator Files and Directories in *Delegated Administrator System Administrator's Guide*.

Note: If you have customized values in the **resource.properties** file from previous releases, ensure that the same customization is made in the new **serverconfig.properties** file.

Upgrading to Newer Updates of Delegated Administrator 7.0.0.10

After upgrading to Delegated Administrator 7.0.0.10, apply the latest patch. See ["Installing Patches"](#) for more information.

Upgrading Customized Service Packages in Delegated Administrator for Oracle Communications Unified Communications Suite Version 7.0.0.10

This information applies only if you are upgrading from Communications Services 6 2005Q4 Delegated Administrator, or a prior version, to Delegated Administrator for Oracle Communications Unified Communications Suite 7.0.0.10, and you created custom service packages in Delegated Administrator 6 2005Q4 or earlier. If you created custom service packages in the Delegated Administrator 6.4 release, you do not have to take the steps described in this section.

Starting with Delegated Administrator 6.4, service package templates are located in a different node in the directory than they were in the 6 2005Q4 release.

For more information about preserving customized configurations during upgrades, see ["Preserving Delegated Administrator for Oracle Communications Unified Communications Suite Customizations During Upgrades."](#)

Sample Class-of-Service Templates

When you run the Delegated Administrator configuration program, the previously installed sample Class-of-Service templates installed by the Delegated Administrator configuration program are upgraded automatically. (In the configuration program, you should select **Load sample service packages** in the **Service Package and Organization Samples** panel.)

If you use only the sample templates to assign service packages to users and groups, no action is required.

Upgrading Customized Service Packages

To upgrade customized service packages, perform the following operations on the LDAP directory:

1. Copy your service package templates from the **o=cosTemplates,o=rootsuffix** directory node to the **o=service_target,o=cosTemplates,o=rootsuffix** directory node, where *service_target* is one of the following:

```
mailuser
calendaruser
mailcalendaruser
mailgroup
calendargroup
mailcalendargroup
```

For example, if a service package template is called **myservicepackage**, and it provides mail service to users, the service package template's new dn would be:

```
o=myservicepackage,o=mailuser,o=cosTemplates,o=rootsuffix
```

2. Remove the entries for your service package templates from the original directory node:

```
o=cosTemplates,o=rootsuffix
```

3. Edit each customized service package by adding the following line to the LDIF file defining the service package:

```
daServiceType:service type target
```

Note: If your LDIF file already contains the `daServiceType` attribute, you can skip this step.

The **daServiceType** attribute defines the type of service provided by the service package and the target for the service package.

The *service* can be **mail** or **calendar**.

The *target* can be **users** or **groups**.

For example:

```
daServiceType: mail user
```

The following example shows what the edited LDIF file might look like:

```
dn: cn=myservicepackage,o=mailuser,o=cosTemplates,o=mycompanysuffix
changetype: modify
replace: daServiceType
daServiceType: mail user
```

4. Use the LDAP directory tool **ldapmodify** to update the service package in the directory.

For example, you could run the following command:

```
ldapmodify -D directory_manager -w password -f myservicepackagemodldif
```

where:

- *directory_manager* is the name of the Directory Server administrator.
- *password* is the password of the Directory Service administrator.
- *myservicepackagemodldif* is the name of the ldif file containing the modifications described in the preceding steps.

Uninstalling Delegated Administrator

This chapter describes how to uninstall Oracle Communications Delegated Administrator.

Uninstalling Delegated Administrator

The **commpkg uninstall** command enables you to uninstall Communications Suite products, such as Delegated Administrator, as well as shared components. However, the **commpkg uninstall** command does not remove OS patches or shared components installed by **commpkg install**.

To uninstall Delegated Administrator:

1. Log in as **root**.
2. Change to the *InstallRoot/CommsInstaller/bin/* directory.
3. Run the **commpkg uninstall** command.
4. Select **Delegated Administrator** from the list of installed Communications Suite components.
5. When prompted, enter **Yes** to continue.

Installing Patches

This chapter describes how to install patches on Oracle Communications Delegated Administrator.

About Patching Delegated Administrator

Delegated Administrator patches are posted on the My Oracle Support web site:

<https://support.oracle.com>

To install patches, use the **patchadd** command on Solaris OS, and use the **rpm** command on Linux.

Important: Always read the patch ReadMe file in its entirety before installing a patch.

Note: Solaris 11 does not support the **patchadd** command. If you need patches and are running Solaris 11, you must use the ARU package and install it by running the **commpkg install** command bundled within it. However, for upcoming patches you must install the patch on Solaris 11 using the **commpkg upgrade** option.

Some patches contain fixes and functionality that may not be of any interest to you or may apply to features that you have not installed or purchased. Read the patch ReadMe file to determine if you must install the patch.

Some patches are password protected. To request the password to download a protected patch, open a Service Request on the My Oracle Support web site.

Planning Your Patch Installation

Before installing a patch, verify your version of Delegated Administrator and ensure the patch is not already installed.

Oracle recommends scheduling your patch installation during non-peak hours to minimize the disruption to your operations.

Oracle recommends installing a patch on a test system with a copy of your production data before installing the patch on your production system. Test the patch by logging into Delegated Administrator and verifying the version number of installed components.

Installing a Patch

To install a patch on Delegated Administrator:

1. Apply the patch.
 - Solaris OS: Run the **patchadd** command. See the **patchadd** man page for more information.
 - Linux: Run the **rpm -F *rpmname*** command. See the **rpm** man page for more information.
2. Restart GlassFish Server.

commpkg Reference

This appendix provides information about the **commpkg** command.

Overview of the **commpkg** Command

The **commpkg** command, also referred to as the Installer, comprises several commands (verbs) that enable you to install, uninstall, and upgrade Oracle Communications Delegated Administrator software and its shared components. The **commpkg** command is installed in the directory in which you unzip the product software.

Syntax

```
commpkg [general_options] verb [verb_options]
```

[Table A-1](#) describes the **commpkg** general options.

Table A-1 *commpkg General Options*

Option	Description
-? or --help	Displays help.
-V or --version	Displays the Installer version.
--OSversionOverride	Overrides the operating-system version check.
--fixEntsys [y n]	<p>Fixes an invalid Sun Java Enterprise System (Java ES) entsys symlink, making the link point to the latest Java version upgraded by commpkg. The Java ES symlink is located in <code>/usr/jdk/entsys-j2se</code>. Choose --fixEntsys y to fix the Java ES symlink to the Java files.</p> <p>If you do not specify this switch, commpkg prompts you if the symlink is invalid. However, in silent mode, the default is not to fix the symlink (the equivalent of using a value of n). To fix the symlink in silent mode, type commpkg install --fixEntsys y --silent INPUTFILE on the command-line.</p>

[Table A-2](#) describes the **commpkg** verbs.

Table A-2 *Installer Verbs*

Verb	Description
install	Performs software installation.
uninstall	Uninstalls software but does not remove OS patches or shared components installed by commpkg install .

Table A–2 (Cont.) Installer Verbs

Verb	Description
info	Displays product information on the paths (also known as <i>installroots</i>) where Delegated Administrator is installed, and the products that are installed in those paths.
upgrade	Performs software upgrade.
verify	Verifies installed product.

install Verb Syntax

```
commpkg install [install_options] [ALTROOT|name]
```

Tip: Installing Only Shared Components: To install just the product's shared components, launch the Installer then prefix your product selection with a tilde (~). You can type multiple selections by using a comma to separate the entries.

Table A–3 describes the options for the **commpkg install** command.

Table A–3 commpkg install Options

commpkg install Options	Description
-? or --help	Displays help.
-V or --version	Displays the Installer version.
--excludeOS	Does not apply operating system patches during product installation.
--excludeSC	Does not install, upgrade, or patch any shared components.
<i>ALTROOT name</i>	<p>Use this option to install multiple instances of the product on the same host or Oracle Solaris zone. You can also use this option to perform a side-by-side upgrade of the product.</p> <p>This option is available on Solaris only.</p> <p>Specifies an alternate root directory for a multi-instance installation. The <i>InstallRoot</i> (the top-level installation directory for all products and shared components) is the alternate root.</p> <p>If you specify a <i>name</i>, it will be a friendly name associated with the <i>ALTROOT</i> that is registered in the software list.</p> <p>If you specify the <i>name</i> and it exists in the software list, the corresponding <i>ALTROOT</i> is used.</p> <p>If you also specify the --installroot option, it must correspond to the entry in the software list. If you specify <i>name</i> and it does not exist in the software list, it is added to the software list.</p> <p>Specifying any <i>name</i> other than "" implies an <i>ALTROOT</i>. A value for <i>name</i> of "" is reserved for the default root.</p>
--distro path	<p>Specifies the <i>path</i> to packages or patches for the products.</p> <p>Default: Location of commpkg script</p>
--installroot path	<p>Specifies location of <i>InstallRoot</i>, the top level installation directory for all products and shared components. The top-level installation directory for individual products are subdirectories under <i>InstallRoot</i>.</p> <p>Default is /opt/sun/comms.</p>

Table A-3 (Cont.) commpkg install Options

commpkg install Options	Description
--silent <i>INPUTFILE</i>	Runs a silent installation, taking the inputs from the <i>INPUTFILE</i> and the command-line arguments. The command-line arguments override entries in the <i>INPUTFILE</i> . Installation proceeds without interactive prompts. Use --dry-run to test a silent installation without actually installing the software. Specify NONE for <i>INPUTFILE</i> if you want to run in silent mode without using an input file. When you specify NONE , the installation uses default values.
--dry-run or -n	Does not install software. Performs checks.
--upgradeSC [<i>y n</i>]	Upgrades or does not upgrade shared components as required. If this option is not specified, you are prompted for each shared component that needs to be upgraded by using package removal and installation. Default: n Caution: Upgrading shared components by using package removal and installation is irreversible. However, if you do not upgrade required shared components, products might not work as designed. The --excludeSC flag has precedence over this flag.
--auditDistro	Audits the installation distribution to verify that the patches and packages matches the versions in the product files internal to the installer.
--pkgOverwrite	Overwrites the existing installation package. You might use this option when you are installing a shared component in a global zone where either the shared component does not exist in a global zone, or the shared component exists in the whole root zone. The default is not to override the existing package. In general, shared components should be managed in the global zone.
--components <i>comp1 comp2...</i>	A space delimited set of component products. Each product has mnemonic associated with it. Use commpkg info --listPackages to see the mnemonic for a product. In most shells you need to escape the space between each mnemonic, that is, by adding double quotes around all the components.
--skipOSLevelCheck	(Solaris only) The Installer always checks that the operating system is at a certain minimum patch level. Using this option skips the check.

uninstall Verb Syntax

```
commpkg uninstall [uninstall_options] [ALTROOT|name]
```

Table A-4 describes the options for the **commpkg uninstall** command.

Table A-4 commpkg uninstall Options

commpkg uninstall Options	Description
-? or --help	Displays help.
-V or --version	Displays the Installer version.

Table A–4 (Cont.) commpkg uninstall Options

commpkg uninstall Options	Description
--silent <i>INPUTFILE</i>	Runs a silent uninstall, taking the inputs from the <i>INPUTFILE</i> and the command-line arguments. The command-line arguments override entries in the <i>INPUTFILE</i> . Uninstall proceeds without interactive prompts. Use --dry-run to test a silent installation without actually installing the software.
--dry-run or -n	Does not install software. Performs checks.
<i>ALTROOT</i> <i>name</i>	Use this option to uninstall multiple instances of the product on the same host or Oracle Solaris zone. You can also use this option to perform a side-by-side upgrade of the product. This option is available on Solaris only. Specifies an alternate root directory for a multi-instance uninstallation. The <i>InstallRoot</i> (the top-level installation directory for all products and shared components) is the alternate root. If you specify a <i>name</i> , it will be a friendly name associated with the <i>ALTROOT</i> that is registered in the software list. If you specify the <i>name</i> and it exists in the software list, the corresponding <i>ALTROOT</i> is used. If you also specify the --installroot option, it must correspond to the entry in the software list. If you specify <i>name</i> and it does not exist in the software list, it is added to the software list. Specifying any <i>name</i> other than "" implies an ALTROOT . A value for <i>name</i> of "" is reserved for the default root.

upgrade Verb Syntax

```
commpkg upgrade [upgrade_options] [ALTROOT|name]
```

Table A–5 describes the options for the **commpkg upgrade** command.

Table A–5 commpkg upgrade Options

commpkg upgrade Options	Description
-? or --help	Displays help.
-V or --version	Displays the Installer version.
--excludeOS	Does not apply operating system patches during product upgrade.
--excludeSC	Does not install, upgrade, or patch any shared components.
<i>ALTROOT</i> <i>name</i>	This option is available on Solaris only. Specifies an alternate root directory during a multiple host installation. The <i>InstallRoot</i> (the top-level installation directory for all products and shared components) is the alternate root. If you specify a <i>name</i> , it is an "alias" associated with the alternate root that is registered in the software list. You can use this option to upgrade multiple product instances on the same host or Solaris zone. Additionally, you can use this option to perform a side-by-side product upgrade.

Table A–5 (Cont.) commpkg upgrade Options

commpkg upgrade Options	Description
--distro <i>path</i>	Specifies the <i>path</i> to packages and patches for the products. Default path: Location of the commpkg command.
--silent <i>INPUTFILE</i>	Runs a silent upgrade, taking the inputs from the <i>INPUTFILE</i> and the command-line arguments. The command-line arguments override entries in the <i>INPUTFILE</i> . Upgrade proceeds without interactive prompts. Use --dry-run to test a silent upgrade without actually installing the software. Specify NONE for <i>INPUTFILE</i> if you want to run in silent mode without using an input file. When you specify NONE , the upgrade uses default values.
--dry-run or -n	Does not upgrade software but performs checks. This option creates a silent upgrade file in the /tmp directory.
--upgradeSC [<i>y n</i>]	Indicates whether or not to upgrade shared components as required. If this option is not specified, you are prompted for each shared component that needs to be upgraded by the package uninstall/install. Default: n Caution: Upgrading shared components is irreversible. However, if you do not upgrade required shared components, products might not work as designed. The --excludeSC flag has precedence over this flag.
--pkgOverwrite	This option is only for Solaris systems. Overwrites the existing installation package. You might use this option when you are installing a shared component in a global zone where either the shared component does not exist in a global zone, or the shared component exists in the whole root zone. The default is not to override the existing package. In general, shared components should be managed in the global zone.
--components <i>comp1 comp2...</i>	Specifies products to be upgraded. Separate each component product with a space. (Thus, the list is a space-delimited set.) To specify each component product, use the mnemonic associated with that product. To display a list of the mnemonics for all the component products, use the commpkg info --listpackages command.
--usePkgUpgrade	If the upgrade can be performed by using a patch or an in-place package upgrade, this option uses the in-place package upgrade. The default is to use a patch to upgrade, if possible. Note: Patches are used only on Solaris.

verify Verb Syntax

```
commpkg verify [verify_options] [ALROOT|name]
```

Tip: When verifying the package installation in an alternate root, be aware that Delegated Administrator uses the operating system components installed in the default root. Some products might also use shared components in the default root. Thus, verify the package installation in the default root as well.

Table A-6 describes the options for the **commpkg verify** command:

Table A-6 *commpkg verify Options*

Options	Description
-? or --help	Displays help.
-V or --version	Displays the Installer version.
--excludeOS	Do not verify operating system components.
--excludeSC	Do not verify shared components.
--components <i>comp1 comp2...</i>	A space delimited set of component products. Each product has mnemonic associated with it. Use commpkg info --listPackages to see the mnemonic for a product. In most shells you need to escape the space between each mnemonic, that is, by adding double quotes around all the components.
<i>ALTROOT</i> <i>name</i>	Use this option to verify multiple instances of the product on the same host or Solaris zone. This option is available on Solaris only. Specify <i>ALTROOT</i> or <i>name</i> if you need to specify an alternate root directory on which to perform the package verification.

info Verb Syntax

```
commpkg info [info_options] [ALTROOT|name]
```

Table A-7 describes the options for the **commpkg info** command.

Table A-7 *commpkg info Options*

Options	Description
-? or --help	Displays help.
-V or --version	Displays the Installer version.
--clean	Removes entries in the software list. If <i>ALTROOT</i> <i>name</i> is specified, the option removes the entry from the software list. If no <i>ALTROOT</i> <i>name</i> is specified, the option removes all entries from the software list.
--listPackages	Lists the packages that make up each Delegated Administrator, shared components, and operating system auxiliary product. This option also displays the mnemonic for Delegated Administrator and components such as comm_dssetup.pl .
--verbose	Prints product information installed in the <i>installroots</i> . To print information for a specific <i>installroot</i> , run the following command: commpkg info --verbose <i>installroot</i>
--components <i>comp1 comp2...</i>	A space delimited set of component products. Each product has mnemonic associated with it. Use commpkg info --listPackages to see the mnemonic for a product. In most shells you need to escape the space between each mnemonic, that is, by adding double quotes around all the components.

Using the Alternate Root Option

This section describes how to use the alternate root option to install multiple copies of the same product version on the same Solaris machine or Solaris zone.

About the Alternate Root

The Installer enables you to install multiple copies of the same product version on the same Solaris machine or Solaris zone by using the alternate root feature of the **commpkg install** command. For example, you might deploy a host with an installation in the default root directory, **/opt/sun/comms**, and a second, separate installation in the **/opt/sun/comms2** alternate root directory. The alternate root installation directory is the top-level directory underneath which the Delegated Administrator component product and shared components are installed in their respective directories.

Some possible uses for multiple installations include:

- Performing a side-by-side upgrade.
- Enabling an installation to be easily moved from one machine to another.

Note: The alternate root feature is available only on Solaris. This feature is a “power user” feature. If you are interested in installing more than one instance of the same version of Delegated Administrator on the same physical host, another option is to use Solaris zones.

ALTROOTname Syntax and Examples

The Installer uses the optional **ALTROOT | name** option to the **commpkg install**, **commpkg upgrade**, **commpkg uninstall**, and **commpkg verify** commands. You use either **ALTROOT** or **name**. The **name** acts as an alias for the alternate root installation path. The **name** is registered in an internal software list maintained by the Installer. You can use **name** in place of the alternate root's path in commands that accept the alternate root. The distinction between the alternate root and name is that the alternate root always begins with a slash (/) whereas the name does not.

Syntax:

```
commpkg [install|upgrade|uninstall|verify] [ALTROOT|name]
```

Example 1:

```
commpkg install /opt/sun/comms2
```

In this example, the path **/opt/sun/comms2** is the alternate root, which becomes the top-level directory underneath which Delegated Administrator software and shared components are installed.

Example 2:

```
commpkg install Comms2
```

In this example, **Comms2** is the name for the alternate root. During the installation process, the Installer prompts you to type in the alternate root installation directory.

Example 3:

In this example, you avoid installing the shared components in the alternate root by using the **--excludeSC** option:

```
commpkg install --excludeSC /opt/sun/comms2
```

Example 4:

To install only the shared components, run the **commpkg install** command and select the product you want to install, but prepend a tilde (~).

For example, if you plan to install Delegated Administrator in the alternate root, you select ~1 during the default installation. This tells the Installer to install the dependencies but not the product itself.

Notes on the *ALTROOT* | *name* command-line argument:

- Specifying a slash (/) as an alternate root is the same as specifying the default root installation directory. That is, specifying a slash is interpreted by the Installer as having specified no alternate root.
- Likewise, specifying "" as an alternate root is interpreted as having specified no alternate root. (The "friendly name" for the default alternate root is "").
- If you specify the **--installroot** option in addition to *ALTROOT* | *name*, the two must match.
- Operating system patches are always installed into the default root (/). Some shared components are installed into the *ALTROOT* and some are installed into the default root (/).
- You can quickly uninstall an *ALTROOT* installation by using the **rm -r** command on the alternate root directory. The next time that you run the **commpkg info** command, the internal software list that maintains the alternate root information is updated.
- You can create as many alternate roots as you like. Running the **commpkg info** command reports on the various alternate roots.

Understanding the Difference Between ALTROOT and INSTALLROOT

The following concepts define an alternate root (*ALTROOT*):

- An alternate root directory is a Solaris feature that is used by the **commpkg** command to enable multiple product installations on the same host.
- The default alternate root is the standard root directory (/) and is always present.

The following concepts define an installation root (*InstallRoot*):

- An *InstallRoot* is the top-level umbrella installation path for Delegated Administrator.
- On the default alternate root (that is, /), you can specify an *InstallRoot*.
- On an alternate root, the *InstallRoot* is the same as the alternate root.

Default Root

If you use the default root, the default *InstallRoot* is:

```
/opt/sun/comms/
```

Using Both Default Root and Alternate Root

Suppose you want to install one instance of Delegated Administrator in the `/opt/sun/mycompany/comms/` directory, and another instance of the same product in the `/opt/sun/mycompany/comms2/` directory. You would use the following commands:

For the default root:

```
commpkg install --installroot /opt/sun/mycompany/comms
```

For the alternate root:

```
commpkg install /opt/sun/mycompany/comms2/
```

Running Multiple Installations of the Same Product on One Host: Conflicting Ports

By default, after you initially configure the product on alternate roots, the ports used by the different product installations are the same and thus conflict with each other.

This is not a problem if you install multiple installations of the same product on the same host but only intend to have one instance running at one time. For example, you may perform a side-by-side upgrade scenario in which you plan to stop the old instance before you start the new instance.

However, you may plan to test the new instance while the old instance is still running (and supporting end users). In this scenario, the ports are used simultaneously, and you need to take steps to resolve the port conflicts.

comm_dssetup.pl Reference

This appendix provides information about the Oracle Communications Delegated Administrator **comm_dssetup.pl** script. You must prepare your Oracle Directory Server Enterprise Edition (Directory Server) hosts by running the **comm_dssetup.pl** before you install and configure Delegated Administrator.

About the comm_dssetup.pl Script

This section provides information you need to understand before running the **comm_dssetup.pl** script.

The **comm_dssetup.pl** script performs the following steps:

1. Prompts you for your deployment's Directory Server and schema information.
For a list of the specific information this step requests, see "[Information Needed to Run the comm_dssetup.pl Script](#)."
2. Generates a shell script and LDIF file from the information that you supply that is used to modify the Directory Server LDAP.
3. Runs the generated shell script and modifies your Directory Server.

At the end of each step, the **comm_dssetup.pl** script prompts you to continue. No changes are made to the Directory Server LDAP until the last step.

Directory Server Considerations for the comm_dssetup.pl Script

When running the **comm_dssetup.pl** script, consider the following points.

- **comm_dssetup.pl** configures local Directory Server instances, and thus you must:
 - Install the **comm_dssetup.pl** script on every host on which a Directory Server instance resides.
 - Run the **comm_dssetup.pl** script on the same host as your Directory Server. The tool runs locally for a specific instance (specified by path of Directory Server or path of instance).
- You can run the **comm_dssetup.pl** script against any Directory Server instance on the local host. If you have multiple Directory Information Trees (DITs) on one host, you can maintain and update one installation of **comm_dssetup.pl**, and apply it to every Directory Server instance on the host.
- **comm_dssetup.pl** must configure every Directory Server instance for the same DIT. This assumes that:

- A Directory Server has already been installed, configured, and is running before you launch the **comm_dssetup.pl** script.
- When adding an additional Directory Server host (such as a replica), at a future date, you must run the **comm_dssetup.pl** script against it, too.
- If you have customized your Directory Server, the following considerations might apply:
 - If you have indexed some attributes, you might have to reindex those attributes after running the **comm_dssetup.pl** script.
 - If you have added other LDIF files (schema definitions), they should not be affected, so no action should be necessary. However, back up your custom schema definition files before running the **comm_dssetup.pl** script.

The **comm_dssetup.pl** script backs up old schema files to the **/var/tmp/dssetup_timestamp/save** directory.

- For all Directory Server customizations, including the first two just listed, stop the **comm_dssetup.pl** script after it generates the script and before it actually updates the LDAP directory. Then inspect the script to evaluate how its proposed actions affect your LDAP directory. Take whatever actions you think necessary to protect your customizations before running the script against your Directory Server.

Information Needed to Run the comm_dssetup.pl Script

Table B–1 describes the information about your deployment that you need to gather before running the **comm_dssetup.pl** script.

Table B–1 *comm_dssetup.pl* Information

Information Item Needed	Default Value
Directory Server root path name	The default depends on the Directory Server version detected. The comm_dssetup.pl script does attempt to heuristically determine the value.
Which instance of Directory Server to use? (if more than one)	The default depends on the Directory Server version detected. The comm_dssetup.pl script does attempt to heuristically determine the value.
Directory Manager Distinguished Name (DN)	"cn=Directory Manager"
Directory Manager's Password	NA
Directory Server being used for user/group data? (yes), or configuration data only? (no)	yes

Table B–1 (Cont.) comm_dssetup.pl Information

Information Item Needed	Default Value
User and group root suffix (if yes to previous question)	The default depends on what is detected. The comm_dssetup.pl script does attempt to heuristically determine the value.
Schema version? (pick one of the following): <ul style="list-style-type: none"> ■ 1 - Schema 1 ■ 1.5 - Schema 2 Compatibility Mode ■ 2 - Schema 2 Native Mode For more information on how to choose a schema, see "About the comm_dssetup.pl Script Schema Choices." If you have one version of the schema installed and want to upgrade to a higher level, refer to <i>Sun Java System Communications Services 6 2005Q4 Schema Migration Guide</i> before running the script.	2 However, if you run comm_dssetup.pl again, it defaults to the value that you chose the previous time.
If you choose Schema 1 or 1.5, you need a DC tree. If the DC tree does not yet exist, the comm_dssetup.pl script creates only the root suffix node, its does not create the rest of the DC tree. You must create the rest of your DC tree yourself.	o=internet However, if you run comm_dssetup.pl again, it defaults to the value that you chose the previous time.

About the Directory Server Root Path Name and Instance

The **comm_dssetup.pl** script prompts you for both the Directory Server root path and the Directory Server instance. The script then combines these two items into an absolute path name to the Directory Server instance. For example, if your Directory Server instance resides under the `/var/opt/sun/directory/slapd-varrius` directory, then you specify `/var/opt/sun/directory` for the Directory Server root path and `slapd-varrius` for the Directory Server instance.

The reason for having two **comm_dssetup.pl** prompts to specify one absolute path is historical. Prior to Directory Server 6, Directory Server had the concept of a "server root" under which all Directory Server instances (as well as the Directory Server binaries) resided. After Directory Server 6, the concept of the "server root" was removed. Directory Server instances (as well as the Directory Server binaries) do not all have to reside under a single umbrella "server root" directory.

About the comm_dssetup.pl Script Schema Choices

Delegated Administrator supports the following schema choices:

- LDAP Schema 2 native mode
Corresponds to **comm_dssetup.pl** script schema version choice 2. This is the default for a fresh installation.
- LDAP Schema 1
Corresponds to the **comm_dssetup.pl** script schema version choice 1.
- LDAP Schema 2 compatibility mode
Corresponds to **comm_dssetup.pl** script schema version choice 1.5.

About LDAP Schema 2

LDAP Schema 2 is a set of provisioning definitions that describes the types of information that can be stored as entries by using the Directory Server LDAP.

The native mode uses search templates to search the Directory Server LDAP. Once the domain is found by using the domain search template, the user or group search templates are used to find a specific user or group.

You should use native mode if you are installing Delegated Administrator for the first time and you do not have other applications in your deployment that are dependent on a two-tree provisioning model.

Note: If you have an existing deployment that uses Schema 1, and you want to integrate other Communications Suite products, you should migrate your directory to Schema 2. Refer to *Sun Java System Communications Services 6 2005Q4 Schema Migration Guide* for information on how to migrate from LDAP Schema version 1 to LDAP Schema version 2.

About LDAP Schema 1

LDAP Schema 1 is a provisioning schema that consists of both an Organization Tree and a DC Tree. In Schema 1, when a search is conducted for user or group entries, it looks at the user's or group's domain node in the DC Tree and extracts the value of the **inetDomainBaseDN** attribute. This attribute holds a DN reference to the organization subtree containing the actual user or group entry.

About LDAP Schema 2 Compatibility Mode

Schema 2 compatibility mode is an interim mode between Schema 1 and Schema 2 native mode. Schema 2 compatibility mode supports both schemas and enables you to retain the existing two-tree design you already have.

Use Schema 2 Compatibility if you have existing applications that require Schema 1, but you also need functionality that requires Schema 2.

Note: Schema 2 compatibility mode is provided as a convenience in migrating to the Schema 2 Native mode. Do not use Schema 2 compatibility mode as your final schema choice. The migration process from Schema 1 to Schema 2 compatibility mode and then finally to Schema 2 native mode is more complex than simply migrating from Schema 1 to Schema 2 native mode. See *Sun Java System Communications Services 6 2005Q4 Schema Migration Guide* for more information.

Attribute Indexes Created by the comm_dssetup.pl Script

Attribute indexes improve the performance of search algorithms. The **comm_dssetup.pl** script offers you the choice to index attributes.

Table B-2 lists all the attributes the **comm_dssetup.pl** script indexes, grouped by suffix category. It also lists the type of indexes created for each attribute. For more information about Directory Server indexing, see the Directory Server documentation at:

http://docs.oracle.com/cd/E20295_01/index.htm

Table B–2 *Attributes Indexed by comm_dssetup.pl*

Suffix	Attributes Indexed	Type of Indexes Added
User/Group	mail	pres, eq, approx, sub
User/Group	mailAlternateAddress	pres, eq, approx, sub
User/Group	mailEquivalentAddress	pres, eq, approx, sub
User/Group	mailUserStatus	pres, eq
User/Group	member	eq
User/Group	ou	pres
User/Group	cosspecifier	pres
User/Group	groupid	pres, eq, sub
User/Group	icsCalendar	pres, eq, approx, sub
User/Group	icsCalendarOwned	pres, eq, approx, sub
User/Group	uniqueMember	eq
User/Group	memberOf	eq, sub
User/Group	cn	eq
User/Group	mgrpUniqueId	eq
User/Group	deleted	pres, eq
User/Group	davuniqueid	pres, eq
User/Group	inetCos	eq
User/Group (additional for Schema 2)	inetDomainBaseDN	pres, eq
User/Group (additional for Schema 2)	sunPreferredDomain	pres, eq
User/Group (additional for Schema 2)	associatedDomain	pres, eq
User/Group (additional for Schema 2)	o	pres, eq
User/Group (additional for Schema 2)	mailDomainStatus	pres, eq
User/Group (additional for Schema 2)	sunOrganizationAlias	pres, eq
DC Tree (for Schema 1)	inetDomainBaseDN	pres, eq
DC Tree (for Schema 1)	mailDomainStatus	pres, eq
DC Tree (for Schema 1)	inetCanonicalDomainName	pres, eq
Personal Address Book (PAB) (o=pab) Note: For old Address Book	memberOfManagedGroup	pres, eq
Personal Address Book (PAB) (o=pab) Note: For old Address Book	memberOfPAB	pres, eq
Personal Address Book (PAB) (o=pab) Note: For old Address Book	memberOfPABGroup	pres,eq

Table B–2 (Cont.) Attributes Indexed by comm_dssetup.pl

Suffix	Attributes Indexed	Type of Indexes Added
Personal Address Book (PAB) (o=pab) Note: For old Address Book	un	eq
New PAB (o=PiServerDb)	displayname	pres, eq, sub
New PAB (o=PiServerDb)	MemberOfPiBook	eq
New PAB (o=PiServerDb)	MemberofPiGroup	eq
o=mlusers for future mailserv feature	mail	eq
o=mlusers for future mailserv feature	mlsubListIdentifier	eq
o=mlusers for future mailserv feature	mlsubMail	eq

To add additional indexes on your own, see the Directory Server documentation.

Running the comm_dssetup.pl Script

You can run the **comm_dssetup.pl** script in either interactive or silent mode.

Running the comm_dssetup.pl Script in Silent Mode

To run the **comm_dssetup.pl** script in silent mode:

1. On the host where Directory Server is installed, log in as or become the superuser (**root**).
2. Start Directory Server, if necessary.
3. Change to the directory where you installed or copied the Directory Server Setup **comm_dssetup.pl** script.
4. Run the script followed by the silent mode options.

All options are required. For more information, see ["Silent Mode Options."](#)

```
/usr/bin/perl comm_dssetup.pl
[ -i yes | no ] [ -R yes | no ] [ -c DirectoryServerRoot ]
[ -d DirectoryInstance ] [ -r DCTreeSuffix ]
[ -u UserGroupSuffix ] [ -s yes | no ] [ -D DirectoryManagerDN ]
[ -j DirectoryManagerPasswordFile ] [ -b yes | no ]
[ -t 1 | 1.5 | 2 ] [ -m yes | no ] [-S PathtoSchemaFiles ]
```

The script creates the following LDIF file and shell script to update the LDAP indexes and schema:

- **/var/tmp/dssetup_timestamp/dssetup.ldif**
- **/var/tmp/dssetup_timestamp/dssetup.sh**

5. If you answered **no** to the **-R** and **-m** options, you need to manually run the **dssetup.sh** script that was created.

If you answered **yes** to the **-R** and **-m** options, the **dssetup.sh** script is run automatically.

Silent Mode Options

Table B–3 describes the **comm_dssetup.pl** silent mode options.

Table B–3 *comm_dssetup.pl Silent Mode Options*

Option and Argument	Description
-i <i>yes no</i>	Specifies whether to configure new indexes. yes - Add new Directory Server indexes. no - Do not add indexes.
-R <i>yes no</i>	Specifies whether to reindex automatically. yes - Reindex without prompting the user. no - Do not reindex without prompting the user. The -m option must also be specified for yes for the -R option to take effect.
-c <i>DirectoryServerRoot</i>	Specifies the Directory Server root path, for example, /var/opt/sun/directory .
-d <i>DirectoryInstance</i>	Specifies the Directory Server instance subdirectory under the Directory Server root path, for example, slapd-varrius .
-r <i>DCTreeSuffix</i>	Specifies the DC tree root suffix (for Schema 1 and Schema 2 compatibility modes only), for example, o=internet .
-u <i>UserGroupSuffix</i>	Specifies the user and group root suffix, for example, o=usergroup .
-s <i>yes no</i>	Specifies whether to update the schema. yes - Update the schema. no - Do not update schema.
-D <i>DirectoryManagerDN</i>	Specifies the Directory Manager Distinguished Name (DN), for example, "cn=Directory Manager" . The value must be enclosed by double quotation marks (" ") to enable the comm_dssetup.pl script to interpret a value with a space correctly.
-j <i>DirectoryManagerPasswordFile</i>	Specifies the file containing the Directory Manager DN password.
-b <i>yes no</i>	Specifies to use this Directory Server for users and groups. yes - Use this directory to store both configuration and user group data. no - Use this directory to store only configuration data.
-t <i>1 1.5 2</i>	Specifies the schema version.
-m <i>yes no</i>	Specifies whether to modify the Directory Server. yes - Modify the Directory Server without prompting the user. no - Do not modify the Directory Server without prompting the user.
-S <i>PathtoSchemaFiles</i>	Specifies the path to the directory where the schema files are located for example, ./schema .

