

**Oracle® Communications Configuration
Management**

Installation and System Administration Guide

Release 7.3

E61119-01

July 2015

E61119-01

Copyright © 2011, 2015, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface	v
Audience	v
Downloading Oracle Communications Documentation	v
Related Documents	v
Documentation Accessibility	v
1 Configuration Management Pre-Installation Tasks	
About Configuration Management	1-1
Prerequisites	1-2
Supported Platforms	1-2
Requirements and Deployment Scenarios	1-3
Standalone Single Server	1-3
Distributed Deployment	1-4
Medium-Scale Deployment	1-4
Large-Scale Deployment	1-5
Downloading the Configuration Management Media Pack	1-5
2 Installing Configuration Management	
Prerequisites	2-1
Installing WebLogic Server on a 64-bit Platform	2-1
Installing JDK	2-1
Installing Configuration Management	2-2
About Silent Installations	2-3
Setting Up TFTP or FTP Services	2-5
Setting Up the Syslog Server	2-6
Enabling and Disabling Syslog Server on a Solaris Server	2-6
Enabling and Disabling Syslog Server on a Linux Server	2-6
Post-Installation Tasks	2-7
Verifying the Installation	2-7
Starting the Configuration Management GUI	2-7
Exiting the Configuration Management GUI	2-7
Uninstalling Configuration Management	2-8
Upgrading Configuration Management 5.2.4 to Configuration Management 7.0.0	2-8
Upgrading Configuration Management 7.2 to Configuration Management 7.3	2-10
Moving Configuration Management	2-11

3 Administering Configuration Management

Using System Properties Files	3-1
Using Logging Properties File.....	3-1
Changing Logging Levels.....	3-1
Using Collector Properties Files.....	3-2
Changing Parameters in the Collector Properties files.....	3-2
Changing Logging Levels for Collector Properties	3-2
Using Server Log Files.....	3-2
Changing the Name of the logging.log File	3-3
Changing the Name of the cmuser.audit.log File	3-3
System Configuration Script	3-3
Running the Script	3-3
Managing the Database	3-4
Purging Unlocked Archive Records from the Database	3-4
Stopping and Starting Oracle WebLogic Server	3-5
Reducing the ORB Message Timeout	3-5
Restoring Configuration When the Device Model Contains Configlets	3-5
Restarting After Adding a New Domain or Network	3-6
Troubleshooting Configuration Management	3-6
WebLogic Patch Update Errors.....	3-6

Preface

This document describes how to install, run, and complete administrative tasks in Oracle Communications Configuration Management.

Audience

This document is intended for network operators and system engineers using a UNIX/Linux-based management station. Prior knowledge of the Oracle Communications Configuration Management application is not required. However, prior knowledge of Oracle Communications IP Service Activator is required. This guide assumes that you:

- Have a working knowledge of the UNIX or Linux operating system.
- Understand your network configuration and the devices managed by Configuration Management.
- Have experience with windowing systems, browsers, and graphical user interfaces (GUIs).

Downloading Oracle Communications Documentation

Configuration Management for Oracle Communications documentation, and additional Oracle documentation, is available from Oracle Help Center:

<http://docs.oracle.com>

Related Documents

Configuration Management Installation and System Administration Guide is one book in the following set of resources that comprise the Configuration Management documentation suite. The resources include:

- *Configuration Management Planning Guide*: Describes the planning tasks associated with Configuration Management.
- *Configuration Management Release Notes*: Provides information about supported operating systems and release-specific information.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Configuration Management Pre-Installation Tasks

This chapter describes Oracle Communications Configuration Management, and the requirements and pre-installation tasks you must perform before installing in order to ensure the system is properly configured.

About Configuration Management

Configuration Management controls network operations for multi-vendor networks. With Configuration Management, you can automate consistent configuration management practices, such as network discovery, archiving, auditing, and activation.

The key features of Configuration Management are:

- **Network Discovery:** Track and manage SNMP-enabled network elements and organize them into networks and sub-networks, organized by customer or geographic location. Discovered data is stored in the Configuration Management local inventory.
- **Configuration Archiving and Versioning:** Generate records of historical configurations for change tracking, configuration troubleshooting, and emergency rebuilds of the network elements (NEs). You can also perform intelligent NE software restoration with any selected network archive version or use standard TFTP/FTP to pick up the latest archive.
- **Configuration Auditing and Compliance Management:** Identify configuration changes between the archive version and the running configuration using a visual audit diagnosis tool. You can then deploy an automated configuration compliance audit across the network to validate configuration consistency and accuracy and find any abnormality. You can schedule this audit to run on an ongoing basis.
- **Configuration Activation:** Create a configuration template that allows consistent configuration implementations based on network engineering guidelines. You can also enable configuration modeling, with code or GUI auto-generation, and deliver effective configuration template version management that supports changing configuration guidelines.
- **Configuration Change Tracking:** Provides a snapshot of network-wide configuration changes, enabling you to associate device configuration changes with specific users and times. Configuration Management automatically correlates change events with configuration versions, allowing you to view configuration change records and track them to specific content changes or to view change records leading up to specific archives.

Prerequisites

You must install the following components before installing Configuration Management:

- JDK 1.7: For information about installation and configuration, see the JDK 1.7 documentation.
- Oracle 11g or 12c Database. Create a tablespace, ensure that it is auto-extensible in increments of 5 MB, and create valid users. See the Oracle Database documentation for installation instructions.

Note: Only one tablespace is needed, and users are the same as those for Oracle Communications IP Service Activator. A database administrator can configure more table space if the archive is very large.

- Oracle Application Development Framework (ADF): ADF is available in the Oracle Fusion Middleware media pack. For information about downloading software, see "[Downloading the Configuration Management Media Pack](#)". Use the version of ADF that is compatible with your version of WebLogic Server software.
- Oracle WebLogic Server 12c or 11g (10.3.6), or higher. Ensure that you:
 - Install WebLogic Server on the server on which you are installing Configuration Management.
 - Create a WebLogic server domain.

Note: When you configure the domain, select the **Oracle JRF** check box.

- Create a managed server in the WebLogic domain

Note: For installation instructions, see the Oracle WebLogic Server documentation on the Oracle Technology Network Web site:

<http://docs.oracle.com/en/middleware/>

- Administration Base (IP Service Activator 7.3 components): If you already have IP Service Activator 7.3 installed, or if you have purchased it separately, you must integrate it with Configuration Management by using the IP Service Activator Configuration GUI. See *IP Service Activator System Administrator's Guide* for more information.
- Install Microsoft Internet Explorer 8.0 or 9.0

Supported Platforms

Configuration Management 7.3 runs on the following platforms:

- Oracle Linux 5.x and 6.x, 64-bit only
- Oracle Solaris 10 or 11, 64-bit and 32-bit

The client is supported on the following platforms:

- Windows 7 64-bit or 32-bit

Requirements and Deployment Scenarios

This section describes the general deployment scenarios for Configuration Management. The hardware requirement for any type of deployment is:

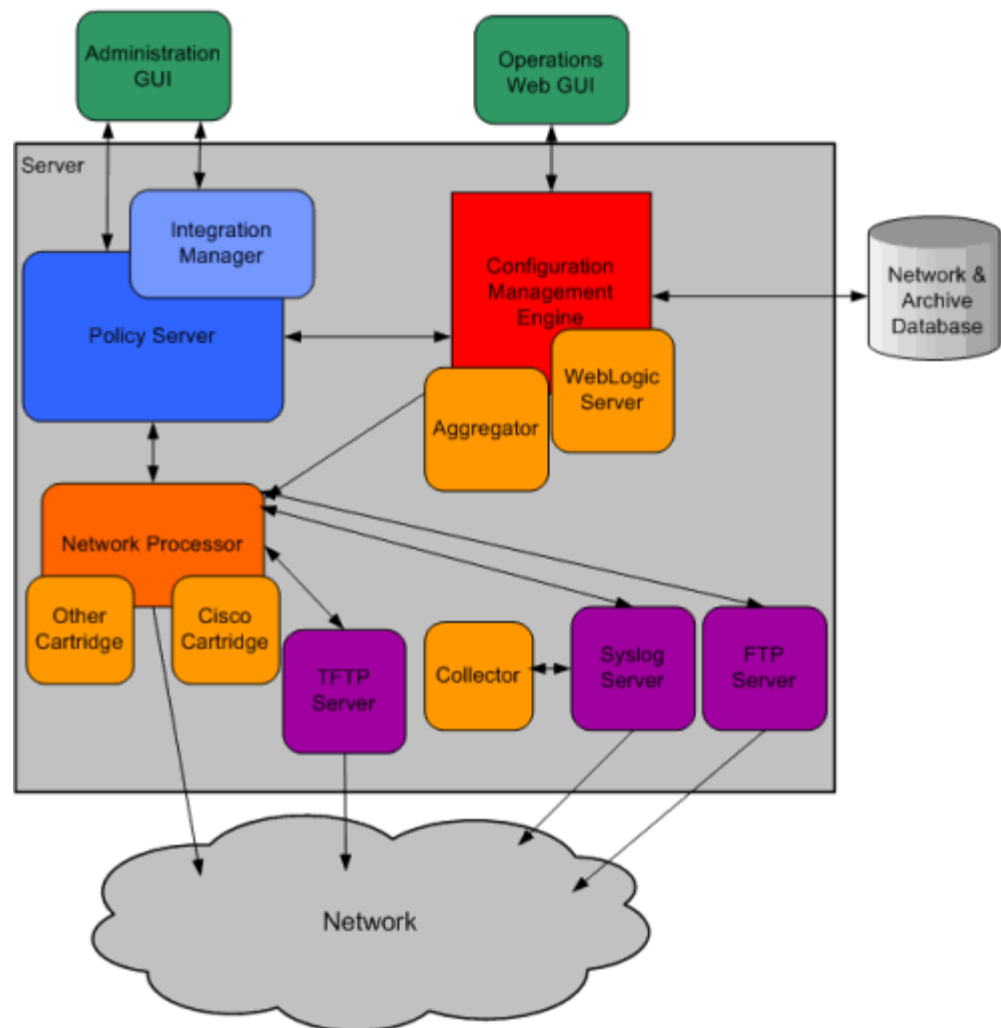
- Oracle Solaris 10 server with Sun Fire V240, dual 1.28 GHz CPUs
- Oracle Linux server with Sun Fire V240, dual 1.28 GHz CPUs

Standalone Single Server

In a standalone single-server deployment, all components are installed on the same server. This scenario is intended for deployments of 500 to 1000 customer edge (CE) devices.

Figure 1-1 shows a standalone single-server deployment.

Figure 1-1 Standalone Single-Server Deployment



Distributed Deployment

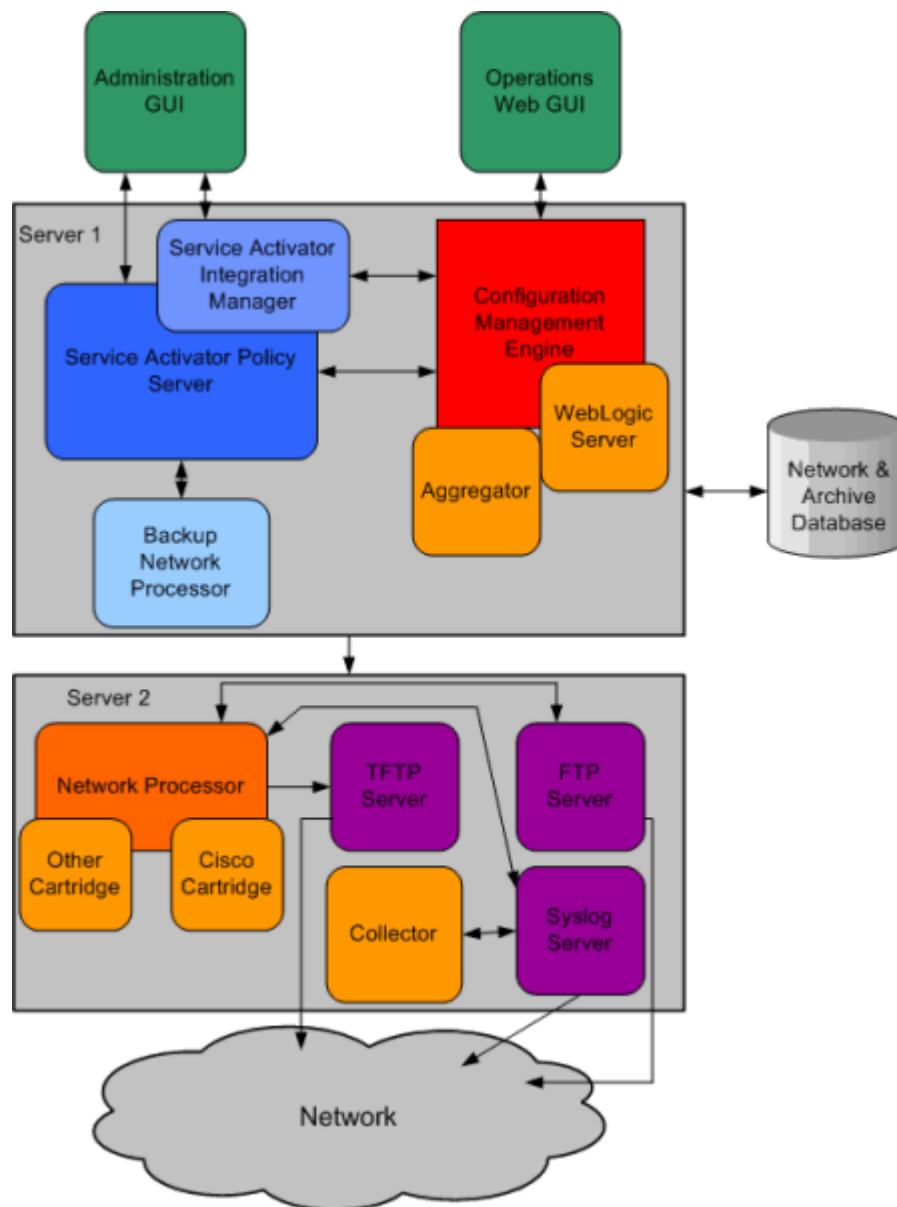
In a distributed deployment, every instance of the Network Processor must have a collector, TFTP, FTP, and Syslog server configured. If a network processor instance is co-located with Configuration Management, the installer configures the associated servers. Any other servers must be configured according to the procedures in ["Setting Up TFTP or FTP Services"](#) and ["Setting Up the Syslog Server"](#).

Medium-Scale Deployment

The medium-scale deployment has 1,000 to 10,000 CE devices.

[Figure 1-2](#) shows a medium-scale distributed deployment.

Figure 1-2 Medium-Scale Distributed Deployment

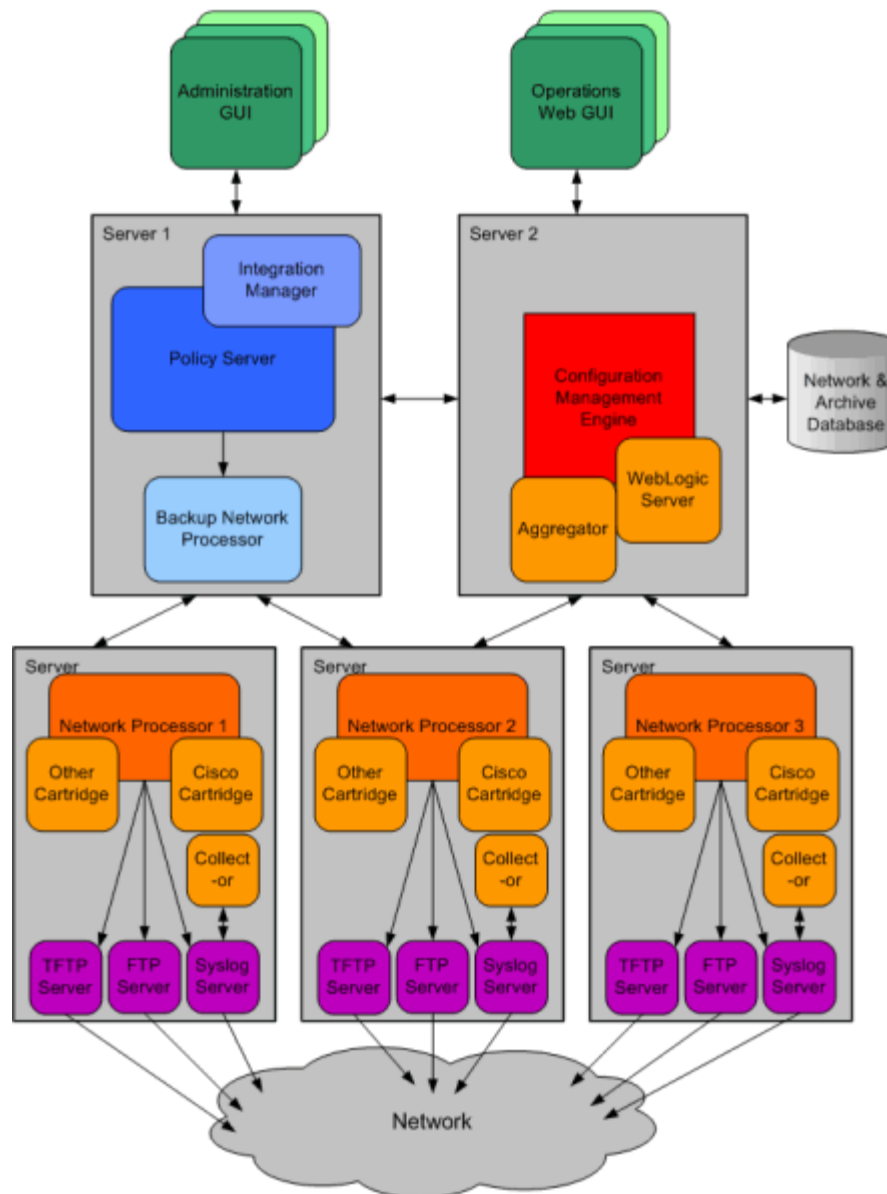


Large-Scale Deployment

The large-scale deployment has more than 10,000 CE devices.

Figure 1–3 shows a large-scale distributed deployment.

Figure 1–3 Large-Scale Distributed Deployment



Downloading the Configuration Management Media Pack

To download the media pack from the Oracle Software Delivery Cloud Web site (<https://edelivery.oracle.com>):

1. Select the Configuration Management media pack for your platform from the Oracle E-Delivery Web site.
2. Download the media pack.
3. Extract the components that you need from the downloaded file.

4. Follow the installation procedure for each component that you want to install.

Installing Configuration Management

This chapter describes how to install and start Oracle Communications Configuration Management.

Prerequisites

If you are installing Configuration Management and Oracle Communications IP Service Activator on the same server, you must install IP Service Activator first.

Before beginning the Configuration Management installation:

- Verify that the database user was created.
- Verify that the Oracle WebLogic domain was created.
- Start the WebLogic server.
- Start the managed server.

Installing WebLogic Server on a 64-bit Platform

To install WebLogic Server on a 64-bit platform:

1. Run the `java -version` command. This ensures that `JAVA_HOME` refers to a 64-bit JDK. For example, if installing in graphical mode using the package installer:

```
java -d64 -jar wlsversion_generic.jar
```

where *version* is the WebLogic version. For example:

```
java -d64 -jar wls1036_generic.jar
```

2. The new WebLogic Installer 64-bit starts.

Installing JDK

In the 32-bit WebLogic server installation, a JDK comes pre-packaged and can be re-used when running the scripts in the following directory:

`/opt/OracleCommunications/ConfigurationManagement/Scripts`

The scripts are:

- `BulkArchiveDelete.sh`
- `ConfigMgmtRoleAssign.sh`
- `dbUpgrade.sh`

However, the 64-bit installation assumes that you have a JDK or JRE already installed, and it does not package the script.

To make these scripts work, do the following:

1. Install a 64-bit JDK (if not already installed on the system).
2. Set JAVA_HOME to that value (export JAVA_HOME=/opt/jdk1.7.x).
3. Run the script.

Installing Configuration Management

If you are accessing the Oracle Solaris server remotely, set the display variable by running the following command:

```
export DISPLAY=IPaddress:port.0
```

where *IPaddress* is the IP address of the computer where the browser accesses Configuration Management and *port* is the port on which VNC server is running.

To install Configuration Management:

1. On the computer on which you want to install Configuration Management, download the Configuration Management 7.3 Solaris/Linux media pack from the Oracle software delivery Web site. For more information, see "[Downloading the Configuration Management Media Pack](#)".
2. Un-zip the media pack.

Note: If you are installing Configuration Management on a different server from the one on which you installed IP Service Activator, install the required network processor cartridges from the IP Service Activator installer.

3. Log in as the **admin** user.
4. Go to the *media pack un-zip location/cm/Disk1/install* directory.
5. There are two installation methods:
 - **Interactive:** For an interactive installation, continue with the next step of this procedure.
 - **Silent:** For information about silent installations, including recording an installation session for later re-use in a silent installation, see "[About Silent Installations](#)".
6. Run the following command:

```
./runInstaller
```

The Welcome window opens.
7. Click **Next**.
The Select Installation Type window opens.
8. Select the installation type:
 - **All Components:** Installs the Configuration Management server and all cartridges. Select this option if you want to install Configuration Management on the same server as the IP Service Activator Network Processor.

- **Configuration Management Server:** Installs only the Configuration Management server. Select this option if you want to install Configuration Management on a different server than the IP Service Activator Network Processor.
- **Cartridges:** Allows you to select the cartridges that you want to install.
- **Custom:** Allows you to select the components that you want to install.

9. Click **Next**.

If you selected All Components or Configuration Management Server, the Specify Home Details window opens.

If you selected the Cartridges or Custom installation types, the Available Product Components window opens.

10. Select the components that you want to install.

11. Click **Next**.

The Specify Home Details window opens.

12. Enter the location where you want to install Configuration Management.

13. Click **Next**.

A WebLogic window opens.

14. Enter the path to the WebLogic server domain.

For example, `/opt/Oracle/Middleware/user_projects/CMDomain`.

15. Verify the components to be installed and click **Install**.

The Install window opens.

After the installation completes, the End of Installation window opens.

16. Click **Exit**.

The Exit dialog box appears.

17. Click **No**.

The End of Installation window opens.

Note: You can now click **Yes** to start the Configuration GUI, or, if you have already configured Configuration Management in the Configuration GUI, click **No** to go back to the command prompt.

You must enter the correct values in the Configuration GUI, in the Configuration Management tab. You must edit User ID and Password.

About Silent Installations

Oracle Universal Installer supports silent installations by using a response file.

A silent installation does not use the Installer GUI and does not display the typical dialog boxes.

Note: You can record installation details into a response file for use in a future silent installation by running the `runInstaller -record -destinationFile path` command.

Complete details about silent installations, the contents of response files, and customizing and creating new response files are available in the latest Oracle Universal Installer documentation on the Oracle Technology Network Web site.

Note: Some response parameters specific to Configuration Management are not mentioned in the Oracle Universal Installer documentation.

The response directory contains the following response template files for the corresponding installation type:

- All Components: **oracle.communications.cm.AllComponents.rsp**
- Cartridges: **oracle.communications.cm.Cartridges.rsp**
- Custom: **oracle.communications.cm.Custom.rsp**
- Configuration Management Server: **oracle.communications.cm.Server.rsp**

To run the Configuration Management installer in silent mode for a Solaris or Linux installation:

1. Locate the response template file in *media pack un-zip location/cm/Disk1/stage/Response*.

Open the **oracle.communications.cm.Custom.rsp** file and, in the DEPENDENCY_LIST section, remove the components that you do not want to install.

- oracle.communications.iprsa.jre1_7, 1.7.x: Java Runtime Environment 1.7.x
- oracle.communications.iprsa.tools.configtool, 7.3.x.x.x: Configuration GUI 7.3.x.x.x
- oracle.communications.cm.server, 7.3.x.x.x: Configuration Management Server 7.3.x.x.x
- oracle.communications.cm.cartridges, 7.3.x.x.x: Cartridges 7.3.x.x.x
- oracle.communications.cm.tools, 7.3.x.x.x: Tools 7.3.x.x.x
- oracle.communications.cm.tools.syslog, 7.3.x.x.x: Configuration Scripts for Syslog 7.3.x.x.x
- oracle.communications.cm.cartridges.cisco.ios, 7.3.x.x.x: Cisco IOS 7.3.x.x.x
- oracle.communications.cm.cartridges.cisco.iosxr, 7.3.x.x.x: Cisco IOSXR 7.3.x.x.x
- oracle.communications.cm.cartridges.juniper.junos, 7.3.x.x.x: Juniper JUNOS 7.3.x.x.x
- oracle.communications.cm.cartridges.huawei.vrp, 7.3.x.x.x: Huawei VRP 7.3.x.x.x

Note: If you do not remove any of the components from the DEPENDENCY_LIST section, the Custom installation installs all the components.

2. Open the response file and modify the following installation parameters if they are different from the default parameters:
 - ORACLE_HOME="/opt/OracleCommunications/cm_install"

- ORACLE_HOME_NAME="cm_install"
 - DOMAIN_HOME="/opt/Oracle/Middleware/user_projects/domains/CMDomain"
3. Save and close the file.
 4. Log on to the server as the **admin** user.
 5. Go to the **cm/Disk1/install** directory and run the following command:


```
./runInstaller -silent -responseFile response_file_path
```

 where *response_file_path* is the full path to the response file, including the file name.
 6. After the installation is complete, check the log files.

Setting Up TFTP or FTP Services

Set up TFTP or FTP services on your Linux or UNIX server. Whether you choose to set up TFTP or FTP depends on the cartridge that you are using.

Note: Oracle recommends that you set up the TFTP or FTP directory outside the IP Service Activator or Configuration Management directories.

To set up TFTP:

1. Install TFTP on your Linux or UNIX server.
2. Create a directory that has permissions 755 and is owned by the IP Service Activator user.

For example, **/tftpboot**

3. Configure TFTP to use the directory that you created as its home directory.
4. In the IP Service Activator Configuration GUI, click **Network Processor Framework**, and then click **Common**.
5. In **Restore file location**, enter the name of the directory that you created.

See *IP Service Activator System Administrator's Guide* for information about using the Configuration GUI.

To set up FTP:

1. Install FTP on your Linux or UNIX server.
2. Enable FTP for anonymous.
3. Create a directory that has permissions 755 and is owned by the IP Service Activator user.

For example, **/ftpboot**

4. Configure FTP to use the directory that you created in this procedure as its home directory.
5. In the IP Service Activator Configuration GUI, click **Network Processor Framework**, and then click **Common**.
6. In **Restore file location**, enter the name of the directory that you created.

Setting Up the Syslog Server

The syslog server, used for tracking changes, is automatically configured by the Configuration Management installer on systems where Configuration Management and the IP Service Activator Network Processor are collocated. By running a pre-defined script you can enable or disable the syslog server functionality on a Solaris or Linux server.

Note: If you are installing Configuration Management on a different computer from that on which IP Service Activator is installed, you must run the installer again and choose the Cartridges installation type.

Enabling and Disabling Syslog Server on a Solaris Server

To enable syslog server on a Solaris server:

1. Switch users to root.
2. Go to the `CM_Home/ConfigurationManagement/tools` directory.
3. Run the following script:

```
./enableSyslog.sh
```

To disable syslog server on a Solaris server:

1. Go to the `CM_Home/ConfigurationManagement/tools` directory.
2. Run the following script:

```
./disableSyslog.sh
```

Enabling and Disabling Syslog Server on a Linux Server

The Oracle Linux syslog server does not support IPv6 functionality. You must install rsyslog.

To install rsyslog:

1. As the **root** user, run the following command:

```
yum install rsyslog
```

2. Open the `/etc/sysconfig/rsyslog` file in a text editor.
3. Add the following lines:

```
# Options to syslogd
# -m 0 disables 'MARK' messages.
# -rPortNumber Enables logging from remote machines. The listener will listen
to
the specified port.
# -x disables DNS lookups on messages recieved with -r
# See syslogd(8) for more details
SYSLOGD_OPTIONS="-c3"
# Options to klogd
# -2 prints all kernel oops messages twice; once for klogd to decode, and
# once for processing with 'ksymoops'
# -x disables all klogd processing of oops messages entirely
# See klogd(8) for more details
KLOGD_OPTIONS="-x"
```

4. Save the file.
5. Run the following commands:

```
ps -ef | grep syslogd  
kill -9 <pid>
```
6. Run the following command, which starts the syslog daemon:

```
/etc/init.d/rsyslog start
```
7. Run the following script:

```
./enableSyslog.sh
```

Post-Installation Tasks

Perform the following tasks after you install Configuration Management.

Verifying the Installation

You can use the Configuration GUI to make configuration changes. You need to enter or verify the parameters of the Configuration Management Server and Configuration Management Collector. See *IP Service Activator System Administrator's Guide* for information about using the Configuration GUI.

In the Configuration GUI, specify the path of the **syslog.log** file of the CMCollector component as *CM_Home/ConfigurationManagement/logs/syslog.log*

If the **syslog.log** file is deleted manually when the CMCollector is functioning, CMCollector tries to read that file from the specified location. If the **syslog.log** file is not present, CMCollector takes fifty percent of the central processing unit (CPU) time to read that file. Polling for this file does not consume CPU time continuously.

Starting the Configuration Management GUI

To start the Configuration Management GUI:

1. Open a browser and enter the following address:

```
IPaddress:ManagedServerWithCMPort/ConfigMgmt
```

where *IPaddress* is the IP address of the Configuration Management installation.

The Configuration Management login screen appears.

2. Log in as a valid user. You can obtain login credentials from your IP Service Activator installation.
3. You can now create and schedule archives, as well as restore archived configurations. See Configuration Management online Help for instructions.

Exiting the Configuration Management GUI

To exit the Configuration Management GUI:

1. Click the **Logout** link in the upper right-hand corner.

The Configuration Management login screen appears.

Uninstalling Configuration Management

This section describes how to uninstall Configuration Management.

Note: Perform the following procedure on every server where Configuration Management (engine and components) is installed.

To uninstall Configuration Management:

1. In the Configuration Management GUI, click the **Configuration Management** tab.
2. Click **Undeploy**.

This removes all WebLogic configuration and stops the application.

Note: Undeploying does not remove the database information or schema from the Oracle database.

3. Go to the *media pack un-zip location/cm/Disk1/install* directory and run the following command:

```
./runInstaller
```

The installer starts and the Welcome window opens.

4. Click **Deinstall Products**.

The Inventory window opens.

5. Select the items that you want to uninstall and click **Remove**.

The Confirmation window opens.

6. Click **Yes**.

Note: You can click **No** to go back and change the uninstall options.

The Remove window opens with a progress bar and uninstalls the selected components.

7. Click **Close**.

8. Click **Cancel**.

The Exit window opens.

9. Click **Yes**.

The uninstallation is complete.

Upgrading Configuration Management 5.2.4 to Configuration Management 7.0.0

To upgrade Configuration Management 5.2.4 to Configuration Management 7.0.0:

1. Upgrade IP Service Activator from 5.2.4 to 7.0.0.

Do not run the **dbUpgrade** and **npUpgrade** script when asked in the IP Service Activator installation instructions. You will run the **dbUpgrade** and **npUpgrade** scripts after Configuration Management 7.0.0 is installed.

For more information about installing IP Service Activator, see *IP Service Activator Installation Guide*.

2. Stop the following Configuration Management tools, which are running as UNIX processes:

- syslog daemon
- TFTP server
- FTP server

3. Uninstall Configuration Management 5.2.4 by running the following command:

```
./runInstaller
```

Wait until the uninstallation process is completed.

4. Stop the WebLogic server.
5. Delete the existing WebLogic domain (*WebLogic_Home/user_projects/domains/domain_name*).

where *WebLogic_Home* is the location of the WebLogic Server instance and *domain_name* is the path to the WebLogic created domain.

6. (Optional) Remove the old WebLogic server (WebLogic 92 mp1 or mp3).
7. Install WebLogic.
8. Create a new WebLogic server domain by using the WebLogic domain creation tool (*WebLogic_Home/wlserver_10.3/common/bin/config.sh* script).
9. Start the newly created WebLogic domain by running the following script:

```
startWeblogic.sh
```

10. Run the Configuration Management installer:

```
./runInstaller
```

11. Run the Configuration GUI and enter Configuration Management parameters, for example, IP Service Activator **user id** and **password**.
12. Commit the changes in the Configuration GUI.
13. Run the IP Service Activator **dbUpgrade** and **npUpgrade** scripts.

For more information about running the scripts, see *IP Service Activator Installation Guide*.

Note: **npUpgrade** might report a device audit failure, which indicates a MISSING logging host command for the ciscoSyslog cartridge. Expect this if the source and target Configuration Management software are installed on different servers (such as when upgrading and migrating to a different platform at the same time). In this case, you must re-issue the modified command to the device.

14. Run the following script, which upgrades the database:

```
CM_Home/ConfigurationManagement/Scripts/dbUpgrade.sh -dbUser userid -dbPass pwd
-dbHost db_ipaddr
```

where *userid* is the database user ID, *pwd* is the database password, and *db_Ipaddr* is the IP address of the database.

15. Stop and start the WebLogic server.

Upgrading Configuration Management 7.2 to Configuration Management 7.3

To upgrade Configuration Management 7.2 to Configuration Management 7.3:

1. Upgrade IP Service Activator from 7.2 to 7.3.

Do not run the **dbUpgrade** and **npUpgrade** script when asked in the IP Service Activator installation instructions. You will run the **dbUpgrade** and **npUpgrade** scripts after Configuration Management 7.3 is installed.

For more information about installing IP Service Activator, see *IP Service Activator Installation Guide*.

2. Stop the following Configuration Management tools, which are running as UNIX processes:

- syslog daemon
- TFTP server
- FTP server

3. Uninstall Configuration Management 7.2 by running the following command:

```
./runInstaller
```

Wait until the uninstallation process is completed.

4. Stop the WebLogic server.
5. Delete the existing WebLogic domain: delete the directory (*WebLogic_Home/user_projects/domains/domain_name*).
6. (Optional) Remove the old WebLogic server (WebLogic 92 mp1 or mp3).
7. Install the WebLogic Server software.

For information, see "[Prerequisites](#)".

8. Create a new WebLogic server domain by using the WebLogic domain creation tool (for example: *WebLogic_Home/wlserver_10.3/common/bin/config.sh* script).
9. Start the newly created WebLogic domain by running the following script.

```
.startWeblogic.sh
```

10. Run the Configuration Management installer:

```
./runInstaller
```

11. Run the configuration GUI and enter the Configuration Management parameters, for example, IP Service Activator **user id** and **password**.
12. Commit the changes in the Configuration GUI.
13. Run the IP Service Activator **dbUpgrade** and **npUpgrade** scripts.

For more information about running the scripts, see *IP Service Activator Installation Guide*.

Note: `npUpgrade` might report a device audit failure, which indicates a MISSING logging host command for the `ciscoSyslog` cartridge. Expect this if the source and target Configuration Management software are installed on different servers (such as when upgrading and migrating to a different platform at the same time). In this case, you must re-issue the modified command to the device.

14. Run the following script, which upgrades the database:

```
CM_Home/ConfigurationManagement/Scripts/dbUpgrade.sh -dbUser userid -dbPass pwd
-dbHost db_Ipaddr
```

where *userid* is the database user ID, *pwd* is the database password, and *db_Ipaddr* is the IP address of the database.

15. Stop and start the WebLogic server.

Moving Configuration Management

This section describes how to move a Configuration Management installation from one server to another. The source and target servers can be on the same or different platforms: Solaris (64-bit), or Linux (64-bit).

To move Configuration Management:

1. Install the target version of Configuration Management (and all necessary components) on a Solaris or Linux server using the Configuration Management Installer (Solaris or Linux version). For more information about installing Configuration Management, see "[Installing Configuration Management](#)".

Note: Do not run the Configuration GUI tool when prompted by the installer. You must restore the **Config** directory to the new installation directory before running the tool.

2. Copy the `CM_Home/ConfigurationManagement/Config` directory from the source server to the new `CM_Home/ConfigurationManagement` directory on the target server.
3. Manually run the Configuration GUI tool to configure the system and commit changes to the host. Update the CORBA parameters if the target server IP address has changed. `CM_Home/ServiceActivator/bin/configGUI.sh`.

Administering Configuration Management

This chapter describes how to complete administrative tasks in Oracle Communications Configuration Management.

Using System Properties Files

This section describes how to perform administration tasks on Configuration Management using system properties files.

Using Logging Properties File

The system properties file, **logging.properties**, is located in the *CM_Home/ConfigurationManagement/Config* directory.

This is the default location and can be changed during installation.

Changing Logging Levels

The **logging.properties** file controls the logging level used in Configuration Management. This section provides instructions for changing the logging level.

Changing the logging level is recommended for troubleshooting purposes and should be done only by an administrator.

Table 3–1 describes the logging levels.

Table 3–1 Logging Levels

Level	User Type	Description
Fatal	Operator	Very severe errors that will most likely cause Configuration Management to stop or crash.
Error	Operator	Errors that are most likely recoverable and will allow Configuration Management to continue running.
Warn	Operator	Indicates a potentially harmful condition.
Info	Operator	Indicates the progress of an action performed in Configuration Management.
Debug	Administrator	Very detailed error messages that are useful only when debugging Configuration Management.

To change the logging level:

1. Open the *CM_Home/ConfigurationManagement/Config/logging.properties* file.
2. Search for the following line:

```
log4j.rootLogger=info, file
```

3. Change **info** to any of the levels listed in [Table 3–1](#).

To enable full logging, uncomment the following line in the **logging.properties** file:

```
#log4j.logger.com.metasolv.oss.cm.impl=trace2#com.metasolv.util.logging.TraceLevel
, file
```

Using Collector Properties Files

The system properties files, **Collector.properties**, **CollectorIpsa.properties**, and **logging.properties**, are located in the *CM_Home/ConfigurationManagement/CMCollector* directory.

This is the default location and can be changed during installation.

Changing Parameters in the Collector Properties files

[Table 3–2](#) lists the parameters, definitions, and default values for the **Collector.properties** file. If you delete any of these parameters, the default values that exist in the Configuration Management software are used.

User login credentials, such as user name and password are encrypted in the **CollectorIpsa.properties** file.

Table 3–2 *Collector.properties Parameters*

Parameter	Description	Default
ORB Server port	Configuration Management Collector Port Number	2829
Aggregator Port	Aggregator Port Note: If you are using a managed server, this port must be the managed server port of WebLogic	7001
Collector Name	Collector Name	cm-collector-1
Time reading syslog	Time between reading in seconds.	60
Syslog locations	Location of the syslog.log file.	<i>CM_Home/ConfigurationManagement/logs</i>
Syslog message format file	Message format file of the Syslog.	<i>CM_Home/ConfigurationManagement/CMCollector/SyslogMessageFormats.xml</i>
IPSA Host	Host for IP Service Activator.	127.0.0.1
IPSA Home Dir	IP Service Activator Home Directory	<i>CM_Home/ServiceActivator</i>

Changing Logging Levels for Collector Properties

You can changing logging levels for collector properties. See "[Changing Logging Levels](#)" for more information.

Using Server Log Files

The server log files for Configuration Management include **logging.log** (for the main logs in the GUI and Engine) and **cmuser.audit.log** (for the user audit trail).

The server logs for Configuration Management are located in the `WLS_home/user_projects/Domain_name/logging.log` directory:

For example: `/opt/Oracle/Middleware/user_projects/domains/CMDomain`

Changing the Name of the logging.log File

To change the name of the `logging.log` file:

1. In the `CM_Home/ConfigurationManagement/Config` directory, open the `logging.properties` file in a text editor.
2. In the **File output** section, locate the following line and change the value `logging.log` to another file name, as shown in the following example:

```
log4j.appender.file.File=logging.log
```

Changing the Name of the cmuser.audit.log File

The `cmuser.audit.log` file tracks and reports user actions.

To change the name of the `cmuser.audit.log` file:

1. In the `CM_Home/ConfigurationManagement/Config` directory, open the `logging.properties` file in a text editor.
2. In the **File output** section, locate the following line and change the value `cmuser.audit.log` to another file name, as shown in the following example:

```
log4j.appender.userAudit.File=cmuser.audit.log
```

System Configuration Script

To create a schedule to archive device and network configurations, you must provision a role on the management interfaces for all of the devices that are managed. Do this manually by using the Configuration Management Administration GUI, or by executing a script that is packaged with the Configuration Management software.

The system configuration script `ConfigMgmtRoleAssign.sh` is located in the `CM_Home/ConfigurationManagement/Scripts` directory.

When you run the script, you are prompted to enter login credentials.

Running the Script

To provision a role, run the following script, in either the foreground or background, by using the following command:

```
./ConfigMgmtRoleAssign.sh
```

The `CmRoleAssign.log` log file is created in `CM_Home/ConfigurationManagement`. You can also see the status of the script execution on the console.

If you run the script in the foreground, you can terminate it by using **CTRL-C**.

To stop a script running in the background:

1. Find the process you want to stop by using the following command:

```
ps -ef | grep Config
```

Text appears, similar to the following example:

```
root 16127 14862 0 19:49:08 pts/7 0:00 /bin/sh ./ConfigMgmtRoleAssign.sh
```

```
root 16128 16127 1 19:49:08 pts/7 0:02 /usr/jdk/jdk1.7.0_21/bin/java DPROFILE_
BASE=/CM_Home/Config
```

2. Stop all processes with a process ID (PID) associated with the ConfigMgmtRoleAssign process.

In the above example, two processes belong to the ConfigMgmtRoleAssign script (16127 and 16128). Stop both processes by using the following command:

```
kill -9 16127 16128
```

Managing the Database

Device configuration archives are stored in the Configuration Management database. Because a significant amount of data can accumulate in the database over time, you must purge archive records that are no longer required.

Purging Unlocked Archive Records from the Database

Running the database purge script purges unlocked archive records from the Configuration Management database. Configuration Management must be running in order for you to run the database purge script. A confirmation appears before the archive delete begins, allowing you to verify the operation before continuing. The **logging.log** file records the progress of the database purge operation.

After you start the database purge script, you cannot stop it. You can press CTRL-C to return to the console, but the script continues to run in the background.

The script purges records at a rate of 100 per minute: allocate sufficient time for the operation to complete.

The script **BulkArchiveDelete.sh** is in the **CM_Home/ConfigurationManagement/Scripts** directory.

Note: After you enter the command to run either the database purge or bulk archive delete scripts, you are prompted for your IP Service Activator/Configuration Management user ID and password.

To run the database purge script:

1. Run the following command as the **root** user:

```
./BulkArchiveDelete.sh start_date end_date [IP_address]
```

where *start_date* and *end_date* are in the format mm/dd/yyyy and *IP_address* is either an IPv4 or IPv6 IP address, and is used to narrow the operation to records belonging to the specified address. If *IP_address* is omitted, the command purges all records for all devices between *start_date* and *end_date*.

For example, the command

```
./BulkArchiveDelete.sh 10/22/2013 04/22/2014 10.13.22.77
```

purges all device records for the device 10.13.22.77 between the dates October 22, 2013 and April 22, 2014.

The **BulkArchiveDelete.log** log file is created in **CM_Home/ConfigurationManagement** each time you run the database purge script.

Stopping and Starting Oracle WebLogic Server

WebLogic Server provides several ways to start and stop server instances. For information about starting and stopping a WebLogic server instance, see Oracle WebLogic Server documentation.

Reducing the ORB Message Timeout

You can customize the Configuration Management Server response time to reduce the ORB message timeout.

When the network that IP Service Activator is managing is over 10,000 devices, the OSS Integration Manager may take longer than the ORB default for message timeouts to respond to a Configuration Management requested device search. Increasing the ORB message timeout setting ensures that the Configuration Management client receives the proper data, and not a timeout notification, from an initiated device search.

Reducing the ORB message timeout increases the amount of time that the Configuration Management Server can wait for a response from the OSS Integration Manager when conducting a device search on a very large IP Service Activator network.

To reduce the ORB message timeout:

1. In the Configuration Management server *WLS_home/user_projects/domains/Domain_name* directory, open the **startWeblogic.sh** file.
2. Find the following line:

```
JAVA_OPTIONS="${SAVE_JAVA_OPTIONS}"
```

3. Replace it with the following:

```
JAVA_OPTIONS="${SAVE_JAVA_OPTIONS}
-Dcom.sun.CORBA.transport.ORBTCReadTimeouts=1:15000:300:1"
```

4. Save and close the file.

After you edit the file, you must restart the Configuration Management server for the change to take effect.

Restoring Configuration When the Device Model Contains Configlets

When performing a device restoration operation, if the device model contains one or more configlets that were created and persisted through Configuration Management, the commands are re-sent to the device even though the restored configuration has the configlets as part of the device model.

To restore a device configuration:

1. Log in to Configuration Management and display the domain containing the discovered device.
2. Create an archive for the device.
3. Select the device, click **Actions**, and select **View/Modify Configuration**.
4. Create a configlet and activate it.
5. Click **Archive** to create an archive.
6. Click the **Configuration Archives** link to display the archive list.

7. Select the check box for the archive you just created.
8. Click **Restore**, and select **Complete Restore**.
The device is restored and restarted, and it is left in Offline Test mode.
9. Select the device, click **Actions**, and select **Put in Online Mode**.
The configlet is pushed to the device.

Typically, when you restore the configuration to the device, no configuration commands are sent to the device. This is the only exception.

For complete details, see Configuration Management online Help.

Restarting After Adding a New Domain or Network

If you add a new domain or network to IP Service Activator, you must restart Configuration Management to see the new domain or network.

To restart Configuration Management:

1. In a browser, go to the WebLogic server console:
`http://IP_address:Port/console`
where *IP_address* is the WebLogic server domain IP address or hostname, and *Port* is the port on which the WebLogic server listens for traffic.
2. Log in using your WebLogic credentials.
3. Select **Deployments**.
4. Select the check box next to the **ConfigurationManagement** deployment.
5. Click the **Stop** button, and then select **Force Stop Now**.
6. Click the **Start** button, and then select **Servicing All Requests**.

Troubleshooting Configuration Management

This section provides troubleshooting information for Configuration Management.

WebLogic Patch Update Errors

When you upgrade your instance of WebLogic Server to the latest patch version, you might receive errors. These errors occur because the updated .jar files no longer have the correct security permissions.

For information about the errors and the procedure to correct the security permissions, see the troubleshooting chapter of *IP Service Activator System Administrator's Guide*.