

**Oracle® Communications Converged Application
Server**

Installation Guide

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Preface

This document describes how to install Oracle Communications Converged Application Server.

Audience

This document is intended for system administrators or application developers who are installing Converged Application Server. You should be familiar with WebLogic Server and related Java technologies, and have a general understanding of Windows, Linux, and Solaris system administration.

Related Documents

For more information, see the following documents in the Oracle Communications Converged Application Server Release 7.0 documentation set:

- *Oracle Communications Converged Application Server Release Notes*
- *Oracle Communications Converged Application Server Concepts*
- *Oracle Communications Converged Application Server Security Guide*
- *Oracle Communications Converged Application Server Developer's Guide*
- *Oracle Communications Converged Application Server Diameter Application Development Guide*

For more information about WebLogic Server, see the following documents in the Oracle Fusion Middleware for Oracle WebLogic Server 12c documentation set:

- *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*
- *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*
- *Oracle Fusion Middleware Oracle WebLogic Scripting Tool*
- *Oracle Fusion Middleware Configuring and Managing JDBC for Oracle WebLogic Server*

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impaired.

Converged Application Server Installation Overview

This chapter describes the general process of installing and configuring Oracle Communications Converged Application Server. Subsequent chapters describe installation steps in detail.

For more information about Converged Application Server, see *Converged Application Server Concepts*.

Overview of Installed Components

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

- Oracle database software
- Java Development Kit (JDK) software
- The Converged Application Server software, which includes:
 - Oracle WebLogic Server, which is the platform container
 - Oracle Coherence software

To view the supported software versions, see "[Converged Application Server System Requirements](#)".

Overview of the Converged Application Server Installation Procedure

The process for installing Converged Application Server is similar to the process for installing WebLogic Server:

1. Plan your installation:
 - Determine the scale of your implementation, for example, a small test 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, and Java Virtual Machine (JVM) process requirements (such as memory settings)
 - Information requirements, such as IP addresses and host names
3. Perform pre-installation tasks such as assigning IP addresses to network assets, installing the database, and installing the JDK.
 4. Install Converged Application Server.
When you install Converged Application Server, WebLogic Server and Oracle Coherence are also installed.
 5. Configure a Converged Application Server domain.
 6. Perform post-installation tasks.
 7. Troubleshoot any installation issues.

Ensuring a Successful Installation

The Converged Application Server installation should be performed only by qualified personnel. You must be familiar with WebLogic Server and the supported operating systems. You should be experienced with installing Java-related packages. Oracle recommends that the Oracle database installation and configuration be performed by an experienced database administrator.

Follow these guidelines:

- As you install each component (for example, the Oracle database), 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 that your system has the required base software. In addition, make sure 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. You re-enter these configuration values later in the procedure.
- Use this guideline only if you are configuring Converged Application Server as a Proxy Registrar. Confirm that you have installed and configured an Oracle database for use as a Java Database Connectivity (JDBC) data source.

Placeholders Used in This Guide

Table 1–1 lists placeholders that are used in this guide to refer to the directories that contain Converged Application Server system components.

Table 1–1 Directory Placeholders

Placeholder	Directory
<i>Central_inventory_location</i>	The directory in which the Oracle inventory file lives. The Oracle inventory lists all Oracle software installed on a machine. This directory is created by the Oracle installer upon the first Oracle product installation.
<i>Domain_home</i>	The directory in which the Converged Application Server domain resides, located in <i>Oracle_home/user_projects/domains</i> .

Table 1–1 (Cont.) Directory Placeholders

Placeholder	Directory
<i>Oracle_home</i>	<p>The directory that serves as the repository for common files that are used by Oracle Communications products installed on the same machine, such as Converged Application Server and WebLogic Server.</p> <p>The files in the <i>Oracle_home</i> directory are essential to ensuring that software operates correctly on your system. They:</p> <ul style="list-style-type: none"> ■ Facilitate checking of cross-product dependencies during installation ■ Facilitate Service Pack installation
<i>temp_dir</i>	A temporary directory into which you extract the installation images for Converged Application Server. Referenced when extracting installation files and other utilities.
<i>occas_home</i>	The directory in which the Converged Application Server software is installed. By default, this is a subdirectory of <i>Oracle_home</i> ; for example, <i>Oracle_home/occas</i>

Planning Your Converged Application Server Installation

This chapter provides information about planning your Oracle Communications Converged Application Server installation.

About Planning Your Converged Application Server Installation

When planning a Converged Application Server installation, consider how many physical servers can handle your subscriber base and how many signaling and media server nodes to include in your cluster.

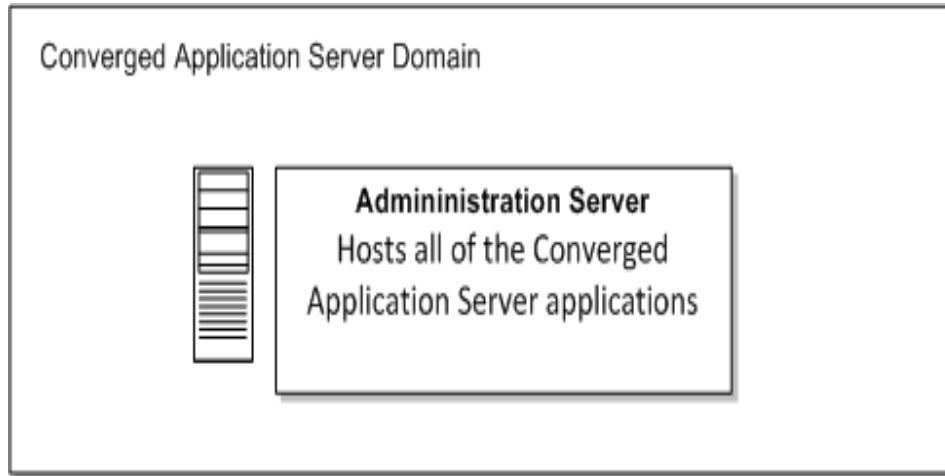
The difference between a Converged Application Server development system and a Converged Application Server production system is only the number of machines in the system. Install the same components in a development system as installed in a production system.

See "[Converged Application Server System Requirements](#)" for information about required hardware and software.

Understanding Converged Application Server Installation Topologies

[Figure 2-1](#) shows a simple Converged Application Server installation topology, which consists of a domain with a single Administration Server. The Administration Server hosts all of the Converged Application Server applications on a single machine.

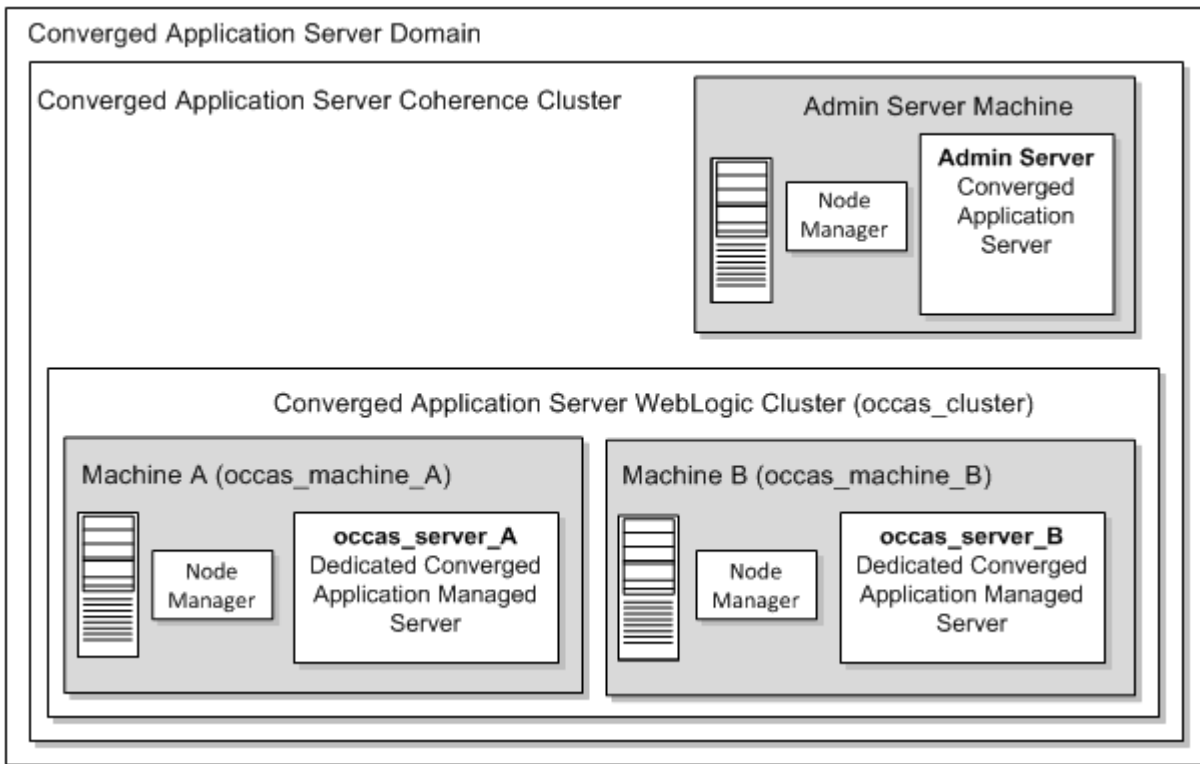
Figure 2–1 Basic Converged Application Server Topology



While a simple single host configuration is sufficient for development and Proof of Concept (PoC) installations, production systems must be robust and fault-tolerant.

Figure 2–2 shows a fault-tolerant Converged Application Server installation topology. In this topology, the Administration Server is installed on a separate machine from the two independent managed servers, which each host a dedicated instance of Converged Application Server. The managed servers can be separated geographically for extra fault tolerance, and more engines can be added as required.

Figure 2–2 Fault-Tolerant Converged Application Server Topology



Each element in this topology illustration is described in [Table 2–1](#).

Table 2–1 Description of the Elements in the Converged Application Server and Coherence Standard Installation Topology

Element	Description and Links to Additional Documentation
Converged Application Server Domain	A group of logically related Java components (in this case, the Administration Server, managed servers, and other related software components). For more information, see "Understanding Domains" in <i>Understanding Oracle WebLogic Server</i> .
Administration Server	The central control entity of a domain, which maintains the domain's configuration objects and distributes configuration changes to managed servers. For more information, see "Administration Server" in <i>Understanding Oracle WebLogic Server</i> .
Cluster	A collection of multiple Converged Application Server instances running simultaneously and working together. For more information, see "Managed Servers and Managed Server Clusters" in <i>Understanding Oracle WebLogic Server</i> .
Node Manager	Node Manager is a WebLogic Server utility that enables you to start, shut down, and restart Administration Server and managed server instances from a remote location. Although Node Manager is optional, Oracle recommends it if your WebLogic Server environment hosts applications with high availability requirements. For more information, see "Running Node Manager as a Startup Service" in <i>Administering Node Manager for Oracle WebLogic Server</i> .
Machine	A logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between Converged Application Server managed servers and the Node Manager; to start or stop a managed server with Node Manager, the managed server must be associated with a machine.
Managed Server	The host for your applications, application components, Web services, and their associated resources. For more information, see "Managed Servers and Managed Server Clusters" in <i>Understanding Oracle WebLogic Server</i> .

About Converged Application Server Coherence Planning

Converged Application Server nodes are based on Oracle Coherence. For optimal performance, determine how to configure Oracle Coherence settings for your Converged Application Server topology. For example, determine the number of servers needed in the cluster and the number of machines deployed to ensure that there are enough servers to accommodate any type of failure, such as server processes, machines, and so on. For more information, see "Configuring and Managing Coherence Clusters" in *Administering Clusters for Oracle WebLogic Server*.

About Installing a Secure System

In a production system, ensure that communication between components and access to the system servers are secure. For information about choices for installing a secure system, see *Converged Application Server Security Guide*.

Converged Application Server System Requirements

This chapter describes the software, hardware, and information requirements for Oracle Communications Converged Application Server.

Software Requirements

Converged Application Server is supported on the operating system, hardware, and Java Virtual Machine (JVM) combinations shown in [Table 3-1](#).

Notes:

- Converged Application Server does not support any Open Java Development Kit (OpenJDK).
 - Production deployment is supported only for Linux and Solaris platforms. Windows platforms are supported for development purposes only.
-
-

Table 3-1 Supported Software

Operating System	Hardware Architectures	JDK	Additional Information
Oracle Solaris 11	SPARC 64-bit	Oracle JDK 1.8.0_31	Oracle VM 2.1.2+
Oracle Enterprise Linux 5.x, Oracle Enterprise Linux 6+	x86-64	Oracle JDK 1.8.0_31	Converged Application Server is certified on Oracle Linux running either natively or as a part of Oracle virtual machine (VM) Server.
Windows 7 (64 bit)	x86-64	Oracle JDK 1.8.0_31	For development systems only.

Database Software

[Table 3-2](#) shows the databases that Converged Application Server supports.

Table 3-2 Supported Databases

Database Software	Notes
Oracle 11g Release Standard Edition	NA
MySQL Server version 5.4	NA

Middleware Software

Table 3–3 shows the middleware software that Converged Application Server supports.

Table 3–3 Supported Middleware Software

Middleware Software	Notes
WebLogic Server Version 12.1.3.0.0	Oracle WebLogic Server is bundled with the Converged Application Server installer.
Oracle Coherence 12.1.3.0.0	Oracle Coherence is bundled with the Converged Application Server installer.

Virtualization Software

Table 3–4 shows the virtualization software that Converged Application Server supports.

Table 3–4 Supported Virtualization Software

Virtualization Software	Notes
Kernel-based Virtual Machine (KVM) 0.12	NA
Oracle VM 3	NA

About SIP Clients

Any standards-compliant Session Initiation Protocol (SIP) User Agent can be used.

About Critical Patch Updates

Converged Application Server is supported on all Oracle Critical Patch Updates. Install all Critical Patch Updates as soon as possible.

To download Critical Patch Updates, find out about security alerts, and enable email notifications about Critical Patch Updates, see the topic about security on Oracle Technology Network:

<http://www.oracle.com/technetwork/topics/security/whatsnew/index.html>

Hardware Requirements

The number and configuration of the computers that you employ for your Converged Application Server system depend on the scale and the deployment type you plan. Work with your performance team to determine your sizing requirements.

Converged Application Server has similar requirements to Oracle WebLogic Server. The following items are required in addition to the basic WebLogic Server requirements:

- Gigabit Ethernet connections are required between engine servers for most production deployments.
- Dual network interface cards (NICs) are required to provide failover capabilities in a production environment.
- Extra RAM is required to support the throughput requirements of most production installations.

- A load balancer is required for production installations.

Information Requirements

Table 3–5 shows the information you provide during the Converged Application Server installation.

Table 3–5 Required Information

Information Type	Description	Default Value
Host name or IP address	The network names or IP addresses of the machines on which you are going to install the software.	Current host name or IP address
Directory	The directory on each machine that serves as your <i>Oracle_home</i> directory. It is the directory that serves as the repository for common files that are used by Oracle Communications products installed on the same machine, such as Converged Application Server and WebLogic Server.	NA
Directory	The directories on each machine in which to install Converged Application Server and WebLogic Server software. By default, these are subdirectories of <i>Oracle_home</i> .	NA
Password	A password for the administrative user. The password must have a minimum of eight characters, at least one of which is non-alphabetic.	NA

Converged Application Server Pre-Installation Tasks

This chapter describes tasks you must complete before installing Oracle Communications Converged Application Server.

About Pre-Installation Tasks

You must perform certain tasks before installing Converged Application Server. Pre-installation tasks are broken down into the following categories:

- Tasks that are required for all Converged Application Server systems. See ["Pre-Installation Tasks for All Converged Application Server Systems"](#).
- Tasks that are required for Proxy Registrar domains only. See ["Pre-Installation Tasks for Proxy Registrar Domains"](#).

Pre-Installation Tasks for All Converged Application Server Systems

Before installing the Converged Application Server software, complete the following pre-installation tasks:

- Perform general pre-installation tasks. See ["General Pre-Installation Tasks"](#).
- Choose your Oracle home directory. See ["Choosing an Installation Directory"](#).
- Install JDK on all machines in your Converged Application Server system. See ["Installing the Java Development Kit"](#).

General Pre-Installation Tasks

Complete the following general pre-installation tasks:

- Allocate IP addresses for Converged Application Server interfaces, including:
 - Public-facing external interfaces
 - Internal-facing interfaces
 - Intra-system interfaces for private signaling between Converged Application Server nodes
 - If required by your organization, a separate systems management interface
- Determine which logical interfaces map to which physical interfaces on each server.

- Have access to a Domain Name Service (DNS) and Network Time Protocol (NTP) servers.
- Optionally assign fully qualified domain names to each server.
- Make a note of any required static routes.

Choosing an Installation Directory

When you install Converged Application Server, you are prompted to specify a *Oracle_home* directory. This directory serves as a repository for common files that are used by multiple Fusion Middleware products installed on the same machine. For this reason, the *Oracle_home* directory can be considered a central support directory for all of the Fusion Middleware products installed on your system.

The files in the *Oracle_home* directory are essential to ensuring that Converged Application Server and WebLogic Server operate correctly on your system. They facilitate checking of cross-product dependencies during installation.

For more information about selecting an installation directory, see "Understanding the Oracle WebLogic Server and Coherence Directory Structure" in *Installing and Configuring Oracle WebLogic Server and Coherence*.

Installing the Java Development Kit

Install Oracle Java Development Kit (JDK) plus the latest security update on each physical machine or VM in your Converged Application Server system. For a list of supported versions, see "[Software Requirements](#)".

To install and configure your JDK:

1. Download the JDK from the Java SE Development Kit Downloads page at:
<http://www.oracle.com/technetwork/java/javase/downloads/>
2. Install the JDK per instructions provided with it.
3. Add the JDK **bin** directory to the beginning of the **PATH** variable definition on the target system. For example:

```
PATH=$JAVA_HOME/bin:$PATH
export PATH
```

Pre-Installation Tasks for Proxy Registrar Domains

If your Converged Application Server system will use a Proxy Registrar domain, you must install and configure either an Oracle or MySQL database for use as a JDBC data source.

Before installing the Converged Application Server software, complete the following pre-installation tasks:

- Create your database.
 - To create an Oracle database, see "[Creating an Oracle Database](#)".
 - To create a MySQL database, see "[Creating a MySQL Database](#)".
- Write down key information about your database that is required when you install Converged Application Server. See "[Recording Your Database Information](#)".
- Create a user account for the primary user running Converged Application Server. See "[Creating the Converged Application Server User Account](#)".

Creating an Oracle Database

Create two Oracle schemas. Create one for the Registrar bindings, and another for the User Service and Security Service. For instructions about installing the Oracle database software, creating a schema, and granting user privileges, see the Oracle database documentation.

Notes:

- Oracle recommends that you create two schemas. However, you can choose to create a single schema for all of the Converged Application Server data sources, or you can create three schemas, with one for each data source. The choice you make depends on your database management preferences.
 - The following, abbreviated instructions are intended to provide an overview of the procedures to create a database for use with Converged Application Server. Refer to the documentation for your Oracle database deployment for information about creating a schema and granting privileges.
-
-

To create an Oracle database user:

1. Start SQL*Plus (the Oracle SQL command-line tool).
2. Log in to the Oracle database as an administrative user with sufficient privileges to create new database users.
3. Create the users that you need in the database by entering the following command in SQL*Plus:

```
SQL> CREATE USER username IDENTIFIED BY password DEFAULT TABLESPACE  
user_tablespace TEMPORARY TABLESPACE temp_tablespace;
```

Where *username* is the name identifying the database account to use when connecting to the database, *password* is the password associated with the user name, and *temp_tablespace* is the temporary tablespace to use when storing temporary tables.

4. Grant the following privileges to the users you create for use with Converged Application Server:

```
SQL> GRANT CREATE SESSION, CREATE TABLE, CREATE SEQUENCE TO username;  
SQL> ALTER USER username QUOTA UNLIMITED ON user_tablespace;
```

5. Exit SQL*Plus.

Creating a MySQL Database

Create two MySQL databases. Create one database for the Registrar bindings, and another database for the User Service and Security Service. For instructions about installing the MySQL database software, creating a database, and granting user privileges, see the MySQL database documentation.

Notes:

- Oracle recommends that you create two databases. However, you can create a single database for all of the Converged Application Server data sources, or you can create databases, with one for each data source. The choice you make depends on your database management preferences.
- The following, abbreviated instructions are intended to provide an overview of the procedures to create a database for use with Converged Application Server. Refer to the documentation for your MySQL database deployment for information about creating databases and granting privileges.
- If the MySQL database is installed on a case-sensitive operating system such as Linux or Solaris, set the MySQL variable **lower_case_table_names** to **1** to ensure that MySQL is case insensitive. For example:

```
set-variable=lower_case_table_names=1
```

For more information, see the documentation for your MySQL database deployment.

To create a MySQL database:

1. Log in to the MySQL database as an administrative user.
2. Create a MySQL database:

```
mysql> CREATE DATABASE database_name;
```

Where *database_name* is a label (or name) that you specify to identify the database.

3. Verify that the database was created:

```
mysql> SHOW DATABASES;
```

4. Grant the following connect and resource privileges to the databases you create:

```
mysql> GRANT ALTER, CREATE, DELETE, INDEX, INSERT, LOCK TABLES, SELECT, UPDATE  
ON database_name.* TO 'username'@'hostname'  
IDENTIFIED BY 'password' WITH GRANT OPTION;
```

Where *username* is the name identifying the database account to use when connecting to the database, *password* is the password associated with the username, and *hostname* identifies the network address of the host computer running that database.

5. Exit MySQL:

```
exit;
```

Recording Your Database Information

When you install and configure a database, you define system configuration values that you enter when you install and configure the Converged Application Server software. When you create the following values, write them down so you can use them during the installation process:

- **Vendor:** The database vendor's name. For Converged Application Server, either Oracle or MySQL.
- **JDBC driver:** The JDBC driver to use to connect to the database.
- **Database username:** The user name for connecting to the database.
- **Database user password:** The password for the specified user name.
- **Database SID or database name:** If you are using an Oracle database, this is the Database System Identifier. If you are using a MySQL database, this is the name of the database.
- **Host name:** The name or IP address assigned to the server hosting the database.
- **Port:** The port number for connecting to the database. The default port numbers are port **1521** for the Oracle database, and port **3306** for the MySQL database.

Creating the Converged Application Server User Account

Create a user account for the primary user running Converged Application Server in your environment. All machines in your system must use the same user name.

To create the Converged Application Server user account:

1. Log in to the target machine.
2. Enter the following command:

```
useradd passwd user_name
```

where *user_name* is the name of the user, and *passwd* is the password for the user.

3. Write down the user name. You will need to specify the user name when you install Converged Application Server.

Next Steps

After you complete the pre-installation tasks, install Converged Application Server. See "[Installing Converged Application Server](#)" for instructions.

Installing Converged Application Server

This chapter describes how to install the Oracle Communications Converged software. Before you install Converged Application Server, complete all pre-installation tasks described in "[Converged Application Server Pre-Installation Tasks](#)".

About the GUI Installation and Silent Installation

You can install Converged Application Server by using the GUI installation or the silent installation. The silent installation enables you to perform a non-interactive installation of Converged Application Server. You can use the silent installation to install Converged Application Server quickly on multiple systems.

For installation instructions, see the following sections:

- [Installing Converged Application Server Using the GUI Installation](#)
- [Installing Converged Application Server Using the Silent Installation](#)

Installing Converged Application Server Using the GUI Installation

To run the installation program in graphical mode, the console attached to the machine on which you are installing the software must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for Solaris and Linux systems do.

To install Converged Application Server:

1. Log in to the target machine.
2. Download the Converged Application Server software from the Oracle software delivery website at:
<http://edelivery.oracle.com>
3. Go to the directory where you downloaded the installation program.
4. Launch the installation program by entering the following command from the JDK directory on your system:

```
java -jar occas_generic.jar
```

The installation program starts.

If no other Oracle products are installed on the system, the Installation Inventory screen appears. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.

For more information about the central inventory, see "Understanding the Oracle Central Inventory" in *Installing Software with the Oracle Universal Installer*.

If an Installation Inventory exists, the Oracle Communications Converged Application Server Installation Welcome screen appears.

5. Click **Next**.

The Installation Location screen appears.

Use this screen to specify the location of your Oracle home directory.

For more information about the Oracle Fusion Middleware directory structure, see "Selecting Directories for Installation and Configuration" in *Planning an Installation of Oracle Fusion Middleware*.

6. Click **Next**.

The Installation Type screen appears.

Select one of the following options:

- **Converged Application Server Installation:** This option includes everything you need to install, configure, and run Converged Application Server.
- **Complete Installation:** In addition to the Converged Application Server software, this option also includes example converged applications. The examples are installed in your *Oracle_home/occas/samples/sipserver/examples* directory. *Oracle_home* is the directory that serves as the repository for common files that are used by Oracle Communications products installed on the same machine, such as Converged Application Server and WebLogic Server. For more information about the examples, see *Converged Application Server Developer's Guide*.

7. Click **Next**.

The Prerequisite Checks screen appears.

This screen verifies that your system meets the minimum requirements.

If there are any warnings or errors, make sure that your environment meets all of the prerequisites. See "[Converged Application Server System Requirements](#)" for more information.

8. Click **Next**.

The Security Updates screen appears.

If you already have an Oracle Technical Support account, use this screen to indicate how you would prefer to receive security updates.

If you do not have one and are sure you want to skip this step, clear the check box and verify your selection in the follow-up dialog box.

9. Click **Next**.

The Installation Summary screen appears.

Use this screen to verify the installation options you selected. If you want to save these options to a response file, click **Save Response File** and provide a location and name for the response file. Response files can be used later in a silent installation.

Note: If you only want to save a response file, exit the installer now.

For more information about silent installation, see ["Installing Converged Application Server Using the Silent Installation"](#).

10. Review the selections you have made, and click **Install**.

The Installation Progress screen appears and the installation begins.

Note: After the installation begins, if you click **Cancel**, the installation process stops but the files that are already copied are not removed.

11. When the installation completes, click **Next**.

The Installation Complete screen appears.

The next step is to launch the configuration wizard to create your WebLogic Server domain. There are two ways to launch the configuration wizard:

- Select **Automatically Launch the Configuration Wizard** on this screen. After you click **Finish** to close the installer, the configuration wizard starts and you can begin to configure your domain. Proceed to ["Creating a Converged Application Server Domain"](#).
- Do not select **Automatically Launch the Configuration Wizard** on this screen. After you click **Finish** to close the installer, manually start the configuration wizard to begin configuring your domain. Proceed to ["Starting the Configuration Wizard"](#).

Installing Converged Application Server Using the Silent Installation

Silent mode is a way of setting installation options once and then using those settings to duplicate the installation on many machines. The installation program reads your settings from a Response File that you create before you begin installation. The installation program does not display any options during the installation process.

About the Response File

The entries in the Response File (**response.rsp**) correspond to the prompts that you would see if you used GUI mode.

Incorrect entries in **response.rsp** can cause installation failures. To help you determine the cause of a failure, Oracle recommends that you create a log file when you start the installation.

The following shows a sample version of a **response.rsp** file. Your input may be slightly different, depending on your installation.

```
[ENGINE]

#DO NOT CHANGE THIS.
Response File Version=1.0.0.0.0

[GENERIC]

#The Oracle home location. This can be an existing Oracle Home or a new Oracle
Home
ORACLE_HOME=Oracle_home

#Set this variable value to the Installation Type selected. e.g. Converged
```

```

Application Server.
INSTALL_TYPE=Converged Application Server

#Provide the My Oracle Support Username. If you wish to ignore Oracle
Configuration Manager configuration provide empty string for user name.
MYORACLESUPPORT_USERNAME=

#Provide the My Oracle Support Password
MYORACLESUPPORT_PASSWORD=<SECURE VALUE>

#Set this to true if you wish to decline the security updates. Setting this to
true and providing empty string for My Oracle Support username
will ignore the Oracle Configuration Manager configuration
DECLINE_SECURITY_UPDATES=true

#Set this to true if My Oracle Support Password is specified
SECURITY_UPDATES_VIA_MYORACLESUPPORT=false

#Provide the Proxy Host
PROXY_HOST=

#Provide the Proxy Port
PROXY_PORT=

#Provide the Proxy Username
PROXY_USER=

#Provide the Proxy Password
PROXY_PWD=<SECURE VALUE>

#Type String (URL format) Indicates the OCM Repeater URL which should be of the
format [scheme[Http/Https]]://[repeater host]:[repeater port]
COLLECTOR_SUPPORTHUB_URL=

```

Returning Exit Codes to the Console

The silent installation program generates exit codes that indicate the success or failure of the installation. [Table 5–1](#) describes these exit codes:

Table 5–1 Installation Program Exit Codes

Code	Description
0	Installation completed successfully.
-1	Installation failed due to a fatal error.
-2	Installation failed due to an internal XML parsing error.

If you start the silent installation process from a script, you can have these exit codes displayed to the console. [Example 5–1](#) shows a sample command file that runs the WebLogic Platform installation while in silent mode and echoes the exit codes to the console from which the script is executed.

Example 5–1 Return Exit Codes

```

#!/bin/bash

#rem Execute the installer in silent mode
java -jar occas_generic.jar -silent -responseFile /home/user/bin/response.rsp

```

```
exit_code=$?  
  
echo ${exit_code}  
  
echo Exit Code Key  
echo -----  
echo 0=Installation completed successfully  
echo -1=Installation failed due to a fatal error  
echo -2=Installation failed due to an internal XML parsing error  
rem Execute the installer in silent mode
```

Running the Installer in Silent Mode

To perform a silent installation:

1. Log in to the target system.
2. Download the Converged Application Server software from the Oracle software delivery website at:
<http://edelivery.oracle.com>
3. Create a response file, as described in "[About the Response File](#)".
4. Go to the directory where you downloaded the Converged Application Server software.
5. Start the installer by entering the following command:

```
java -jar occas_generic.jar -silent -responseFile ResponseFile
```

The installer checks for all required software and writes errors to a log file if it detects any missing or unavailable components, or if there are any connectivity-related issues.

6. Check whether the installer completed successfully by retrieving the exit codes, as described in "[Returning Exit Codes to the Console](#)".

Next Steps

After you install Converged Application Server, you must configure a Converged Application Server domain. See "[Creating and Configuring Converged Application Server Domains](#)" for instructions.

Creating and Configuring Converged Application Server Domains

This chapter describes the steps required to create your Oracle Communications Converged Application Server domain.

Before continuing in this chapter, you need to understand the following:

- WebLogic Server domains and clustering. See "Understanding Oracle WebLogic Server Domains" and "Understanding WebLogic Server Clustering" in *Oracle Fusion Middleware Understanding Domain Configuration for Oracle WebLogic Server*.
- The domain topologies available for use with Converged Application Server. See "[Understanding Converged Application Server Installation Topologies](#)".

About Domains and Domain Configuration

You must configure the domains of all servers in your Converged Application Server system. You can configure your domains by:

- Using the WebLogic Server Configuration Wizard to configure each server in your installation.
- Configuring the domain on the Administration Server and then using the **pack** and **unpack** commands provided by Oracle WebLogic Server to package the configuration data for copying to all the other servers. The Converged Application Server installer puts the **pack** and **unpack** commands in the *Oracle_home/wlserver/common/bin* directory. *Oracle_home* is the directory that serves as the repository for common files that are used by Oracle Communications products installed on the same machine, such as Converged Application Server and WebLogic Server.

For more information about packing and unpacking configurations, see *Oracle Fusion Middleware Creating Templates and Domains Using the Pack and Unpack Commands*.

- Using the WebLogic Scripting Tool (WLST) to configure each domain. The WLST scripting environment is based on the Java scripting interpreter, Jython. See *Oracle Fusion Middleware Understanding the WebLogic Scripting Tool* for more information.

For more information about other methods available for domain creation, see "Additional Tools for Creating, Extending, and Managing WebLogic Domains" in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

About Converged Application Server Domain Types

Converged Application Server ships with default domain configuration templates for each type of deployment that Converged Application Server supports. You use one of these templates to configure your domain. These templates contain the basic configurations for setting up domains, but you may need to adjust some aspects of the domain during the domain configuration process.

- **Basic Domain**

The Basic Domain template enables you to create a simple Converged Application Server domain. This domain configuration can be used during development where it is more convenient to deploy and test applications on a single server. The Basic Domain topology can also be used in deployments that do not have high-availability and scalability requirements.

This domain template is specified in **oracle.communications.occas.basic.template.jar**.

The domain configuration script for this domain type is **occas-basic.py**.

- **Replicated Domain**

The Replicated Domain template enables you to create a replicated Converged Application Server domain. The Replicated Domain topology is designed for use with SIP applications that require high levels of scalability, availability, and performance.

This domain template is specified in **oracle.communications.occas.combined.coherence.template.jar**.

The domain configuration script for this domain type is **occas-replicated.py**.

- **Converged Application Server - Diameter Sh Domain**

The Diameter Sh Domain template enables you to create a simple Diameter Converged Application Server domain. The Diameter Sh Domain topology supports the Diameter protocol over the TCP, TLS, and SCTP transport protocols.

Note: This domain is not available through the Graphical Mode Domain Configuration Wizard. You install and configure the Diameter Sh Domain manually. For instructions, see "Configuring Diameter Client Nodes and Relay Agents" in *Converged Application Server Administrator's Guide*.

This domain template is specified in **diameterdomain.jar**.

The domain configuration script for this domain type is **occas-diameter.py**.

- **Proxy Registrar - Basic Domain**

The Proxy Registrar - Basic Domain template enables you to create a non-clustered (single-server) Converged Application Server domain with the Proxy Registrar component. The Proxy Registrar combines the functionality of a SIP proxy server and registrar. Its main tasks include registering subscribers, looking up subscriber locations, and proxying requests. The Proxy and Registrar functions are described in RFC 3261.

The Proxy Registrar - Basic Domain template creates a domain appropriate for development environments, or cases where high availability is not an important consideration.

This domain template is specified in **oracle.communications.proxyregistrar.basic.template.jar**.

The domain configuration script for this domain type is **occas-proxyregistrar.py**, and the associated properties file is **occas-proxyregistrar.properties**.

- **Proxy Registrar - Replicated Domain**

The Proxy Registrar - Replicated Domain template enables you to create a clustered (multi-server) Converged Application Server domain with the Proxy Registrar component. The Proxy Registrar Replicated Domain template creates a domain appropriate for production environments where high availability and scalability are crucial.

This domain template is specified in **oracle.communications.proxyregistrar.combined.coherence.template.jar**.

The domain configuration script for this domain type is **occas-proxyregistrar-replicated.py**, and the associated properties file is **occas-proxyregistrar-replicated.properties**.

The domain template JAR files for these domain types are located in the directory *Oracle_home/wlserver/common/templates/wls*.

The domain configuration scripts and property files are located in the directory *Oracle_home/occas/common/templates/scripts/wlst*.

To add Diameter support, extend an existing domain with Diameter components. The domain extension template is *Oracle_home/wlserver/common/templates/wsl/diameterextension.jar*.

Creating a Converged Application Server Domain

To create a Converged Application Server domain:

1. If you are creating a replicated domain, perform the required preconfiguration steps.
2. Start the Configuration Wizard.
3. Answer the questions in each screen of the Configuration Wizard.

For more information about creating a WebLogic Server domain by using the Configuration Wizard, see "Creating a WebLogic Domain" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

Preconfiguration Steps for Replicated Domains

If you are creating a Converged Application Server replicated domain, perform the following configuration steps:

- Specify an explicit listener address for each machine in your cluster. This enables your machines to communicate with each other when the Coherence Cluster uses the default cluster mode.

If you do not want to specify an explicit listen address for each machine, change the Coherence cluster mode either to unicast addressing by using the Well Known Address (WKA) feature or to multicast addressing.

- Keep the directory structures the same on each machine in the cluster to simplify deployment.
- Install the Converged Application Server binaries on each machine in the cluster.

- Install any required patches manually on each machine in the cluster; they are not distributed automatically.
- Create the replicated domain on your Administration Server, and copy that domain to each of your cluster machines.

Note: If the Administration Server is already started before you copy its domain to the cluster servers, delete the existing domains on each cluster server:

```
rm -rf Domain_home/servers/
```

Domain_home is the directory in which the Converged Application Server domain resides, located in *Oracle_home/user_projects/domains*.

For more information, see the following:

- "Configuring and Managing Coherence Clusters" in *Oracle Fusion Middleware Administering Clusters for Oracle WebLogic Server*.
- "Introduction to Coherence Clusters" in *Oracle Fusion Middleware Developing Applications with Oracle Coherence*.
- "Relationship Between Coherence and WebLogic Server Clusters" in *Oracle Fusion Middleware Understanding Oracle WebLogic Server*.

Starting the Configuration Wizard

If you selected the **Automatically Launch the Configuration Wizard** check box during Converged Application Server installation, the Domain Configuration Wizard starts automatically.

To start the Configuration Wizard manually:

1. Log in to the target system.
2. Go to the *Oracle_home/wlserver/common/bin* directory.
3. At a command prompt, enter one of the following:
 - **Windows:**
`config.cmd`
 - **Linux or Solaris:**
`sh config.sh`

The Configuration Wizard starts and the Configuration Type screen appears. Go to ["Creating a Converged Application Server Domain in Graphical Mode"](#) and follow the steps for configuring the domain.

Creating a Converged Application Server Domain in Graphical Mode

The Configuration Wizard displays a sequence of screens in the order listed below. The screens that you see depend on the type of product configuration template that you use. To configure your domain, answer the questions in the following screens:

- [Configuration Type Screen](#)
- [Templates Screen](#)

- [Administrator Account Screen](#)
- [Domain Mode and JDK Screen](#)
- [JDBC Data Sources Screen](#)
- [JDBC Data Sources Test Screen](#)
- [Database Scripts Screen](#)
- [Advanced Configuration Screen](#)
- [Configuration Summary Screen](#)
- [Configuration Progress Screen](#)
- [Configuration Success Screen](#)

Configuration Type Screen

In the Configuration Type screen:

1. Select **Create a new domain**.
2. In the **Domain Location** field, specify your *Domain_home* directory. This directory must be empty.

Oracle recommends that you create your domain outside of the *Oracle_home* directory. This directory structure helps you avoid issues when you upgrade or reinstall your software.

3. Click **Next**.

The Templates screen appears.

For more information about:

- The *Domain_home* directory, see "Choosing a Domain Home" in *Oracle Fusion Middleware Planning an Installation of Oracle Fusion Middleware*.
- Other options on the Configuration Type screen, see "Configuration Type" in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

Templates Screen

In the Templates screen:

1. Select **Create Domain Using Product Templates**.

This option offers you a set of domain templates. See "[About Domains and Domain Configuration](#)" for a description of the different templates.

2. In the **Available Templates** area, select one of the following Converged Application Server configuration templates:
 - **Converged Application Server - Proxy Registrar Replicated Domain - 7.0.0.1.**
 - **Converged Application Server - Proxy Registrar Basic Domain - 7.0.0.1.**
 - **Converged Application Server - Replicated Domain - 7.0.0.1.**
 - **Converged Application Server - Basic Domain - 7.0.0.1.**
3. Click **Next**.

The Administrator Account screen appears.

For more information about the options on the Templates screen, see "Templates" in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

Administrator Account Screen

In the Administrator Account screen:

1. In the **Name** field, enter the user name for the domain's default WebLogic Administrator account.

This user name is used for booting and connecting to the Administration Server. For setup and testing, Oracle recommends that you use **weblogic**.

User names are case-sensitive. Do not use commas or any characters in the following comma-separated list:

\t, < >, #, |, &, ?, (), { }

2. In the **Password** field, enter the main administrator password.
The password is case-sensitive and must contain a minimum of eight characters, at least one of which is not alphabetic.
3. In the **Confirm Password** field, re-enter your password.
4. Write down the user name and password. You need this information later to start and access the Administration Server.
5. Click **Next**.
The Domain Mode and JDK screen appears.

Domain Mode and JDK Screen

In the Domain Mode and JDK screen:

1. In the **Domain Mode** area, select the appropriate startup mode for your installation:
 - **Development Mode**
 - **Production Mode**

Production mode gives your environment a higher degree of security, requiring a user name and password to start the Administration Server.

For more information about startup modes, see "Development vs. Production Mode Default Tuning Values" in *Oracle Fusion Middleware Performance and Tuning for Oracle WebLogic Server*.

2. In the **JDK** area, select the JDK to use for the domain.
By default, the installer selects the JDK that was used when you installed Converged Application Server. Alternatively, you can specify a different JDK.
3. Click **Next**.

For Proxy Registrar domains, the JDBC Data Sources screen appears.

For non-proxy registrar domains, the Advanced Configuration screen appears. (See "[Advanced Configuration Screen](#)").

JDBC Data Sources Screen

This screen appears only if you selected one of the Proxy Registrar domains.

Specify the connection information between Converged Application Server and the JDBC data sources (databases). A JDBC data source contains a pool of database connections that are created when the data source instance is created, when the data

source is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection.

In the JDBC Database Sources screen:

1. In the table, select the **Location Source**, **Security Service**, and **User Service** check boxes.
2. Edit the following fields to meet your system requirements:
 - **Vendor:** Select the database vendor.
 - **Driver:** Select the driver for your database type from the list.
 - **DBMS/Service:** Enter the name of the Converged Application Server database.
 - **Host Name:** Enter the name of the server that is hosting your Converged Application Server database. The default is **localhost**.
 - **Port:** Enter the port number for contacting the database. For Oracle, the default is **1521**. For MySQL, the default is **3306**.
 - **Username:** The Converged Application Server user name you created when you installed the database.
 - **Password:** The Converged Application Server password you created when you installed the database (it is not echoed on the screen).
 - **Oracle RAC configuration for data sources:** If you are using Real Application Cluster features, do one of the following:
 - To convert one or more data sources to GridLink Oracle RAC data sources, select **Convert to GridLink**.
 - To convert one or more data sources to Oracle RAC multi-data sources, select **Convert to RAC multi data source**.
 - To not convert the data sources, select **Don't Convert**.
3. Click **Next**.

The JDBC Data Sources Test screen appears.

JDBC Data Sources Test Screen

This screen appears only if you selected one of the Proxy Registrar domains.

The JDBC Data Sources Test screen automatically tests your data source configurations:

- A green check mark displayed in the **Status** column indicates that the configuration is valid.
- A red circle indicates a problem.

The bottom of the screen shows a short error message to help you troubleshoot the problem. Fix the error and click **Test Selected Connections** to test your data source configurations again.

Click **Next** when you are ready to proceed to the next screen.

Database Scripts Screen

This screen appears only if you selected one of the Proxy Registrar domains.

The Database Scripts screen allows you to run scripts for creating your JDBC data source tables.

In the Database Scripts screen:

1. In the **JDBC Data Sources** area, select **Location Service**.
2. In the **SQL Files** area, the create service table script is selected by default.
3. From the **DB Version** list, select the database version: **10** or **11**.
4. To configure the script to generate a log file, select the **Enable Logging** check box.
5. Click **Run Scripts**.

The script status is output to the **Results** area.

6. In the **JDBC Data Sources** area, select **Security Service**.
7. Repeat steps 2 through 5.
8. In the **JDBC Data Sources** area, select **User Service**.
9. Repeat steps 2 through 5.
10. Click **Next**.

The Advanced Configuration screen appears.

Advanced Configuration Screen

The Advanced Configuration screen allows you to perform advanced configuration on the listed items. If you approve of the current settings, keep all of the check boxes deselected and click **Next**.

In the Advanced Configuration Screen:

1. Select one or more of the following check boxes.
 - Administration Server
 - Node Manager
 - Managed Servers, Clusters and Coherence
 - Deployments and Services
2. Click **Next**.

The screens that appear next depend on the check boxes that you selected (see [Table 6-1](#)).

Table 6-1 Screens Displayed for Advanced Configuration

Check Box Selected	Screens Displayed
Administration Server	Administration Server Screen
Node Manager	Node Manager Screen
Managed Servers, Clusters and Coherence	Managed Servers Screen Clusters Screen Assign Servers to Clusters Screen Coherence Clusters Screen Machines Screen
Deployments and Services	Deployments Targeting Screen Services Targeting Screen

Administration Server Screen

In the Administration Server screen:

1. In the **Server Name** field, enter the name of your Administration Server.
2. In the **Listen Address** list, select an explicit listener address for your Administration Server. Using an explicit listener address enables your machines to communicate with each other when the Coherence Cluster uses the default cluster mode.
3. In the **Listen Port** field, enter a port number to use as a listening port for the Administration Server.
4. To enable the SSL listen port, select the **Enable SSL** check box and enter the port number to use for secure requests. The default port number is **7002**.
5. Click **Next**.

Node Manager Screen

In the Node Manager screen:

1. In the **Node Manager Type** area, select one of the following:
 - **Per Domain Default Location.** If you select this option, the Node Manager home is predefined within the domain as *DomainName/nodemanager* and you cannot edit the Node Manager home. The Node Manager for each domain can have a different configuration, as determined by the files in this directory.
 - **Per Domain Custom Location.** If you select this option, the Node Manager configuration files are created in a specific location for this domain. Specify the directory in the **Node Manager Home** field, or click **Browse** to navigate to the location. The specified directory must be empty. The **nodemanager.properties** and **nodemanager.domains** files are created in this directory.
 - **Manual Node Manager Setup.** If you select this option, Node Manager configuration for the domain is skipped. You must manually create and update the Node Manager configuration for the domain.
2. In the **Node Manager Credentials** area, enter the user name and password that is used to start the specified Node Manager.
3. Click **Next**.

Managed Servers Screen

Add or change connection information for your managed servers. You can add server instances now by clicking the **Add** or **Clone** buttons or add them later by using the Administration Console.

In the Managed Servers screen:

1. In the **Server Name** field, enter the name of the managed server.
2. In the **Listen Address** list, select an explicit listener address for your managed server. Using an explicit listener address enables your machines to communicate with each other when the Coherence Cluster uses the default cluster mode.

The values for the listener address can include alphanumeric characters, dots [.] and dashes [-] only.
3. In the **Listen Port** field, enter a port number to use as a listening port for the managed server.

4. To enable the SSL listen port, select the **Enable SSL** check box and enter the port number to use for secure requests.
Do not enable SSL unless you have a trusted key.
5. Click **Next**.

Clusters Screen

Clusters enable you to group managed servers such that they operate as a single unit for hosting applications and resources. You can add clusters by clicking the **Add** button.

In the Clusters screen:

1. In the **Cluster Name** field, enter the name of the cluster. The name of the cluster must be unique among all component names within the domain.
2. In the **Cluster Address** field, enter the addresses for identifying the managed servers in the clusters.
3. In the **Frontend Host** field, enter the IP address of the frontend host for the cluster.
4. In the **Frontend HTTP Port** field, enter the plain port (HTTP) of the frontend host for the cluster.
5. In the **Frontend HTTPS** field, enter the secure port (HTTPS) of the frontend host for the cluster.
6. Click **Next**.

Assign Servers to Clusters Screen

In the Assign Servers to Clusters screen:

1. In the **Servers** pane, select one or more managed servers.
2. In the **Clusters** pane, select the cluster to which you want to assign the managed servers.
3. Click the right arrow button.
4. Click **Next**.

Coherence Clusters Screen

In the Coherence Clusters screen:

1. In the **Cluster Name** field, enter the name of the Coherence cluster.
2. In the **Unicast Listen Port** field, enter the port number to use as the Coherence cluster unicast listen port.
3. Click **Next**.

Machines Screen

Add or change information about the machines in your Converged Application Server system. In the context of WebLogic Server, a machine is the logical representation of the system that hosts one or more WebLogic Server instances, for the purposes of starting and stopping remote servers using the Node Manager. In a domain, machine definitions identify a particular, physical piece of hardware and are used to associate a computer with the managed servers it hosts.

For Linux and Solaris

1. In the Machines screen, select the **Unix Machine** tab.

2. To add machines to your Converged Application Server system, click **Add**.
3. In the **Name** field, enter the name of the machine.
The name does not have to match the network name for the machine. However, the name must be unique among all component names within the domain.
4. To enable a server running on this machine to bind to a UNIX group ID (GID) after it finishes all privileged startup actions, select the **Enable Post Bind GID** check box and enter the GID in the **Post Bind GID** field.
5. To enable a server running on this machine to bind to a UNIX user ID (UID) after it finishes all privileged startup actions, select the **Enable Post Bind UID** check box and enter the UID in the **Post Bind UID** field.
6. In the **Node Manager Listen Address** list, select the address that Node Manager uses to listen for connection requests.
7. In the **Node Manager Listen Port** list, select the port that Node Manager uses to listen for connection requests.
8. Click **Next**.

For Windows

1. In the Machines screen, select the **Machine** tab.
2. To add machines to your Converged Application Server system, click **Add**.
3. In the **Name** field, enter the name of the machine.
The name does not have to match the network name for the machine. However, the name must be unique among all component names within the domain.
4. In the **Node Manager Listen Address** list, select the address that Node Manager uses to listen for connection requests.
5. In the **Node Manager Listen Port** list, select the port that Node Manager uses to listen for connection requests.
6. Click **Next**.

Deployments Targeting Screen

Target applications and libraries for deployment on your server or cluster.

In the Deployments Targeting screen:

1. In the **Deployments** pane, select one or more libraries and applications to deploy.
2. In the **Targets** pane, select the cluster or server on which to deploy the application or library.
3. Click the right arrow button.
4. Click **Next**.

Services Targeting Screen

Target services for deployment on servers or clusters.

In the Services Targeting screen:

1. In the **Services** pane, select one or more services to deploy.
2. In the **Targets** pane, select the cluster or server on which to deploy the service.
3. Click the right arrow button.

4. Click **Next**.

Configuration Summary Screen

The Configuration Summary screen lists the detailed configuration settings of your domain.

Click **Create** to accept the domain details and to start creating the domain.

Configuration Progress Screen

The Configuration Progress screen displays a progress bar that indicates the status of the configuration process.

After the domain is created successfully, click **Next**.

Configuration Success Screen

The Configuration Success screen displays the name of your domain, the path to the domain files, and the URL for accessing the Administration Console.

Click **Finish** to end your configuration session.

Starting the Servers in Converged Application Server

To access the tools for managing your domain, start the necessary servers:

- [Starting the Administration Server](#)
- [Starting the Node Manager](#)
- [Starting the Managed Servers](#)

Starting the Administration Server

To start the Administration Server:

1. Go to the *Domain_home/bin* directory.
2. Enter the following command:

```
./startWebLogic.sh
```
3. If you selected a production startup mode, you are prompted for the login credentials of the Administrator user.

You can create a boot identity file to bypass the need to provide a user name and password when starting the Administration Server in production mode. For more information, see "Creating a Boot Identity File for an Administration Server" in *Oracle Fusion Middleware Administering Server Startup and Shutdown for Oracle WebLogic Server*.

For more information about starting the Administration Server, see "Starting and Stopping Administration Server" in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

Starting the Node Manager

To start Node Manager:

1. Go to the *Domain_home/bin* directory.
2. Enter the following command:

```
./startNodeManager.sh
```

Oracle recommends that you install Node Manager to run as a startup service, which allows Node Manager to start up automatically each time the system restarts. For more information about installing a per domain Node Manager service, see "Running Node Manager as a Startup Service" in *Oracle Fusion Middleware Administering Node Manager for Oracle WebLogic Server*.

Starting the Managed Servers

Before starting your managed servers for the first time, copy the *Domain_home/security/SerializedSystemIni.dat* file from the Administration Server to the same directory on each managed server.

To start a managed server:

1. Log in to the target system.
2. Go to the *Domain_home/bin* directory.
3. Enter the following command:

```
./startManagedWebLogic.sh managed_server_name admin_server_url
```

where:

- *managed_server_name* is the name of the managed server you want to start.
- *admin_server_url* is the full URL of the Administration Server.

The following shows sample commands for starting **occas_server_1** and **occas_server_2** on Solaris/Linux:

```
./startManagedWebLogic.sh occas_server_1 t3://host.example.com:7001 &  
./startManagedWebLogic.sh occas_server_2 t3://host.example.com:7001 &
```

For more information about starting managed servers, see "Starting and Stopping Managed Servers" in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

Next Steps

After you configure the Converged Application Server domain, complete the Converged Application Server post-installation tasks. See "[Converged Application Server Post-Installation Tasks](#)" for instructions.

Converged Application Server Post-Installation Tasks

This chapter provides instructions for Oracle Communications Converged Application Server post-installation tasks.

Before continuing, complete the tasks in the following chapters:

- [Installing Converged Application Server](#)
- [Creating and Configuring Converged Application Server Domains](#)

Overview of Converged Application Server Post-Installation Tasks

After installing Converged Application Server, complete the following post-installation tasks:

- [Enabling DNS Server Lookup](#)
- [Configuring Converged Application Server Authentication](#)
- [Configuring the Coherence Security Framework](#)

Before continuing, start the servers in your Converged Application Server system. See ["Starting the Servers in Converged Application Server"](#) for more information.

Enabling DNS Server Lookup

You must enable DNS server lookup on your Converged Application Server system to ensure that the **maddr** parameter in SIP headers is processed properly.

To enable DNS server lookup:

1. Start your Converged Application Server servers if they are not already running. See ["Starting the Servers in Converged Application Server"](#) for more information.
2. Navigate to the WebLogic Server Administration Console and log in with your administrator user name and password:

```
http://hostname:port/console
```

where *hostname* is the name of the machine that hosts your Administration Server, and *port* is the Administration Console access port number. The default port number is **7001**.

3. In the Domain Structure pane, select **Sip Server**.

The SIP Server page appears.

4. Click the **Configuration** tab, and then click the **General** subtab.
5. Scroll down and select the **Enable DNS Server Lookup** option.
6. Click **Save**.
7. Log out of the Administration Console.

Configuring Converged Application Server Authentication

If your Converged Application Server system uses a Proxy Registrar domain, set up authentication. For more information, see "Setting Authentication for the Proxy Registrar" in *Converged Application Server Administrator's Guide*.

Configuring SSL Host Name Verification

If your Converged Application Server system supports Secure Socket Layer (SSL), set the host name verification to **None** by using the WebLogic Server Administration Console.

To configure SSL host name verification:

1. Start your Administration Server.
2. Log in to the WebLogic Server Administration Console with your administrator user name and password:

`http://hostname:port/console`

where *hostname* is the name of the machine that hosts your Administration Server, and *port* is the Administration Console access port number. The default port number is **7001**.

3. In the Domain Structure pane, expand **Environment** and then select **Servers**.
The Summary of Servers page appears.
4. Select the **Configuration** tab.
5. For each server in the **Servers** table, do the following:
 - a. Click the name of the server, for example, **AdminServer**.
The Settings for *ServerName* page appears.
 - b. Click the **Configuration** tab, and then click the **SSL** subtab.
 - c. Expand the **Advanced** settings at the bottom of the page.
 - d. From the **Hostname Verification** list, select **None**.
 - e. Click **Save**.

You do not need to restart your Administration Server.

Configuring the Coherence Security Framework

If you created a clustered domain, enable the Coherence Security Framework. For instructions, see "Enabling the Oracle Coherence Security Framework" in *Securing Oracle Coherence*.

Upgrading Converged Application Server

This chapter provides instructions for upgrading from Oracle Communications Converged Application Server 5.1 to Converged Application Server 7.0.0.1.0.

About Upgrading Converged Application Server

Because of architectural changes in the underlying WebLogic Server platform, there is no automated upgrade path. Instead, you must manually upgrade your Converged Application Server 5.1 system to version 7.0.0.1.0.

Changes in Converged Application Server 7.0.0.1.0

This section lists the major changes affecting upgrade deployments in the latest version of Converged Application Server.

SIP Session Tracking for Licenses

You can now track licenses in Converged Application Server. To do so, you input the time when the log entries are to start and the interval for the log output, as startup command options.

Converged Application Server monitors the licenses taking into account the concurrent sessions in a cluster environment or a standalone deployment. It logs the high water mark for the sessions in each interval and the high water mark for the sessions since the start of the logging process. By default, Converged Application Server stores all log entries for session high water mark of a cluster or standalone deployment in the *server_name.log* file for each engine, where *server_name* is the name of the server.

RFC Support Configurable in the Administration Console

Converged Application Server enables you to configure the following features in the Administration Console:

- Enable applications to set the breadth on forked requests (RFC 5393).
When you enable this feature, the container checks the Max-Breadth header which limits the number of parallel forks that can be made on a SIP request by the downstream proxies. The default value is 60.
- Support the SIPOutbound Specification (RFC 5626).
You can enable a flag to facilitate user agents behind a Network Address Translation (NAT) device (or firewall) to communicate with SIP nodes in the other side of NAT.

- Enable Sending 100 For Non-Invite Request Support (RFC4320).

When you enable this feature, the container responds with a 100 TRYING to a request if an application or proxy does not respond to the non-invite request before the TimerE reaches T2. It does so, if the container has not otherwise responded after the amount of time it takes a client transaction's TimerE to be reset to T2.

Debugging Issues in the Runtime Environment

When you encounter an issue in the runtime environment, you can analyze the issue by selecting one or more of the relevant debug attributes in the Converged Application Server Administration Console. To isolate the debug process to one server, you can enable the debug attributes in that server only. Or you can attempt to view the behavior throughout your installation, by enabling the selected attributes in all servers.

By default, Converged Application Server prints the debug log information to standard output stream, **stdout**. When the issue is resolved, be sure to disable the debug flag settings in the Administration Console.

New Replicated Domain Topology

Converged Application Server replicated domains now use Oracle Coherence for data persistence and caching rather than the data tier of earlier versions. Thus, replica servers are no longer required in Converged Application Server 7.0.0.1.0. You can either remove replicated deployments from the configuration or repurpose them as additional engine servers.

Applications No Longer Deployed By Default

Converged Application Server 7.0.0.1.0 provides only a SIP Container Server. It no longer deploys applications, such as SFT/jsr311-api, by default.

High Availability

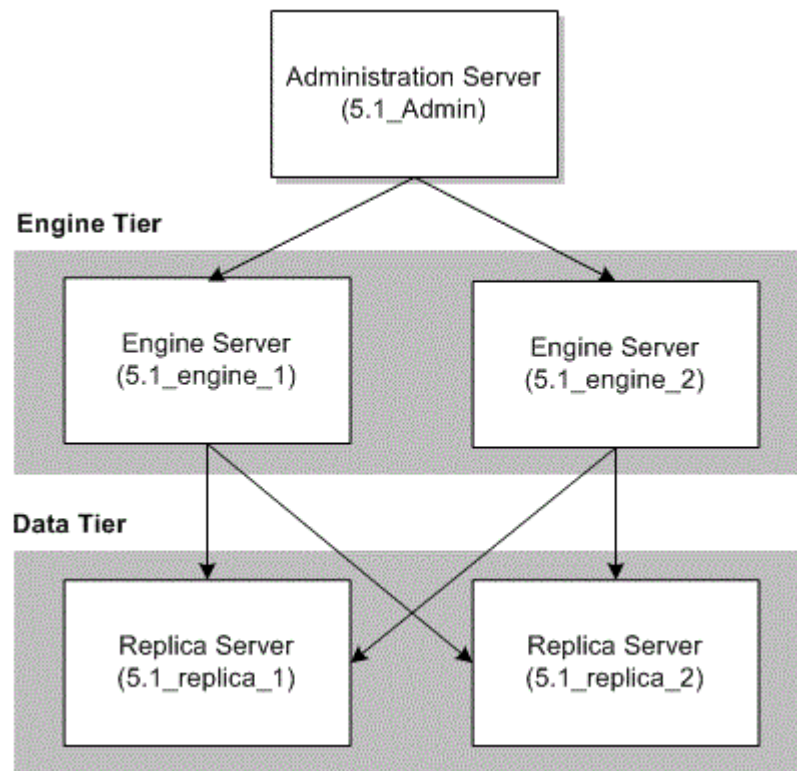
For information about high availability environments, see "Failure Prevention and Automatic Recovery Features" in the *Converged Application Server Administrator's Guide*.

About the Upgrade Example

The instructions in this chapter assume that you have a replicated Converged Application Server 5.1 system with five machines:

- One Administration Server (**5.1_Admin**)
- Two engine servers (**5.1_engine_1** and **5.1_engine_2**)
- Two replica servers (**5.1_replica_1** and **5.1_replica_2**)

[Figure 8–1](#) shows the Converged Application Server 5.1 replicated topology used for the instructions in this chapter.

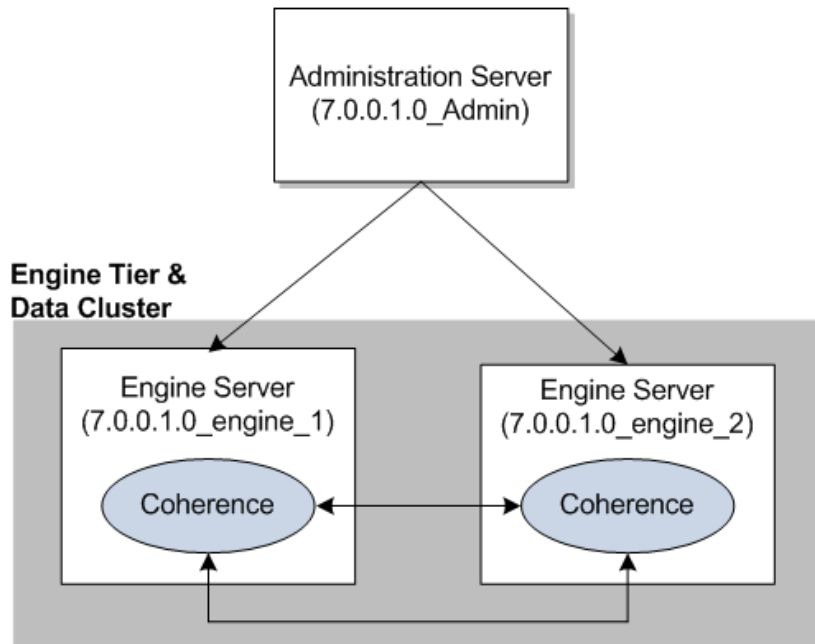
Figure 8–1 Converged Application Server 5.1 Replicated Topology

The instructions assume that your Converged Application Server 7.0.0.1.0 system contains three machines:

- One Administration Server (**7.0.0.1.0_Admin**)
- Two engine servers (**7.0.0.1.0_engine_1** and **7.0.0.1.0_engine_2**)

Note: Converged Application Server 7.0.0.1.0 does not use replicas. You can either repurpose your **5.1_replica_1** and **5.1_replica_2** machines as additional engine servers or decommission them completely.

Figure 8–2 shows the Converged Application Server 7.0.0.1.0 replicated topology used for the instructions in this chapter.

Figure 8–2 Converged Application Server 7.0.0.1.0 Replicated Topology

Upgrading to Converged Application Server 7.0.0.1.0

To manually upgrade your Converged Application Server system to version 7.0.0.1.0:

1. Back up all of your Converged Application Server 5.1 domains.
2. Install Converged Application Server 7.0.0.1.0 on your **7.0.0.1.0_Admin**, **7.0.0.1.0_engine_1**, and **7.0.0.1.0_engine_2** machines. For information, see "[Installing Converged Application Server](#)".
3. Create your Converged Application Server 7.0.0.1.0 domains. You can do this in several ways. For example:
 - By packing your Converged Application Server 5.1 domain and unpacking it to your Converged Application Server 7.0.0.1.0 system. See "[Migrating Your Domains with the Pack and Unpack Commands](#)".
 - By reusing your existing Converged Application Server 5.1 domains as your Converged Application Server 7.0.0.1.0 domains.
4. Reconfigure each Converged Application Server 7.0.0.1.0 domain. See "[Reconfiguring Your Domain](#)".
5. Verify the domain administration settings on your Converged Application Server 7.0.0.1.0 system. See "[Verifying Your 7.0.0.1.0 Domain Administration Settings](#)".
6. Verify that the applications deployed on your Converged Application Server 7.0.0.1.0 system work as expected.

Migrating Your Domains with the Pack and Unpack Commands

To migrate your Converged Application Server 5.1 domains to your Converged Application Server 7.0.0.1.0 system:

1. Pack your Converged Application Server 5.1 domains.

Perform the following steps on your **5.1_Admin**, **5.1_engine_1**, and **5.1_engine_2** machines:

- a. Log on to your target machine.
- b. Pack your Converged Application Server 5.1 domain by entering the following command:

```
sh pack.sh -domain=5.1_Domain_home -template=5.1_template -template_name="template_description"
```

where:

- *5.1_Domain_home* is the path to the directory that holds your Converged Application Server 5.1 domain files. For example, *Oracle_home/user_projects/domains/DomainName*.
- *5.1_template* is the path and file name of the template that you want to create. The template file name must include the **.jar** extension. For example: *Oracle_home/projects/domains/mydomain/5.1_template.jar*.
- *template_description* is an optional description of the template.

For more information about the **pack** command, see *Oracle Fusion Middleware Creating Templates and Domains Using the Pack and Unpack Commands*.

2. Ensure that your Converged Application Server 7.0.0.1.0 Administration Server is not running.
3. Unpack your Converged Application Server 5.1 domains to your Converged Application Server 7.0.0.1.0 system.

Perform the following steps on your **7.0.0.1.0_Admin**, **7.0.0.1.0_engine_1**, and **7.0.0.1.0_engine_2** machines:

- a. Log on to your target machine.
- b. Unpack your 5.1 domain by entering the following command:

```
sh unpack.sh -domain=7.0.0.1.0_Domain_home -template=5.1_template
```

where:

- *7.0.0.1.0_Domain_home* is the directory in which to create the domain. For example: *Oracle_home/user_projects/domains/DomainName*.
- *5.1_template* is the path and file name of the 5.1 template that you created and want to unpack. For example: *Oracle_home/projects/domains/mydomain/5.1_template.jar*.

For more information about the **unpack** command, see *Oracle Fusion Middleware Creating Templates and Domains Using the Pack and Unpack Commands*.

Reconfiguring Your Domain

To reconfigure your domains, perform the following steps on your **7.0.0.1.0_Admin**, **7.0.0.1.0_engine_1**, and **7.0.0.1.0_engine_2** machines:

1. Log on to your target system.
2. Go to the *Oracle_home/wlserver/common/bin* directory, and enter the following command:

```
sh ./occas_reconfig.sh WebLogic_10.3_home 7.0.0.1.0_Domain_home
```

where:

- *WebLogic_10.3_home* is the directory in which Converged Application Server 5.1 installed the WebLogic Server 10.3 software. By default, this is *Oracle_5.1_home/wlsserver*.
- *7.0.0.1.0_Domain_home* is the directory in which your 7.0.0.1.0 domain resides. For example: *Oracle_home/user_projects/domains/DomainName*.

The Fusion Middleware Reconfiguration Wizard starts and the Select Domain screen appears.

3. In the **Existing Domain Location** field, enter or browse to *7.0.0.1.0_Domain_home* and then click **Next**.

The Domain Mode and JDK screen appears.

4. In the **Domain Mode** area, select the appropriate startup mode for your installation:

- **Development Mode**
- **Production Mode**

Production mode gives your environment a higher degree of security, requiring a user name and password to deploy applications and to start the Administration Server.

For more information about startup modes, see "Development vs. Production Mode Default Tuning Values" in *Oracle Fusion Middleware Performance and Tuning for Oracle WebLogic Server*.

5. In the **JDK** area, select the JDK to use for the domain.

By default, the installer selects the JDK that was used when you installed Converged Application Server 7.0.0.1.0. Alternatively, you can specify a different JDK.

6. Click **Next**.

The Node Manager screen appears.

7. The **Node Manager Type** and **Node Manager Configuration** areas are pre-populated with data from your Converged Application Server 5.1 domain. Modify the configuration, if necessary.

8. In the **Node Manager Credentials** area, enter the user name and password that is used to start the specified Node Manager.

9. Click **Next**.

The Advanced Configuration screen appears.

10. Select the **Managed Servers, Clusters and Coherence** check box and the **Deployments and Services** check box, and then click **Next**.

The Managed Servers screen appears.

11. Delete the two replica servers (**5.1_replica_1** and **5.1_replica_2**), and then click **Next**.

The Clusters screen appears.

12. Delete the data tier cluster, and then click **Next**.

The Assign Servers to Clusters screen appears.

13. Assign all of your servers to the engine tier cluster, and then click **Next**.
The Deployments Targeting screen appears.
14. Assign all of your applications and libraries to the engine tier cluster, and then click **Next**.
The Configuration Summary screen appears.
15. Check that the configuration settings are correct, and then click **Reconfig**.
16. Click **Finish**.

Verifying Your 7.0.0.1.0 Domain Administration Settings

1. Start your Converged Application Server 7.0.0.1.0 Administration Server.
2. Log in to your Converged Application Server 7.0.0.1.0 Administration Console:
`http://address:port/console`
where *address* is the Administration Server's listen address and *port* is the listen port.
3. Verify that your 7.0.0.1.0 domain configuration is correct. In particular, pay attention to the following settings:
 - SSL is enabled/disabled consistently on every node machine
 - All security authentication providers are listed and configured correctly
 - Coherence security has been configured
 - Work managers are configured correctly
 - The application router is configured correctly
 - The call state storage and data tier has been configured

For more information about using the Administration Console and configuring settings, see *Converged Application Server Administrator's Guide*.

Patching Converged Application Server

This chapter describes how to apply patches to your Oracle Communications Converged Application Server system.

About Converged Application Server Patch Releases

You can develop and maintain a strategy to handle the installation of patch releases so that your customers experience a seamless transition.

Types of Patch Releases

Oracle Communications distributes the following types of patch releases for Converged Application Server to resolve issues, to resolve any perceived vulnerability in the software, or to improve its overall performance:

- **Patch Set.** A Patch Set is the most comprehensive patch release. It contains the accumulated resolutions and updates in Converged Application Server from the time of the last general release up to the current Patch Set release. Oracle recommends that you stay up-to-date by installing Patch Sets as soon as they become available.

Converged Application Server 7.0 Patch Sets use the release numbering scheme 7.0.0.x.0, where *x* is the Patch Set number. For example, the first Patch Set for Converged Application Server 7.0 would be Converged Application Server 7.0.0.1.0.

- **Debug patch.** A debug patch is used to troubleshoot an ongoing issue in your Converged Application Server system. A debug patch represents a concerted attempt by you and Oracle Technical Support to fix an issue in your Converged Application Server system. Oracle Technical Support uses debug patches as a tool to extract better data from your Converged Application Server system as a way of resolving the issue. Therefore, the debug patch may not resolve the issue, and more patches may be required.

Because debug patches address a single issue, Converged Application Server numbers them as v1, v2, v3, and so on. Each subsequent version replaces the prior version of the debug patch.

- **Temporary fix.** Temporary fixes are tailored to solve an issue in your Converged Application Server system. They are urgent, time-sensitive, or critical corrections that solve an issue you are experiencing. You may have to install more patches to make the temporary fix work.

Because each temporary fix addresses a single issue, Converged Application Server numbers the fixes as v1, v2, v3, and so on. Each subsequent version replaces the prior version of the temporary fix.

About Patch Content

By default, every patch contains the following items:

- A README file
The README file for a patch release describes how to install the patch. Additionally, in case you encounter problems while applying the patch, the README describes how you can revert to your current setup by rolling back the patch.
- Software updates to Converged Application Server
These updates consist of fixes or debug changes.

At times, the patch includes a subdirectory named **custom**, which contains the following items:

- Additional documentation resources
For example, the patch may contain the description of a specific fix detailing what configuration settings are required to utilize the fix.
- Manual patching steps
The patch may target a resource you have modified, such as startup scripts.

About Patch Management In Clustered Environments

If your Converged Application Server system operates in a clustered environment, review the README file that accompanies the patch. Ensure that you apply the patch to all of the servers. Then, perform a rolling restart unless otherwise stated in the README file.

About OPatch

OPatch is an Oracle-supplied Java-based utility that supports the following tasks:

- Applying a patch
- Rolling back a patch to a previous version
- Listing the installed patches
- Detecting a conflict when applying a patch after previous patches have been applied. It also suggests the best options to resolve a conflict

OPatch requires installation of the Oracle Universal Installer software. It is platform-independent and runs on all supported operating systems.

For more information, see "About OPatch" in *Oracle Fusion Middleware Patching with OPatch*.

Preinstallation Tasks for OPatch

Complete the following tasks before you use OPatch for the first time on your system:

1. [Verifying the Oracle Universal Installer Inventory](#)

2. [Creating a Backup of Your Current Converged Application Server Installation](#)
3. [Checking Your Environment Variables](#)

For more information about the prerequisite checks for OPatch, see *Oracle Universal Installer and OPatch User's Guide*.

For the latest information about the OPatch utility, the JRE versions, or the Java commands for Windows, Solaris, and Linux, or to check for updates and get the latest versions, go to My Oracle Support at:

<https://support.oracle.com/>

Verifying the Oracle Universal Installer Inventory

To apply patches successfully, OPatch needs access to a valid version of Oracle Universal Installer, a valid Oracle Inventory directory (oraInventory), and a valid version of oPatch. Validate the versions on your system by using the following command:

```
opatch lsinventory
```

This command displays your system's OPatch and Oracle Universal Installer versions and directories, and lists the patches currently installed in *Oracle_home*. This is the directory that serves as the repository for common files that are used by Oracle Communications products installed on the same machine, such as Converged Application Server and WebLogic Server. For example, the following shows a sample of the information displayed at the beginning of the output:

```
Oracle Interim Patch Installer version 13.2.0.0.0
Copyright (c) 2014, Oracle Corporation. All rights reserved.

Oracle Home           : Oracle_home
Central Inventory     : /export/oraInventory
   from                : Oracle_home/oraInst.loc
OPatch version        : 13.2.0.0.0
OUI Version           : 13.2.0.0.0
Log file location     : Oracle_home/cfgtoollogs/opatch/opatch2015-12-16_11-16-55AM_
1.log
```

For more information, see "[OPatch Utility Reference](#)".

Caution: If the `lsinventory` command errors out, do not proceed further with the patch attempt.

Contact Oracle Technical Support to validate and verify the inventory setup.

Creating a Backup of Your Current Converged Application Server Installation

Before you start any patch operation, back up the contents of the *Oracle_home* directory. You can back up the contents of *Oracle_home* by using your preferred method, such as ZIP, TAR, `cp -r`, or `cpio`.

Checking Your Environment Variables

The patch installation process uses the OPatch and ZIP software. Ensure that your system can find and use the software by setting the following environment variables:

- Set your PATH environment variable to include the path to your *Oracle_home/OPatch* directory and to your ZIP software.
- Set your ORACLE_HOME environment variable to your *Oracle_home* directory.

To confirm that your system can find the OPatch and ZIP software, enter the following at a command prompt:

```
which opatch
which unzip
```

Note: If your system cannot find the path to the software, double-check that your environment variables are set correctly.

Installing Converged Application Server Patches

To install a Converged Application Server patch:

1. Determine whether you need to stop all servers in your Converged Application Server system by checking the patch README file.

The README file explicitly states whether the patch requires you to stop your servers before installing the patch.

2. Log in to the target system.
3. Download the patch from the My Oracle Support website to a temporary directory:

<https://support.oracle.com/>

The patch archive (*PatchName.zip*) is downloaded to your temporary directory.

4. Create a directory for storing the unpacked patch contents. This document and the patch README file refer to this directory as the *Patch_top* directory.

Note: Ensure that the *PatchName.zip* file is not located inside the *Patch_top* directory.

5. Go to your temporary directory and unpack the patch archive (*PatchName.zip*) into the *Patch_top* directory.

The *PatchName* subdirectory is created.

6. Go to the *Patch_top/PatchName* directory.
7. Run the OPatch utility by entering the following at a command prompt:

```
opatch apply
```

OPatch validates the patch and makes sure that there are no conflicts with the software already installed in *Oracle_home* before applying the patch to your Converged Application Server system.

For more information, see "[OPatch Utility Reference](#)" and "[Dealing with Conflicts When You Run the Apply Command](#)".

8. Verify that the patch installed successfully by running the following command:

```
opatch lsinventory
```

For more information, see "[OPatch Utility Reference](#)".

9. Determine whether you need to restart all servers in your Converged Application Server system or perform other tasks by checking the patch README file.

The patch README file explicitly states whether the patch requires you to restart your servers or to perform other tasks after installing the patch.

If you encounter any issues in any of these steps, see "[Troubleshooting](#)".

Troubleshooting

OPatch is reliable and protects *Oracle_home* and the inventory. It can bring back the contents of the *Oracle_home* directory to a stable state from patch application failures. It can also easily detect patch conflicts.

OPatch logs information to a **.log** file. Here is an example entry:

```
Log file location : /home/oracle_
TEST/product/11.1.0/db1/cfgtoollogs/opatch/opatch-yyyy_month_dd_HH-MM-SS-IST_
Wed.log
```

If you encountered errors while installing a patch and you need assistance from Oracle Technical Support, be sure to provide the associated log file together with the patch command you used to install the patch.

Dealing with Conflicts When You Run the Apply Command

When you run the OPatch **apply** command, you may encounter the following conflicts:

- Conflict with a patch already applied to the contents of the *Oracle_home* directory.
In this case, stop the patch installation and contact Oracle Technical Support.
- Conflicts with a subset patch already applied to the contents of the *Oracle_home* directory.

In this case, continue the installation, because the new patch contains all of the fixes from the existing patch. The subset patch is automatically rolled back before the installation of the new patch.

Uninstalling the Patch

If you experience any problems after installing a patch, remove the patch.

To uninstall the patch:

1. Stop all servers in your Converged Application Server system.
2. Roll back the patch with the following command:

```
opatch rollback -id PatchNumber
```

where *PatchNumber* is the patch number. For more information, see "[OPatch Utility Reference](#)".

If you need further assistance, contact Oracle Technical Support with the required information.

OPatch Utility Reference

By default, the OPatch utility is located in the *Oracle_home/OPatch* directory. The following shows the syntax for running the OPatch utility:

```
opatch [-help] [-report] [command]
```

where:

- **-help** lists the commands and options supported by the utility.

Use the **-help** parameter together with a command to view detailed information for the OPatch command. For example:

```
opatch apply -help
```

- **-report** prints the actions without executing the command.
- *command* is one of these OPatch commands:

- **apply** [*PatchDirectory*]

This command applies the patch to the software located in *Oracle_home*. If you do not run the utility from the directory in which the patch content resides (*PatchDirectory*), include the complete path to the directory.

For the command to work properly, the ORACLE_HOME environment variable must be set to *Oracle_home*. See ["Dealing with Conflicts When You Run the Apply Command"](#).

- **lsinventory**

This command displays your system's OPatch and Oracle Universal Installer versions and directories, and lists the patches currently installed in *Oracle_home*. The following shows sample output for the **lsinventory** command:

```
-----
Oracle Interim Patch Installer version 13.2.0.0.0
Copyright (c) 2014, Oracle Corporation. All rights reserved.

Oracle Home           : Oracle_home
Central Inventory     : /export/oraInventory
   from                : Oracle_home/oraInst.loc
OPatch version        : 13.2.0.0.0
OUI Version           : 13.2.0.0.0
Log file location     : Oracle_home/cfgtoollogs/opatch/opatch2015-12-16_
11-16-55AM_1.log

OPatch detects the Oracle Home as "Oracle_home"

-----
Interim patches (1):

Patch 19836145        : applied on Tue Dec 16 10:51:13 CST 2015
Unique Patch ID      : 1418034883552
Patch description     : "[Patch Set v7.0.0.1.0] - Patch set zero"
   Created on 8 Dec 2014, 02:34:45 hrs PST8PDT
   Bugs fixed:
     123412
-----
```

- **rollback -id** *PatchNumber*

This command removes the specified patch from the *Oracle_home* directory, where *PatchNumber* is the patch number.

You can find the patch number by using the **lsinventory** command. For example, you would use the command **rollback -id 19836145** to roll back the patch shown in the following sample **lsinventory** output:

```
-----  
Interim patches (1) :  
  
Patch 19836145      : applied on Tue Dec 16 10:51:13 CST 2014  
Unique Patch ID: 1418034883552  
Patch description: "[Patch Set v7.0.0.1.0] - Patch set zero"  
Created on 8 Dec 2014, 02:34:45 hrs PST8PDT  
Bugs fixed:  
123412  
-----
```

For a full list of the OPatch commands and their descriptions, see "Common OPatch Commands When Patching an Oracle Fusion Middleware Oracle home" in *Oracle Fusion Middleware Patching with OPatch*.

Troubleshooting a Converged Application Server Installation

This chapter describes how to troubleshoot Oracle Communications Converged Application Server installations.

About Troubleshooting Converged Application Server Installations

The Converged Application Server installer and the Domain Configuration Wizard write information to log files. You can check those log files for information about errors and actions performed during the installation process.

About Converged Application Server Installation Log Files

The Converged Application Server installation logs can be found at *Central_inventory_location/oraInventory/logs*, where *Central_inventory_location* is the directory path to the **oraInventory** directory. If you do not know the location of your Oracle Inventory directory, you can find it in the *Oracle_home/oraInst.loc* file. *Oracle_home* is the directory that serves as the repository for common files that are used by Oracle Communications products installed on the same machine, such as Converged Application Server and WebLogic Server.

The following install log files are written to the log directory:

- **installdate-time-stamp.log**
The main log file.
- **installdate-time-stamp.out**
This log file contains the output and error streams during the installation.
- **installProfiledate-time-stamp.log**
This log file contains the overall statistics such as time taken to complete the installation, as well as configuration, memory, and CPU details.
- **oraInstalldate-time-stamp.out**
This log file contains the output stream of the copy session.
- **oraInstalldate-time-stamp.err**
This log file contains the error stream of the copy session.

Changing the Installer Logging Level

To change the logging level, add the **-logLevel** parameter when you start the installer at a command prompt. For example:

```
java -jar occas_generic.jar -logLevel info
```

The following shows valid values for **-logLevel** from most detailed to least detailed:

- **severe**
- **warning**
- **info**
- **config**

You can also specify logging details from detailed to least detailed in the following manner:

- **fine**
- **finer**
- **finest**

About Domain Configuration Log Files

If you encounter errors when configuring a Converged Application Server domain, you can start the Fusion Middleware Configuration Wizard with the appropriate logging options.

To enable domain configuration logging, go to *Oracle_home/oracle_common/common/bin* and enter the following command:

```
./config.sh -log=log_filename -log_priority=log_level
```

Table 10–1 describes the **-log** and **-log_priority** options.

Table 10–1 Configuration Wizard Log File Options

Parameter	Description
-log	<p>Specify the location of your log file.</p> <p>If you specify a log file name, it is created in the same directory as the config.sh script unless you add a path component. Log files are otherwise created in <i>Oracle_home/logs</i>.</p> <p>Other values that can be specified with -log are:</p> <ul style="list-style-type: none"> ■ stdout Writes the error message to the standard output stream. ■ stderr Writes the error message to the standard error stream. ■ disable Disables default logging so that no log files are generated in <i>Oracle_home/logs</i>.

Table 10–1 (Cont.) Configuration Wizard Log File Options

Parameter	Description
-Log_priority	<p data-bbox="773 258 1382 289">Specify the level of detail you want included in your logs.</p> <p data-bbox="773 300 1268 331">The following list shows the acceptable values:</p> <ul data-bbox="773 342 948 646" style="list-style-type: none"><li data-bbox="773 342 867 373">▪ OFF<li data-bbox="773 384 915 415">▪ SEVERE<li data-bbox="773 426 948 457">▪ WARNING<li data-bbox="773 468 883 499">▪ INFO<li data-bbox="773 510 915 541">▪ CONFIG<li data-bbox="773 552 883 583">▪ FINE<li data-bbox="773 594 899 625">▪ FINER<li data-bbox="773 636 915 667">▪ FINEST

Uninstalling Converged Application Server

This chapter describes how to uninstall Oracle Communications Converged Application Server and its components.

Uninstalling Converged Application Server Components in GUI Mode

To uninstall Converged Application Server components in GUI mode:

1. Go to the *Oracle_home/oui/bin* directory, and enter the following in a command window:

```
./deinstall.sh
```

2. If you have multiple Oracle products installed in your Oracle Inventory directory (oraInventory), the Distribution to Uninstall screen appears.

Perform the following to specify the Oracle product to uninstall:

- a. From the **Select Distribution to Uninstall** list, select the software you want to uninstall. For example, select Oracle Communications Converged Application Server~7.0.0.1.0.
 - b. Click **Uninstall**.
3. From the Welcome screen, click **Next**.
The Deinstallation Summary screen appears.
 4. Verify that the list of feature sets to uninstall is correct.
To save the information to a response file so you can uninstall the components later, click **Save Response File** and specify the name and location of the response file.
 5. Click **Deinstall**.
The Deinstallation Progress screen appears, and a progress bar indicates the status of the uninstallation process.
 6. When the uninstallation process is complete, click **Next**.
The Deinstallation Complete screen appears.
 7. Click **Finish**.
The uninstaller exits.

Uninstalling Converged Application Server Components in Silent Mode

This section describes how to uninstall Converged Application Server components in silent mode on all platforms.

Use silent mode to uninstall duplicate installations on multiple machines. In silent mode, you create and use a **response_uninstall.rsp** configuration file, and then specify it as a parameter at the command line. The program does not display any options during the uninstallation process.

To uninstall Converged Application Server components in silent mode:

1. Create a text file on your target system.
2. Add the following contents to your file:

```
[ENGINE]

#DO NOT CHANGE THIS.
Response File Version=1.0.0.0.0

[GENERIC]

#This will be blank when there is nothing to be de-installed in distribution
level
SELECTED_DISTRIBUTION=Oracle Communications Converged Application
Server~7.0.0.1.0

#The oracle home location. This can be an existing Oracle Home or a new Oracle
Home
ORACLE_HOME=Oracle_home
```

where **SELECTED_DISTRIBUTION** is set to the component to uninstall. For Converged Application Server, set **SELECTED_DISTRIBUTION** to **Oracle Communications Converged Application Server~7.0.0.1.0**.

3. Save the file with the name **response_uninstall.rsp**.
4. Go to the *Oracle_home/oui/bin* directory and enter the following in a command window:

```
./deinstall.sh -silent -responseFile ResponseFile
```

where *ResponseFile* is the full path and name of the **response_uninstall.rsp** file. For example, *Oracle_home/oui/bin/response_uninstall.rsp*.

The uninstallation process completes with no prompts.

If the uninstallation procedure completes successfully, you see a response similar to the following:

```
Launcher log file is /tmp/OraInstall2014-11-06_01-46-10PM/launcher2014-11-06_
01-46-10PM.log.
Starting Oracle Universal Installer

Checking if CPU speed is above 300 MHz.   Actual 2893.030 MHz   Passed
Checking swap space: must be greater than 512 MB.   Actual 15826924 MB   Passed
Checking if this platform requires a 64-bit JVM.   Actual 64   Passed (64-bit not
required)
Checking temp space: must be greater than 300 MB.   Actual 136360 MB   Passed

Preparing to launch the Oracle Universal Installer from /tmp/OraInstall2014-11-06_
01-46-10PM
```

```
Java HotSpot(TM) 64-Bit Server VM warning: ignoring option MaxPermSize=512m;
support was removed in 8.0
Log: /tmp/OraInstall2014-11-06_01-46-10PM/deinstall2014-11-06_01-46-10PM.log
Setting ORACLE_HOME to /home/oracle/
Copyright (c) 1996, 2015, Oracle and/or its affiliates. All rights reserved.
Starting silent deinstallation...
-----20%-----40%-----60%-----80%-----100%
```

```
The uninstall of Oracle Communications Converged Application Server 7.0.0.1.0
completed successfully.
Logs successfully copied to /export/oraInventory/logs.
```

