

**Oracle® Communications Services Gatekeeper**

Installation Guide

Release 5.0

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Oracle Communications Services Gatekeeper Installation Guide, Release 5.0

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# Preface

This book explains how to install Oracle Communications Services Gatekeeper. It includes instructions for WebLogic Server domain configuration and post-installation tasks.

## Audience

This document is for support engineers and system administrators.

## Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>

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### Access to Oracle Support

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## Related Documents

For more information, see the following documents in the Oracle Communications Services Gatekeeper set:

- *Accounts and SLAs Guide*
- *Alarm Handling Guide*
- *Application Developer's Guide*
- *Communication Service Guide*
- *Concepts Guide*
- *Deployment Guide*
- *Licensing Guide*
- *Partner Relationship Management Guide*
- *Platform Development Studio Developer's Guide*
- *Platform Test Environment Guide*
- *RESTful Application Development Guide*
- *SDK User's Guide*
- *Statement of Compliance*
- *System Administrator's Guide*
- *System Backup and Restore Guide*

In addition, many documents in the Oracle WebLogic Server documentation set are of interest to users of Oracle Communications Services Gatekeeper:

- *Oracle Fusion Middleware Introduction to Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13752/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13752/toc.htm)
- *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/doc.1111/e14142/title.htm](http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14142/title.htm)
- *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13708/overview.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13708/overview.htm)
- *Oracle Fusion Middleware Getting Started With JAX-WS Web Services for Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13758/title.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13758/title.htm)
- *Oracle Fusion Middleware Developing Manageable Applications With JMX for Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13729/title.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13729/title.htm)
- *Oracle Fusion Middleware Configuring and Using the Diagnostics Framework for Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13714/title.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13714/title.htm)
- *Oracle Fusion Middleware Using Clusters for Oracle WebLogic Server* at: [http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13709/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13709/toc.htm)



- *Oracle Fusion Middleware Securing Oracle WebLogic Server* at:  
[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13707/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13707/toc.htm)



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## Task Overview

This chapter provides a high level description of the process of installing and configuring Oracle Communications Services Gatekeeper. Subsequent chapters describe the steps in detail.

Setting up Services Gatekeeper is a multi-step process that includes planning the hardware and network setup, installing the database software, installing the Services Gatekeeper software which includes WebLogic Server and can include a Java Development Kit (JDK), configuring the WebLogic domain, and some other post-installation tasks.

If you are integrating Services Gatekeeper with Service Oriented Architecture (SOA), you need to install the SOA facades.

If you are upgrading from a previous version of Services Gatekeeper, you need to perform the upgrade tasks.

### Planning the Network/Hardware Setup

Before you can install Services Gatekeeper, you must gather some information about your system and decide on the directories in which to install for the software. You need to know:

- The network names or IP addresses of the machines on which you are going to install.
- The directory on each machine which will serve as your *Middleware\_Home* directory. This directory serves as a repository for common files that are used by Oracle Communications Service delivery products installed on the same machine, such as Services Gatekeeper, WebLogic Server, and Java Development Kit.

The files in the *Middleware\_Home* directory are essential to ensuring that software operates correctly on your system. They:

- Facilitate checking of cross-product dependencies during installation
- Facilitate Service Pack installation
- The directories on each machine which will serve as your product installation directories. You will need to provide directories in which to install Services Gatekeeper and WebLogic Server software. By default, these are subdirectories of *Middleware\_Home*. We refer to these directories as *WebLogic\_Home* and *Services\_Gatekeeper\_Home*.
- If you are going to install the Oracle Communications Services Gatekeeper Platform Development Studio, the Eclipse Plug-in directory.

- A password for the Administrative User. The password must have a minimum of eight characters, at least one of which is non-alphabetic.

Oracle Communications Services Gatekeeper has been tested to run on specific hardware and software platforms. Supported Configurations are outlined in detail in [Table 2–1, "Oracle Communications Services Gatekeeper 5.0 Certification Matrix"](#) in ["Supported Configurations"](#) Unless your installation has been specified differently in cooperation with Oracle, only these configurations are supported.

## Installing the Database Software

You need to install the database software for the database used by Service Gatekeeper. For information on installing the database software, see ["Installing the Database"](#).

## Installing Services Gatekeeper Software

Installing Services Gatekeeper generally copies these separate components to your hardware:

- The platform container, Oracle WebLogic Server
- The Oracle Communications Services Gatekeeper software, including container services and communication services applications
- [optional] The Oracle Communications Services Gatekeeper Platform Development Studio software

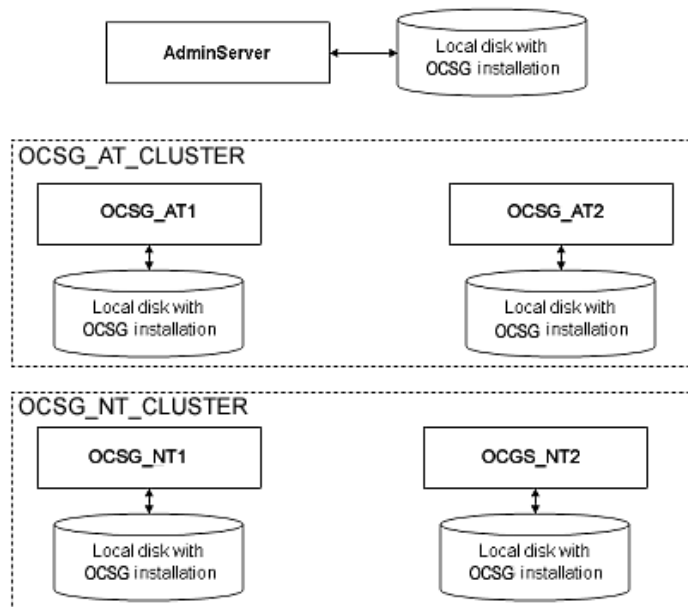
Each of these components is copied to its appropriate places when you run the Services Gatekeeper installer. There are three installer modes available:

- Graphical-mode (GUI-based)
- Console (interactive text-based)
- Silent mode (uses an XML file instead of user-entered responses)

You need to perform an installation on each machine in your Services Gatekeeper configuration.

For information on installing the Services Gatekeeper components, see ["Installing Oracle Communications Services Gatekeeper"](#)

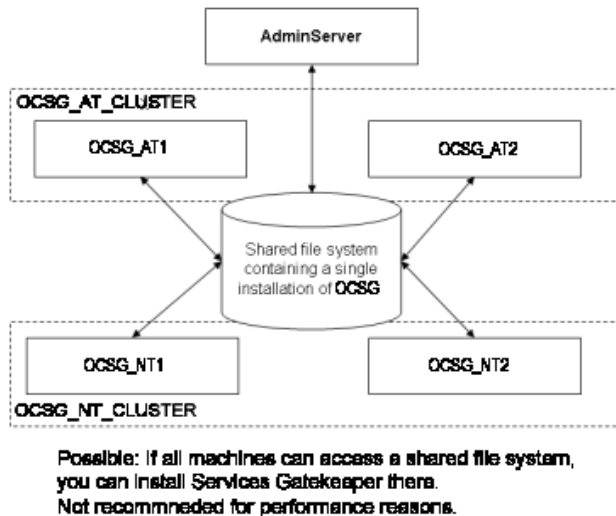
It is recommended that you install Services Gatekeeper on the local disk of each server in your configuration, as illustrated in [Figure 1–1](#).

**Figure 1–1 The Recommended Installation**

**Recommended:** Install Services Gatekeeper on each local disk

If all of your servers can access a shared file system, it is possible to install Services Gatekeeper only there (see [Figure 1–2](#)), but this is not recommended, for performance reasons.

Figure 1–2 Possible, but not recommended



## Configuring the WebLogic Server Domain for Services Gatekeeper

There are two tools available to configure the domain for your WebLogic Server for use in Services Gatekeeper installations:

- The Configuration Wizard, either the GUI-based version or the interactive console version.

If you want to run graphical-mode configuration, the console attached to the machine on which you are configuring the domain must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX/Linux systems do. If you attempt to start the installation program in graphical mode on a system that cannot support a graphical display, the installation program automatically starts console-mode installation

- The command-line scripting tool (WebLogic Scripting Tool) and provided scripts.

The command-line does not support SOA features however.

The WebLogic Scripting Tool (WLST) is a command-line scripting interface that system administrators and operators use to monitor and manage WebLogic Server instances and domains. The WLST scripting environment is based on the Java scripting interpreter, Jython. For more information on WLST, see *Oracle Fusion Middleware Oracle WebLogic Scripting Tool* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13715/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13715/toc.htm)

Services Gatekeeper ships with five default configuration templates:

- Basic Oracle Communications Services Gatekeeper Domain
- OCSG Basic HA configuration

- OCSG Domain with Access and Network Clusters
- OCSG Domain with Access and Network Clusters with Oracle RAC Configuration
- OCSG OSB Integration Configuration

These templates contain the basic information for setting up various common installation selections. However, in all cases, some aspects of the domain may need to be adjusted during the domain configuration process.

For information about configuring the domain, see [Chapter 5, "Configuring the Domain for Oracle Communications Services Gatekeeper."](#)

## Completing Post-Installation Tasks

After installation is complete and your domain has been set up, there are a few post-installation tasks that may be required depending on your requirements. These include creating JMS servers for additional Network Tier servers, installing the Java Cryptography Extension (JCE), installing Orbacus, and adding a custom password validator.

For information about the post-installation tasks, see in [Chapter 6, "Completing Post-Installation."](#)

You will also need to configuring Services Gatekeeper. For detailed information, see *System Administrator's Guide*, another document in this set.

## Installing SOA Facades

If you are integrating Services Gatekeeper with Service Oriented Architecture (SOA) environments, you need to install the SOA facades.

For information, see [Chapter 7, "Installing SOA Facades."](#)

## Upgrading from A Previous Services Gatekeeper Release

If you are upgrading from Services Gatekeeper 4.1[.x] to 5.0, see the upgrade instructions in [Chapter 8, "Upgrading Oracle Communications Services Gatekeeper."](#)

## For Further Information about WebLogic Server

To learn more about installing WebLogic Server products in general, and about the installer program in particular in regard to WebLogic Server, see the *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E14571\\_01/doc.1111/e14142/toc.htm](http://download.oracle.com/docs/cd/E14571_01/doc.1111/e14142/toc.htm)





## Supported Configurations

This chapter summarizes the supported configurations for the Oracle Communications Services Gatekeeper platform.

### Common Configuration Requirements

All servers in a Services Gatekeeper cluster must be dedicated servers.

The directory in which the software is installed must reside on the server's local file system.

There must be at least 1.5 GB of disk space available under `/user/local`.

### Certification Matrix

[Table 2-1](#) shows the Services Gatekeeper certification matrix, which describes specific requirements on the supported software/hardware platforms.

**Table 2-1 Oracle Communications Services Gatekeeper 5.0 Certification Matrix**

Tier	OS Version	OS 32/64 bit	Processor	JDK Version	JDK 32/64 bit	RAM	Disk
Access & Network	Oracle Enterprise Linux 4 (UL7+)	32	x86	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Oracle Enterprise Linux 4 (UL7+)	64	x64	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32 & 64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Oracle Enterprise Linux 5 (UL3+)	32	x86	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6+	32	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Oracle Enterprise Linux 5 (UL3+)	64	x64	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32 & 64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Solaris 2.9 Update 9+	64	SPARC	Sun 1.6.0_18-b07	32	1 GB required; 2 GB recommended	2 x 36 GB

**Table 2–1 (Cont.) Oracle Communications Services Gatekeeper 5.0 Certification Matrix**

Tier	OS Version	OS 32/64 bit	Processor	JDK Version	JDK 32/64 bit	RAM	Disk
Access & Network	Solaris 2.9 Update 9+	64	SPARC	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Solaris 10 Update 4+	64	SPARC	Sun 1.6.0_18-b07	32	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Solaris 10 Update 4+	64	SPARC	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Red Hat EL 4 (UL7+)	32	x86	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Red Hat EL 4 (UL7+)	64	x64	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32 & 64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Red Hat EL 5 (UL3+)	32	x86	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Red Hat EL 5 (UL3+)	64	x64	Sun 1.6.0_18-b07 JRockit 1.6.0_17 R28.0.0-6	32 & 64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	HP-UX 11i (11.31) B.11.31.0803.31 8a Base Quality Pack Bundle for HP-UX 11i v3, March 2008+	64	Itanium-2	HP JDK 6.0.02	32 & 64	1 GB required; 2 GB recommended	2 x 36 GB
Access & Network	Windows 7 Windows XP Professional with SP2+ Windows Vista with SP1+	32	x86	Sun 1.6.0_18-b07	32	1 GB required; 2 GB recommended	2 x 36 GB

## Supported Databases

Table 2–2 shows the databases supported for Services Gatekeeper.

**Table 2–2 Supported Databases**

Database	Characteristic
Oracle 10g and 11g RAC	Full DB Failover and Fault Tolerance
Oracle 10g and 11g Single Instance	No Failover and Fault Tolerance
MySQL 5.1 Single Instance	No Failover and Fault Tolerance

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Minimum RAM required for the database is 2 GB; 6 GB are recommended.

Disk space required for the database is 2 X 36 GB.

## Virtualization

Services Gatekeeper is deployable and certified on Solaris Zones virtualized environment. For information about Solaris virtualization, see:

<http://www.oracle.com/us/products/servers-storage/solaris/virtualization-066073.html>

Services Gatekeeper is also deployable and certified and on Oracle VM. For information about Oracle virtualization, see:

<http://www.oracle.com/us/technologies/virtualization/oraclevm/061976.html>

## Load Balancer and Tier 3 Switches

Per customer preference.

## Firewall

Optional. Per customer preferences.

## Disc Storage

While disc storage can be an ordinary disk system, for performance and high availability reasons, a RAID system should be used.

## Parlay X

Services Gatekeeper supports Parlay X Version 2.1 and Parlay X Version 3.0. For details, see the descriptions of the individual communications service in *Communication Service Guide*, another document in this set.

## SNMP

Services Gatekeeper supports SNMPv1 and SNMPv2.



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## Installing the Database

This chapter provides an overview of the process of installing the database for use with Oracle Communications Services Gatekeeper.

### Outline of Installation

Although there are substantial differences among the installation procedures for each type of database, all installation types include the following basic steps:

1. Install the base software.
2. Configure the database for backup.
3. Set up a user account that Services Gatekeeper will use to access the database.
4. Give the user account appropriate privileges on the database.

### Install Oracle with RAC or Oracle Single Instance Database Software

Use these instructions if you are using Oracle 10g or Oracle 11g with Real Application Clusters (RAC) or Oracle 10g or Oracle 11g Single Instance database software for your database.

The database must be installed on dedicated servers running outside the Oracle Communications Services Gatekeeper cluster.

### Oracle RAC

Oracle with RAC is the only database configuration for supported production environments that require high availability.

For information on using Oracle WebLogic Server (OWLS) RAC with a multi data source configuration, see “Using WebLogic Server with Oracle RAC” in *Oracle Fusion Middleware Configuring and Managing JDBC for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13737/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13737/toc.htm)

### Installing the Database Software

To install the database software:

1. Install the Oracle database software using the instructions provided by Oracle.  
During the installation process, choose these recommended configuration options:
  - Create the database using the **Transaction Processing** template.

- Use the **Dedicated Server Mode** for the database.
- Change the **processes** parameter as follows:

Define the number of processes to be equal to  $(wlng.datasource\ MaximumCapacity + wlng.localTX.datasource\ MaximumCapacity)$  times the number of Services Gatekeeper servers in the cluster.

`MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both data sources.

2. Download and install the latest patch set.

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**Note:** In previous releases, Oracle Automatic Storage Management (ASM) was installed as part of the Oracle Database installation. With Oracle Database 11g Release 2 (11.2), Automatic Storage Management is part of an Oracle grid infrastructure installation, either for a cluster, or for a standalone server.

If you want to upgrade an existing Automatic Storage Management installation, then you must upgrade Automatic Storage Management by running an Oracle grid infrastructure upgrade. If you do not have Automatic Storage Management installed and you want to use Automatic Storage Management as your storage option, then you must complete an Oracle grid infrastructure installation before you start your Oracle Database installation.

The *Oracle Grid Infrastructure Installation Guide 11gRelease2 (11.2) for Linux* is at:

[http://download.oracle.com/docs/cd/E11882\\_01/install.112/e17212/toc.htm](http://download.oracle.com/docs/cd/E11882_01/install.112/e17212/toc.htm)

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## Configure the Oracle Database for Backup

Configure the Oracle database for backup as described in *System Backup and Restore Guide*, another document in this set.

## Define a Database User for the Oracle Database

1. Create a database user for Oracle Communications Services Gatekeeper with an allowed (unlimited) quota on its default tablespace, (the **users** tablespace). The user name and password for the user are later copied to each Oracle Communications Services Gatekeeper Server.
2. The user must be granted the following privileges:
  - CREATE SESSION
  - CREATE TABLE

Oracle Communications Services Gatekeeper must be configured with an additional set of parameters to make it work correctly with the database. This action is performed during the domain configuration phase. See [Configuring the Domain for Oracle Communications Services Gatekeeper](#) for more information.

## Install a MySQL Database

Follow the instructions in this section if you are using MySQL as your database.

MySQL can be installed either on a server in the Services Gatekeeper cluster or on a separate server. If it is installed in the cluster, it should be in the same server as the Network Tier.

Before you start, make sure you have the appropriate installation software for your platform. The software can be downloaded from

<http://www.mysql.com>

1. Copy the installation file to the desired directory.
2. Follow the installation instructions for your platform. These may vary widely depending on your platform and the type of binary you chose to download. You may need to be logged in with administrative privileges.

## Linux

The following is a summary of the commands to install MySQL on some versions of Linux. Check the specific instructions for your version. These instructions assume an installation directory of **/usr/local**.

To install MySQL on Linux:

1. Create a group for mysql and add the mysql user to it:

```
groupadd mysql
useradd -g mysql mysql
```

2. Run the installation script:

```
cd /usr/local
ln -s /usr/local/mysql-standard-<version> mysql
cd mysql
scripts/mysql_install_db --user=mysql
```

3. Set ownership:

```
chown -R root .
chown -R mysql data
chgrp -R mysql .
```

4. Start the database:

```
bin/mysqld_safe --user=mysql &
```

5. Create a file, **/usr/local/mysql/data/my.cnf**, and set the following connection variable, so that `max_connections` is equal to `(wlng.datasource MaximumCapacity + wlng.localTX.datasource MaximumCapacity)` times the number of Oracle Communications Services Gatekeeper servers in the cluster. `MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both datasources. For example:

```
[mysqld]
set-variable=max_connections=400
```

You should also add settings for default character set and storage engine.

The recommended character set is Latin1.

```
set-variable=default-character-set=<desired character set>
set-variable=default-storage-engine=<desired default storage engine>
```

6. Restart MySQL.

## Windows

The Windows version is available with a GUI installer. Detailed instructions on using the installer are available at the MySQL web site. Unless you need to install the database in a non-standard location, you can select **Typical Install**.

You can also use the **Instance Configuration Wizard** to perform basic configuration. Use the default choice unless an alternative is specified below.

To install MySQL on Windows:

1. Select **Detailed Configuration**.
2. Select your appropriate usage type. The recommended usage type is **Non-transactional Database**.
3. To set concurrent connections, select **Manual** and choose a value equal to  $(wlng.datasource MaximumCapacity + wlng.localTX.datasource MaximumCapacity)$  times the number of Services Gatekeeper servers in the cluster. `MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both datasources. Use the drop-down menu. You can change this value later if necessary.
4. Check **Enable TCP/IP Networking** (the standard port is fine unless you need to change it for your particular installation).
5. Select your default character set. The recommended character set is **Latin1**.
6. Select **Install as Windows Service** if you desire.
7. Select **Modify Security Settings** and set a root password.
8. Do not check **Enable root access from remote machines**.
9. Setting MySQL to autostart on reboot is recommended. Refer to the instructions for MySQL and the operating system. If you are installing on Windows, you can set up MySQL to run as a Windows Service (see above).
10. Create the Services Gatekeeper database user and password and give it access privileges using the SQL command. You will need this user name and password for the domain configuration stage of the installation. (For information on the various command level modes of accessing the MySQL server, see the documentation on the MySQL website.

```
GRANT ALL ON *.* TO <Gatekeeper database user>@'<ip-address>' IDENTIFIED BY  
'<password>'
```

You must do this for every IP address in the cluster.

11. Create the database for Services Gatekeeper. This name will be used in the Domain Configuration stage of the installation. The standard way to do this is to issue the following SQL command.

```
CREATE DATABASE <database name>
```

12. Services Gatekeeper must be configured with an additional set of parameters to make it work correctly with the database. This action is performed during the domain configuration phase. See ["Configuring the Domain for Oracle Communications Services Gatekeeper"](#) for more information.



---

# Installing Oracle Communications Services Gatekeeper

This chapter describes how to use the Oracle Communications Services Gatekeeper installers. You must perform the installation on every server in the system.

## Installation Platforms and Modes

You can install Services Gatekeeper using the following platform-specific installers for the specified 32-bit platforms:

- `ocsg500_linux.bin`
- `ocsg500_solaris_sparc.bin`
- `ocsg500_win.exe`

These installers bundle the JRockit SDK and Sun JDK for Linux, Solaris, and Windows.

A generic installer is provided, primarily for 64-bit platforms. There is also a version of the generic installer for 32-bit platforms. Unlike the platform-specific installers listed above, the generic installer does not include a bundled JDK. The JDK must already be installed when you use the generic installer.

The generic installer is contained in:

- `ocsg500_generic.jar`

You can run all the installers in GUI, console, or silent mode.

Silent mode is for creating duplicate installations on multiple machines without responding to prompts.

## Creating an Installation Log

To create an installation log, add the following option to any of the commands that invoke the installer:

`-log=logfilename`

where *logfilename* is a name that you assign to the log file.

For example, the following command runs the console Linux32 Services Gatekeeper installer and creates a log file named **install\_log** containing the installation's output.

```
ocsg500_linux.bin -mode=console -log=install_log
```

## The GUI Mode Installer

This section contains instructions for using the GUI-based installer to install Oracle Communications Services Gatekeeper.

If you want to use the GUI-based installer, 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 UNIX/Linux systems do. If you attempt to start the installation program in GUI mode on a system that cannot support a graphical display, the installation program automatically starts console-mode installation.

GUI mode is the default mode, so it is not necessary to specify the mode on the command line to install in this mode.

### Run the GUI Installer on Windows

The Windows version of Services Gatekeeper is supported only for development and test environments. It is not supported for production.

To run the GUI-based Windows installer:

1. Log in to the Windows system.

If you are going to use this machine as an Administration Server and you wish to install the Node Manager as a Windows service, you must log in as an administrator. Node Manager is used to monitor, start, and stop server instances in a domain.

2. Change to the directory where you have copied the installation program.

You acquire this program either from an Oracle Communications Services Gatekeeper CD or the eDelivery Center.

3. To start the Windows installer, double-click **ocsg500\_win.exe** or enter the following in a command window:

```
ocsg500_win.exe [-log=logfilename]
```

After the installer starts, the Welcome window appears.

You can cancel the installation at any time by clicking **Exit**.

4. In the Welcome window, click **Next** to proceed with the installation.

The Choose Middleware Home Directory window appears.

The Middleware Home directory is the central support directory for all Oracle middleware products installed on the target system.

5. Do one of the following:

- To install into an existing Middleware home:
  - a. Select **Use an existing Middleware Home**.
  - b. From the list of existing Middleware home directories, select a directory.
  - c. Click **Next**.

The Choose Products and Components window appears.

- To create a new Middleware home:
  - a. Select **Create a new Middleware Home**.



If you are installing on Windows, the Choose Shortcut Location window appears.

This window lets you specify the Start menu folder for the Services Gatekeeper Start menu shortcuts.

15. Do one of the following:

- To provide all users registered on the machine with access to the installed software, choose **All Users Start Menu folder**.

Only users with Administrator privileges can create shortcuts in the All Users folder. Therefore, if a user without Administrator privileges uses the Configuration Wizard to create domains, Start menu shortcuts to the domains are not created. In this case, users can manually create shortcuts in their local Start menu folders, if desired.

- To ensure that other users registered on this machine will not have access to the Start menu entries for this installation, choose **Local user's Start Menu folder**.

16. Click **Next**.

The Installation Summary window appears.

17. Make sure that the Installation Summary reflects all the products and JDKs that you have chosen to install.

If the list is not correct, you can use the **Previous** button to navigate back so you can make corrections.

18. Click **Next** to start the installation.

A progress bar indicates the status of the installation process.

19. When the Installation Complete window appears, do one of the following:

- On Windows, you have the option of running QuickStart now to configure domains. If you want to do this:

- a. Check the **Run Quickstart** checkbox.

The installer exits.

The QuickStart menu appears.

- b. Choose an action from the Quick Start menu. For information on configuring domains, see [Chapter 5, "Configuring the Domain for Oracle Communications Services Gatekeeper."](#)

- If do not want to run QuickStart now:

- a. Clear the **Run Quickstart** checkbox.

- b. Click **Done**.

The installer exits.

## Run the GUI Installer on UNIX/Linux

To use the GUI-based platform-specific UNIX/Linux installer:

1. Log into the target UNIX system.
2. Change to the directory where you have copied the installation program.

You acquire this program either from the Oracle Communications Services Gatekeeper CD or the eDelivery Center.

3. Change the mode of the installation program file to executable if it is not already set.
4. To start the UNIX installer, do one of the following:

- To start the Linux32 installer, enter:  
`ocsg500_linux.bin [-log=logfilename]`
- To start the Solaris\_Sparc32 installer, enter:  
`ocsg500_solaris_sparc.bin [-log=logfilename]`

After the installer starts, the Welcome window appears.

You can cancel the installation at any time by clicking **Exit**.

5. In the Welcome window, click **Next** to proceed with the installation.

The Choose Middleware Home Directory window appears.

The Middleware Home directory is the central support directory for all Oracle middleware products installed on the target system.

6. Do one of the following:

- To install into an existing Middleware home:
  - a. Select **Use an existing Middleware Home**.
  - b. From the list of existing Middleware home directories, select a directory.
  - c. Click **Next**.

The Choose Products and Components window appears.

- To create a new Middleware home:
  - a. Select **Create a new Middleware Home**.
  - b. In the **Middleware Home Directory** field, enter the path for the new Middleware home directory.
  - c. Click **Next**.

The Choose Products and Components window appears.

7. In the Choose Products and Components window, clear the checkbox for any component you do not wish to install.

Note that you cannot install the Platform Development Studio without WebLogic Server and Oracle Communications Services Gatekeeper.

8. Click **Next**.

The JDK Selection window appears.

9. In the JDK Selection window, do one of the following:

- To install a bundled JDK:
  - a. Select the check box next to the bundled JDK that you want Services Gatekeeper to use.
  - b. Click **Next**.
- To use an existing JDK already installed on the system:
  - a. Click **Browse**.
  - b. Navigate to the home directory of your local JDK.



6. To start the generic installer, do one of the following:
  - To start the generic installer on a system that uses a 32/64-bit hybrid JDK, such as the HP-PA, HPIA, and Solaris64 platforms, enter:

```
java -d64 -jar ocs500_generic.jar [-log=logfilename]
```
  - To start the generic installer on a system that uses the Solaris\_SPARC 64-bit JDK, enter:

```
java -Xmx1024m -jar ocs500_generic.jar [-log=logfilename]
```
  - To start the generic installer on a 32-bit system, enter:

```
java -jar ocs500_generic.jar [-log=logfilename]
```

After the installer starts, the Welcome window appears.

You can cancel the installation at any time by clicking **Exit**.

7. In the Welcome window, click **Next** to proceed with the installation.

The Choose Middleware Home Directory window appears.

The Middleware Home directory is the central support directory for all Oracle middleware products installed on the target system.
8. Do one of the following:
  - To install into an existing Middleware home:
    - a. Select **Use an existing Middleware Home**.
    - b. From the list of existing Middleware home directories, select a directory.
    - c. Click **Next**.

The Choose Products and Components window appears.
  - To create a new Middleware home:
    - a. Select **Create a new Middleware Home**.
    - b. In the **Middleware Home Directory** field, enter the path for the new Middleware home directory.
    - c. Click **Next**.

The Choose Products and Components window appears.
9. In the Choose Products and Components window, clear the checkbox for any component you do not wish to install.

Note that you cannot install the Platform Development Studio without WebLogic Server and Oracle Communications Services Gatekeeper.
10. Click **Next**.

The JDK Selection window appears.
11. In the JDK Selection window, click **Browse** to navigate to a local JDK that is already installed on your system.
12. Select the local JDK directory.

The selected directory appears checked in the **Local JDK** field.
13. Click **Next**.

14. If you are including the Platform Development Studio in the installation, the Platform Development Studio Eclipse Plugin Path window appears.  
In the **Eclipse Plug-ins Directory** field, enter the full path to the directory of your Eclipse installation or use the **Browse** button to locate the directory. The Eclipse directory must be created prior to the installation of Service Gatekeeper.
15. Click **Next**.  
The Choose Product Installation Directories window appears.
16. In the **Product Installation Directories** fields, enter the directories in which you want to install the Services Gatekeeper and WebLogic Server software.
17. Click **Next**.  
The Installation Summary window appears.
18. Make sure that the Installation Summary reflects all the products that you have chosen to install.  
If the list is not correct, you can use the **Previous** button to navigate back so you can make corrections.
19. Click **Next** to start the installation.  
A progress bar indicates the status of the installation process.
20. When the Installation Complete window appears, click **Done**.  
The installer exits.
21. After installation is complete, set the WL\_HOME variable to the directory in the product installation directory that you indicated for WebLogic Server in step 16.
22. Export WL\_HOME. For example:

```
export WL_HOME=your_installation_directory/wlserver_10.3
cd $WL_HOME/server/native/hpux11/IPF32/
```

## The Console Installer

This section contains instructions for using the console installer to install Oracle Communications Services Gatekeeper.

### Run the Console Installer on Windows

To run the console-based Windows installer:

1. Log in to the target system.
2. Change to the directory where you have copied the installation program. You acquire this program either from a Oracle Communications Services Gatekeeper CD or the eDelivery Center.
3. To start the Windows installer in console mode, enter:

```
ocsg500_win.exe -mode=console [-log=logfilename]
```

The Welcome screen appears in the console.
4. Enter **Next** to continue with the installation.
5. In the Middleware Home Directory screen, if you have any existing Middleware home directories they are displayed. Do one of the following:



- To use an existing Middleware Home directory:
    - a. Enter the number associated with the directory in the console display.
    - b. Press `Enter`.
  - To create a new Middleware Home directory:
    - a. Enter `1`.
    - b. Press `Enter`.
    - c. Enter the full path of the new Middleware Home directory or `Next` to accept the default.
    - d. When prompted to confirm your choice, press `Enter` to confirm or `1` or `2` to change your selection.
6. In the Release 5.0.0.0 screen, specify the components that you wish to install:
- a. To remove components from the planned installation, enter the number in brackets following any components that you do not wish to install.  
The screen refreshes, and the check mark next to that component is removed.  
Note that you cannot install the Platform Development Studio without WebLogic Server and Oracle Communications Services Gatekeeper.
  - b. Enter `Next` to continue.
7. In the JDK Selection screen do one of the following:
- Select the number of the JDK you do not wish to install.
  - Enter `1` to add the path to your local JDK.
8. Enter `Next` to continue.
9. If you are including the Platform Development Studio in the installation, the Platform Development Studio Eclipse Plugin Path screen appears.  
In the Platform Development Studio Eclipse Plugin Path screen, enter `1`.
10. Enter the full path of the Eclipse plug-ins directory.  
The screen refreshes, and the path is displayed.
11. Enter `Next` to continue.
12. In the Choose Product Directories screen, specify the directories in which you want to install the Services Gatekeeper and WebLogic software. Do one of the following:
- To accept the default product directories, enter `Next`.
  - To create one or more new product directories, for each directory you are creating:
    - a. Enter the product index number to specify the product to be installed in the directory.
    - b. Enter the full path to the directory you are creating.
    - c. Enter `Next`.
    - d. When prompted, confirm your choice.
13. Enter `Next`.
14. In the Install Node Manager as a Windows Service screen, do one of the following:

- To install the Node Manager as a Windows Service:
    - a. Enter `Yes`.
    - b. Enter a Node Manager listen port at the prompt.
  - To skip installing the Node Manager as a Windows Service, enter `No`.
15. The Windows installer displays the Choose Shortcut Location screen if you have Administrator privileges and are performing an initial Services Gatekeeper installation. This screen is used to specify the Start menu folder for the Services Gatekeeper Start menu shortcuts.

Do one of the following:

- Enter 1 to select the All Users Start menu folder.

Only users with Administrator privileges can create shortcuts in the **All Users** folder. Therefore, if a user without Administrator privileges uses the Configuration Wizard to create domains, **Start** menu shortcuts to the domains are not created. In this case, users can manually create shortcuts in their local **Start** menu folders, if desired
  - Enter 2 to select the Local user's **Start** menu folder.

This option ensures that other users registered on this machine will not have access to the **Start** menu entries for this installation.
16. When prompted, confirm your choice.
17. Enter `Next` to continue.
18. In the Installation Summary window, make sure the list reflects all the products and JDKs you have chosen to install.
19. Enter `Next` to begin the installation.
20. When the installation is complete, press `Enter` to exit the installer.

## Run the Console Installer on UNIX/Linux

To run the platform-specific console-based UNIX/Linux installer:

1. Log into the target system.
2. Change to the directory where you have copied the installation program.

You acquire this program either from the Oracle Communications Services Gatekeeper CD or the eDelivery Center.

3. To start the installer in console mode, do one of the following:

- To start the Linux32 installer, enter:

```
ocsg500_linux.bin -mode=console [-log=logfilename]
```
- To start the Solaris\_Sparc32 installer, enter:

```
ocsg500_solaris_sparc.bin -mode=console [-log=logfilename]
```

The Welcome screen appears in the console.

4. Enter `Next` to continue with the installation.
5. In the Middleware Home Directory screen, if you have any existing Middleware home directories they are displayed. Do one of the following:
  - To use an existing Middleware Home directory:

- a. Enter the number associated with the directory in the console display.
    - b. Press `Enter`.
  - To create a new Middleware Home directory:
    - a. Enter 1.
    - b. Press `Enter`.
    - c. Enter the full path of the new Middleware Home directory or `Next` to accept the default.
    - d. When prompted to confirm your choice, press `Enter` to confirm or 1 or 2 to change your selection.
6. In the Release 5.0.0.0 screen, specify the components that you wish to install:
  - a. To remove components from the planned installation, enter the number in brackets following any components that you do not wish to install.

The screen refreshes, and the check mark next to that component is removed.

Note that you cannot install the Platform Development Studio without WebLogic Server and Oracle Communications Services Gatekeeper.
  - b. Enter `Next` to continue.
7. In the JDK Selection screen do one of the following:
  - Select the number of the JDK you do not wish to install.
  - Enter 1 to add the path to your local JDK.
8. Enter `Next` to continue.
9. If you are including the Platform Development Studio in the installation, the Platform Development Studio Eclipse Plugin Path screen appears.

In the Platform Development Studio Eclipse Plugin Path screen, enter 1.
10. Enter the full path of the Eclipse plugins directory.

The screen refreshes, and the path is displayed.
11. Enter `Next` to continue.
12. In the Choose Product Directories screen, specify the directories in which you want to install the Services Gatekeeper and WebLogic software. Do one of the following:
  - To accept the default product directories, enter `Next`.
  - To create one or more new product directories, for each directory you are creating:
    - a. Enter the product index number to specify the product to be installed in the directory.
    - b. Enter the full path to the directory you are creating.
    - c. Enter `Next`.
    - d. When prompted, confirm your choice.
13. Enter `Next`.
14. In the Installation Summary window, make sure the list reflects all the products and JDKs you have chosen to install.

15. Enter `Next` to begin the installation.
16. When the installation is complete, press `Enter` to exit the installer.

## Run the Generic Console Installer

To run the generic console installer:

1. Log into the target system.
2. If you are installing on a 64-bit system, ensure that a 64-bit JDK, or a hybrid 32/64-bit hybrid JDK, is installed on the target machine.  
  
If it is not installed, install one. See the certification matrix in [Chapter 2, "Supported Configurations"](#) for information about supported JDK versions.
3. Run the `java -version` command, or `java -d64 -version` command on platforms using a 32/64-bit hybrid JDK to ensure that the `JAVA_HOME` variable is set to a 64-bit JDK.

If `JAVA_HOME` is not correctly set, set it to point to the correct JDK.

4. Add the `bin` directory of the appropriate JDK (which you have installed separately) to the beginning of the `PATH` variable definition on the target system. For example:

```
PATH=$1.5 GB1.5 GBJAVA_HOME/bin:$PATH
export PATH
```

Here `JAVA_HOME` represents the full path to the JDK directory.

5. Change to the directory where you downloaded the installation program.
6. To start the generic installer in console mode, do one of the following:
  - To start the 32-bit generic installer, enter:  

```
java -jar ocsg500_generic.jar -mode=console [-log=logfilename]
```
  - To start the 32/64-bit hybrid generic installer, enter:  

```
java -d64 -jar ocsg500_generic.jar -mode=console [-log=logfilename]
```
  - To start the 64-bit hybrid generic installer on Solaris-SPARC, enter:  

```
java -Xmx1024m -jar ocsg500_generic.jar -mode=console [-log=logfilename]
```

The Welcome screen appears in the console.

7. Enter `Next` to continue with the installation.
8. In the Middleware Home Directory screen, if you have any existing Middleware home directories they are displayed. Do one of the following:
  - To use an existing Middleware Home directory:
    - a. Enter the number associated with the directory in the console display.
    - b. Press `Enter`.
  - To create a new Middleware Home directory:
    - a. Enter `1`.
    - b. Press `Enter`.



18. The Windows installer displays the Choose Shortcut Location screen if you have Administrator privileges and are performing an initial Services Gatekeeper installation. This screen is used to specify the Start menu folder for the Services Gatekeeper Start menu shortcuts.

Do one of the following:

- Enter 1 to select the All Users Start menu folder.

Only users with Administrator privileges can create shortcuts in the **All Users** folder. Therefore, if a user without Administrator privileges uses the Configuration Wizard to create domains, **Start** menu shortcuts to the domains are not created. In this case, users can manually create shortcuts in their local **Start** menu folders, if desired

- Enter 2 to select the Local user's **Start** menu folder.

This option ensures that other users registered on this machine will not have access to the **Start** menu entries for this installation.

19. When prompted, confirm your choice.
20. Enter `Next` to continue.
21. In the Installation Summary window, make sure the list reflects all the products and JDKs you have chosen to install.
22. Enter `Next` to begin the installation.
23. When the installation is complete, press `Enter` to exit the installer.
24. After installation is complete, set the `WL_HOME` variable to the product installation directory that you designated for WebLogic Server.
25. Export `WL_HOME`. For example:

```
export WL_HOME=your_installation_directory/wlserver_10.3
cd $WL_HOME/server/native/hpux11/IPF32/
```

## The Silent Mode Installer

Silent-mode installation is a way of choosing installation settings once and then using those settings to duplicate the installation on many machines. During installation in silent mode, the installation program reads your settings from an XML file that you create prior to beginning the installation. The installation program does not display any options during the installation process. Silent-mode installation works on both Windows and Linux/UNIX systems.

For general information on silent-mode installation, on WebLogic Server see “Running the Installation Program in Silent Mode” in *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/doc.1111/e14142/silent.htm](http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14142/silent.htm)

### About the `silent.xml` file

The entries in the `silent.xml` file correspond to the prompts that you would see if you used one of the interactive modes.

Incorrect entries in the **silent.xml** file can cause installation failures. To help you determine the cause of a failure, we recommend that you create a log file when you start the installation

The following is a sample version of a **silent.xml** file. Your input may be slightly different, depending on your installation.

```
<?xml version="1.0" encoding="UTF-8" ?>
<bea-installer>
<input-fields>
  <data-value name="BEAHOME" value="d:/ocsg" />
  <data-value name="INSTALL_NODE_MANAGER_SERVICE" value="no" />
  <data-value name="WLNGEclipseConfig.dir" value="d:/eclipse/plugin"/>
  <data-value name="LOCAL_JVMS" value="C:\oracle\java\jdk160_18">
</input-fields>
</bea-installer>
```

The following error can be ignored:

```
com.bea.plateng.domain.script.ScriptException: The template to read must be a jar
file containing a valid domain configuration
```

See the *Oracle WebLogic Server Installation Guide* for more information.

## Returning Exit Codes to the Console

When run in silent mode, the installation program generates exit codes that indicate the success or failure of the installation. [Table 4-1](#) describes these exit codes:

**Table 4-1 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 are launching the silent-mode installation process from a script, you can choose to have these exit codes displayed to the console. The following is a sample command file that invokes the WebLogic Platform installation in silent mode and echoes the exit codes to the console from which the script is executed.

### Example 4-1 Return exit codes

```
rem Execute the installer in silent mode
@echo off
ocsg500_win.exe -mode=silent -silent_xml=silent.xml -log=logfilename

@rem Return an exit code to indicate success or failure of installation
set exit_code=%ERRORLEVEL%

@echo.
@echo Exitcode=%exit_code%
@echo.
@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
```

@echo.

## Run the Silent-Mode Installer on All Platforms

To run the silent mode installer:

1. Create a **silent.xml** file, as described in [About the silent.xml file](#).
2. To run the silent installer, do one of the following:
  - To start the platform-specific Windows32 installer in silent mode, enter:  

```
ocsg500_win.exe -mode=silent -silent_xml=silent.xml [-log=logfilename]
```
  - To start the platform-specific Linux32 installer in silent mode, enter:  

```
ocsg500_linux.bin -mode=silent -silent_xml=silent.xml [-log=logfilename]
```
  - To start the platform-specific Solaris-Sparc32 installer in silent mode, enter:  

```
ocsg500_solaris_sparc.bin -mode=silent -silent_xml=silent.xml  
[-log=logfilename]
```
  - To start the generic 32-bit installer in silent mode, enter:  

```
java -jar ocsg500_generic.jar -mode=silent -silent_xml=silent.xml  
[-log=logfilename]
```
  - To start the generic 32/64 -bit hybrid installer in silent mode, enter:  

```
java -d64 -jar ocsg500_generic.jar -mode=silent -silent_xml=silent.xml  
[-log=logfilename]
```
  - To start the generic /64 -bit hybrid installer in silent mode, enter:  

```
java -Xmx1024m -jar ocsg500_generic.jar -mode=silent -silent_xml=silent.xml  
[-log=logfilename]
```

The installation proceeds with no prompts.

## Where to Go From Here

After installing Services Gatekeeper, you must configure the Services Gatekeeper's Administrative Domain. See [Configuring the Domain for Oracle Communications Services Gatekeeper](#).

If you wish to be able to start and stop servers remotely, for example by using the Administration Console, you must set up Node Manager on each server. If you installed in Windows, the installer provided an option to install the Node Manager as a Windows service. For information on setting up and configuring the Node Manager on other platforms, see *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13740/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13740/toc.htm)



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# Configuring the Domain for Oracle Communications Services Gatekeeper

This chapter describes how to use the Oracle Communications Services Gatekeeper domain configuration tools to set up Oracle WebLogic Server for use with Oracle Communications Services Gatekeeper. It covers:

- [Understanding Service Gatekeeper Domain Configuration](#)
- [Configuring a Domain With the Graphical Mode Configuration Wizard](#)
- [Using the Console Configuration Wizard](#)
- [Configuring a Domain with Oracle WebLogic Scripting Tool Scripts](#)
- [Where to Go From Here](#)

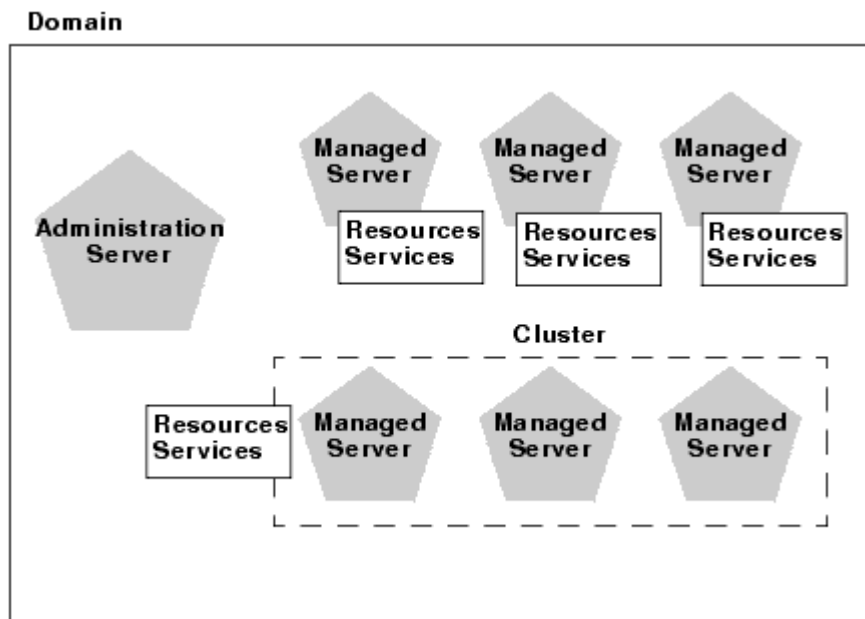
Before you follow the instructions in this chapter to configure a domain, you should have:

- Read [Task Overview](#) for an overview of the entire process.
- Installed the database, as covered in [Installing the Database](#) and the software, as covered in [Installing Oracle Communications Services Gatekeeper](#), and have the database administrator username and password available.

## Understanding Service Gatekeeper Domain Configuration

In order to run Oracle Communications Services Gatekeeper, its container, Oracle WebLogic Server, must be given basic information about the various parts of the system. This is called *configuring the domain*. A domain is the basic administrative unit in Oracle WebLogic Server. It consists of an *Administration Server* and, usually, one or more *Managed Servers*, which may be associated into *clusters*.

**Figure 5–1 Oracle WebLogic Domains**

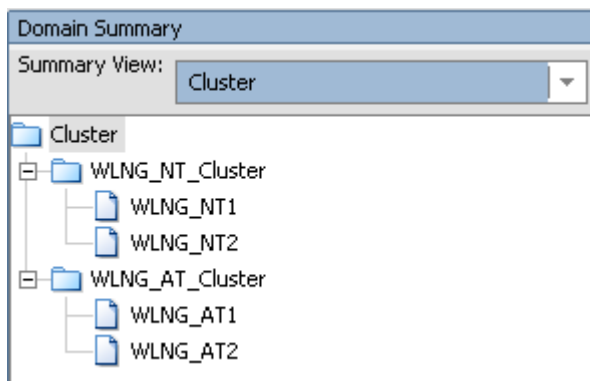


The Administration Server provides a central point for managing the domain and providing access to the Oracle WebLogic Server administration tools.

A single Oracle WebLogic Server instance can function as both the Administration Server and a Managed Server, depending on the needs of the installation. For example, developers creating communication service extensions using the Platform Development Studio commonly might run both the Administration Server and Managed Servers on a single machine.

Managed Servers are often grouped together into clusters. Clusters are groups of server instances that work together to provide scalability and high availability. Clusters improve performance and provide failover should a server instance become unavailable. The servers within a cluster can run on the same machine, or they can reside on different machines. To the client, a cluster appears as a single Oracle WebLogic Server instance.

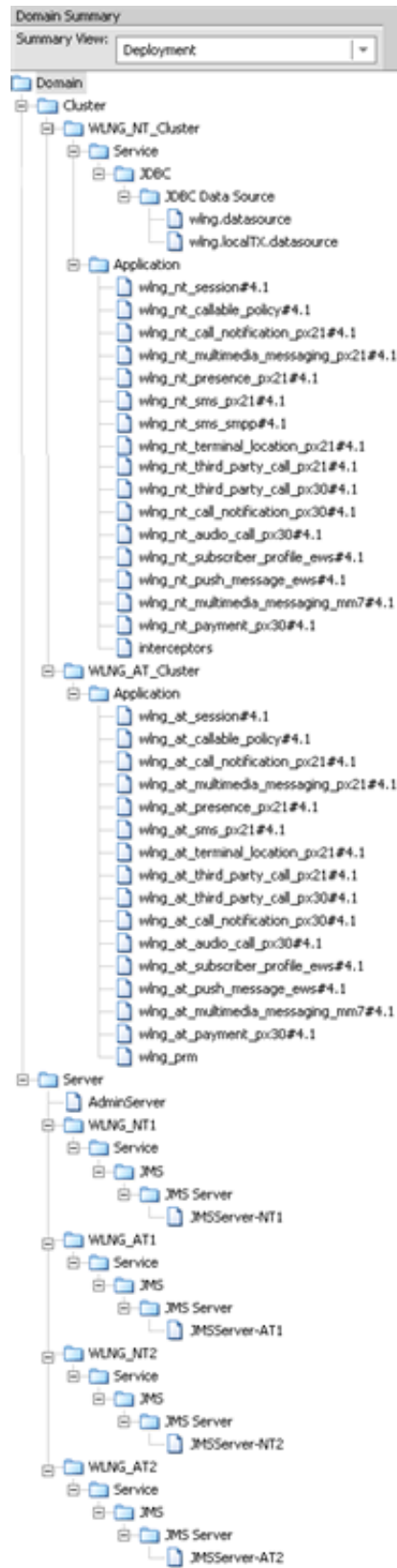
**Figure 5–2 Initial Server Instances Added to Clusters**



Managed Servers, or the clusters into which they are linked, host application components - in this case, the communication services - and resources, which are also deployed and managed as part of the domain. In [Figure 5–3](#) below, the applications

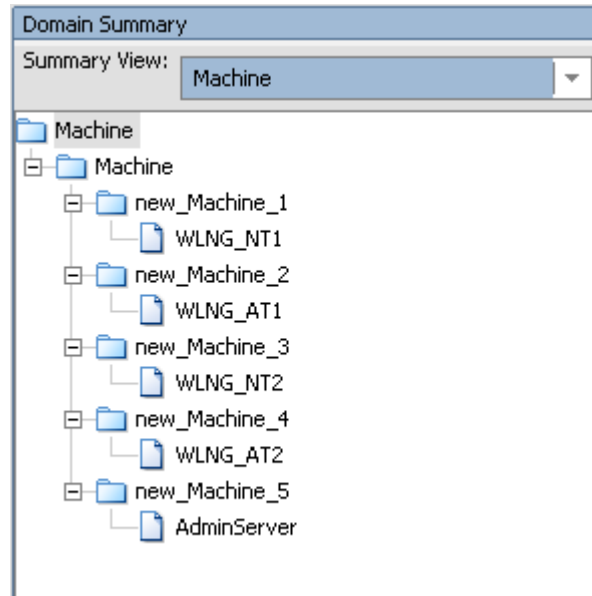
(`wlng_nt_communication-service-name#4.1` and `wlng_nt_communication-service-name#4.1`) are assigned to the two clusters (**WLNG\_NT\_Cluster** and **WLNG\_AT\_Cluster**). But each Network Tier server (**WLNG\_NT1** and **WLNG\_NT2**) must have its own JMS resources, so they are shown per server.

**Figure 5-3 Managed servers/clusters host applications and resources**



Each server instance is also assigned to a *Machine*, a logical representation of actual hardware. The Machine representation is used by the Administration Server to start and stop remote servers using the Node Manager. Multiple server instances can run in a single Machine.

**Figure 5–4 Servers are assigned to Machines**



For more information on Oracle WebLogic Server domains, see “Introduction” and the following sections in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e14140/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e14140/toc.htm)

All servers must have their domains configured. You can either use one of the methods below to manually configure each server in your installation, or you can configure the domain on your Administration server and then use the **pack** and **unpack** commands provided by WLS to package the configuration data for copying to all the other servers. For more information on pack and unpack, see “Overview of the Pack and Unpack Commands” in *Oracle Fusion Middleware Creating Templates and Domains Using the Pack and Unpack Commands* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e14144/intro.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e14144/intro.htm)

The scripts themselves are located in the **common/bin** directory. In the default installation, this would be `Services_Gatekeeper_Home\wlserver_10.3\common\bin`.

## Configuring a Domain With the Graphical Mode Configuration Wizard

Use the following instructions explain how to use the Services Gatekeeper GUI-based Configuration Wizard to configure Oracle WebLogic Server for Oracle Communications Services Gatekeeper.

To do so, the console attached to the domain configuration system must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX/Linux systems do. If you attempt to start the configuration

program in graphical mode on a system that cannot support a graphical display, the configuration program automatically starts console-mode installation.

## Configuring a Domain with the GUI Configuration Wizard - Windows

You can start the Configuration Wizard in graphical mode from either the Windows Start menu or from the command line.

- To start the GUI Configuration Wizard from the Windows Start menu, choose the Configuration Wizard option from the BEA program group in the Windows Start Menu:

```
Start->Programs->Oracle Communications Services Gatekeeper 5.0-> OCSG  
5.0->Tools->Configuration Wizard
```

---

---

**Note:** If you have used the GUI-based installer, and the Run Quickstart box is checked in the Installation Complete window, the Quickstart window opens automatically. Simply click **Start Domain Configuration Wizard** to launch the Wizard.

---

---

See the [Configuring Domain Settings](#) section for details on how to fill in the domain settings.

- To start the GUI Configuration Wizard from the command line:
  1. Log in to the target system
  2. Open a command prompt window
  3. Go to the `Middleware_Home\common\bin` subdirectory. For example:

```
cd c:\Middleware_Home\wlserver_10.3\common\bin
```
  4. At the prompt, type **config** and press **Enter**.
  5. The Configuration Wizard starts in graphical mode and the **Welcome** screen appears. See the [Configuring Domain Settings](#) section for details on how to fill in the domain settings.

---

---

**Note:** You can also use Explorer to find the `config.cmd` file in `c:\Middleware_Home\wlserver_10.3\common\bin`, and simply double-click it.

---

---

## Configuring a Domain with the GUI Configuration Wizard - UNIX/Linux

To start the GUI Configuration Wizard on a UNIX/Linux system:

1. Log in to the target system
2. Open a command shell window
3. Go to the `/common/bin` subdirectory. For example:

```
cd Services_Gatekeeper_Home/wlserver_10.3/common/bin
```
4. Invoke the following script:

```
sh config.sh
```

5. The Configuration Wizard starts in graphical mode and the **Welcome** screen appears. See the [Configuring Domain Settings](#) section for details on how to fill in the domain settings.

## Configuring Domain Settings

This section assumes that you have followed the instruction in either [Configuring a Domain with the GUI Configuration Wizard - Windows](#) or [Configuring a Domain with the GUI Configuration Wizard - UNIX/Linux](#) and launched the GUI Configuration Wizard and have the **Welcome** screen. The GUI Configuration Wizard screens prompt you to enter specific information about your system and configuration. For instructions on responding to the prompts during installation, see the following sections.

To complete this section you need the name of the database name, database instance name, any listening port numbers, and the name and password of a database user to use. Services Gatekeeper domains require this connection information.

---

---

**Note:** If you are going to be using any CORBA-based functionality that in one way or another connects to a machine other than your own, you should not use the value "localhost" in any of your configuration choices.

---

---

### Welcome Screen - Create or Update a WebLogic Domain

1. Do one of the following:
  - Select the **Create a new WebLogic domain** radio button to create a new domain.
  - Select the **Extend an existing WebLogic domain** to extend an existing domain with additional components.
2. Click **Next** to proceed with the installation.

You may cancel the installation at any time by clicking **Exit** and you may go back to a previous window by clicking **Previous**.

### Select Domain Source Screen

1. Select the **Generate a domain configured automatically to support the following products** radio button. This option offers you these standard options for pre-configured domains based on popular products and options:

Select the appropriate template depending on your needs:

- **Basic Oracle Communications Services Gatekeeper Domain**  
Creates an all-in-one domain, with the Access and Network Tier and the Administration Server all on a single machine. This configuration is common for development machines.
- **OCSG Basic HA configuration**  
Creates a basic domain with two servers, each with an AT and an NT instance and a database. This configuration can be expanded later in the process.
- **OCSG Domain with Access and Network Clusters**

Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster. This configuration can be expanded later in the process.

- **OCSG Domain with Access and Network Clusters with Oracle RAC Configuration**

Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster. This configuration can be expanded later in the process. It also creates the additional data sources required for use with an Oracle RAC based installation.

- **OCSG OSB Integration Configuration**

Creates a domain for integration with Oracle Service Bus (OSB), using the Service Oriented Architecture (SOA) Facade. If you are using this template, you need additional special information. Please look in [Installing SOA Facades](#) for this information.

### Specify Domain Name and Location Screen

1. Accept the default domain name or create a new name in the **Domain Name** text box.
2. Accept the default domain location or click the **Browse** button to change the location.
3. Click **Next** to save your changes and continue.

### Configure Administrator User Name and Password Screen

1. Specify the main Administrative user in the **Name** text box.  

This name is used to boot the Administration Server and connect to it. For setup and testing, Oracle suggests that you use `weblogic`. User names are case sensitive. Do not use commas or any characters in the following comma-separated list:

\t, <, >, #, |, &, ?, ( ), { }
2. Specify the password for the Administrative user in the **User password** text box.  

The password must contain a minimum of eight case-sensitive characters, at least one of which is not alphabetic.
3. Re-enter the password in the **Confirm user password** text box.
4. (Optional) Enter an informal description for this username in the **Description** text box.
5. Click **Next** to save your changes and continue.

### Configure Server Startup Mode and JDK Screen

1. On the left side of the window, select the appropriate startup mode for your installation:
  - **Development Mode**
  - **Production Mode**

**Note:** If you select **Production Mode**, you should not enable SSL unless you have a trusted key. For more information on startup modes, see “Development vs.



Production Mode Default Tuning Values” in *Oracle Fusion Middleware Performance and Tuning for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13814/wls\\_tuning.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13814/wls_tuning.htm)

2. On the right side of the window, select the **Available JDKs** radio button.
3. Highlight the appropriate JDK.
4. Click **Next** to save your changes and continue.

### Configure JDBC Data Sources Screen

This screen appears if you are installing a non-RAC based Gatekeeper.

Use this screen to specify connection information between Services Gatekeeper 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 it is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection.

1. Configure **wlng.datasource**, **wlng.localTX.datasource**, and **wlng.localTX.datasource**.

Select the **wlng.datasource**, **wlng.localTX.datasources**, and (for SOA domains) **wlng.localTX.datasource** check boxes to configure these data sources simultaneously. To configure these data sources separately, make adjustments in the data source for the transactional data source.

Typically, fields you may need to edit include:

- **Vendor:** Select the database vendor from the list; the default is **Oracle**.
  - **Driver:** Select the driver for your database type from the list; the default is Oracle’s Driver (Thin) for Instance connections. Non-RAC domains need to use the **non-XA** thin driver for **wlng.localTX.datasource**.
  - **Username:** The Oracle Communications Services Gatekeeper user name you created when you installed the database. The default is **SETME\_DBUSER**.
  - **Password:** The Oracle Communications Services Gatekeeper password you created when you installed the database (it is not be echoed on the screen).
  - **DBMS/Service:** Enter name of the database you created in [Installing the Database](#); the default is **SLEE\_DB**.
  - **Host Name:** Where the database is located; 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**.
  - **Configure selected data sources as RAC multi data sources in the next panel.** Check this check box if you are using Real Application Cluster features.
2. Click **Next** to save your changes and continue.
  3. The **Test JDBC Data Sources** screen appears and automatically tests your data source configurations.

A green check displayed in the **Status** column indicates that the configuration is valid. A red circle and slash indicates a problem. To correct any problems, click **Previous** to return to the **Configure JDBC Data Sources** screen and make the necessary changes and Click **Next**. When the Test JDBC Data Sources screen reappears, click **Test Connections** to retest the configurations.

### (As Needed) Configure RAC Multi-Data Sources

If you checked the **Configure selected data sources as RAC multi data sources in the next panel** box in the **Configure JDBC Data Sources** screen, this screen appears next. Follow these steps to configure JDBC data sources:

1. Check the boxes next to **wlng.datasource**, **wlng.TX.datasources** and (if applicable) **wlng.localTX.datasource** to configure them all at the same time.
2. Enter the service name of a database to connect to in the **Service Name** text box.
3. Enter a database user account name in the **Username** text box.
4. Enter the password for the user account password in the **Password** text box.
5. Enter the IP address or DNS name of the server that hosts the database in the **Host Name** field.
6. Enter the database name in the **Instance Name** text box. Naming schemes vary by database.
7. Enter a port on which the database listens for connection requests in the **Port** text field.
8. Click **Add** to add the data source.
9. Add as many data sources as you need. Typically only one is configured per database.
10. Click **Next** to save your changes and continue to the next screen.

### Select Optional Configuration Screen

Leave these boxes unchecked to accept the default values for the selected options. These settings are described in the [Optional Configuration Screens](#) section.

RAC domains require that you at least configure an administration server using the [Configure the Administration Server \(Administration Server Screen\)](#) section

### Configuration Summary Screen

Displays the domain details. Use the Summary View drop-down list to choose a category view to use. The options vary with your configuration and may include:

- Deployment
- Application
- Service
- Cluster
- Machine
- JDBC Multi Data Source
- JMS Server

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

## Optional Configuration Screens

The following sections explain how to configure options for the **Optional Configuration** screens. A few of these settings are required for certain domain configurations.

### Configure the Administration Server (Administration Server Screen)

1. Replace **AdminServer** with the name of your administration server in the **Name** text box.
2. Replace **host-admin.bea.com** with the IP address or DNS name of your administration server in the **Listen address** text box.
3. Replace **7001** with a port number on your administration server to use as a listening port. in the **Listen Port** text box.
4. (Optional) Enter a port number to use as an SSL listening port in the **SSL listen port** text box.
5. (Optional) check the **SSL enabled** check box to use SSL.  
Do not enable SSL unless you have a trusted key.
6. Click **Next** to save your changes and continue.

### JMS Distribution Destination (Select JMS Distributed Destination Type Screen)

1. Select Uniform distribution Destination (**UDD**) or Weighted Distributed Destination (**WDD**) settings for each of your JSM system resources.  
See the screen text for more information.
2. Click **Next** to save your changes and continue.

### Managed Servers, Clusters and Machines (Configure Managed Servers Screen)

Use this window to add or change connection information for Managed Servers. Each Managed Server is an instance of WebLogic Server. Some information may already be filled in.

1. Change the **Listen address** of each of your servers, based on your installation values. You can add Managed Server instances at this time. (You can also do this using the Administration Console at any time.).

**Note:** The **Listen address** and **Listen port** per server combination must be unique. The values for the **Listen address** can include alphanumeric characters, dots [.] , and dashes [-] only.

2. Replace **7001** with a port number on your administration server to use as a listening port. in the **Listen Port** text box.
3. (Optional) Enter a port number to use as an SSL listening port in the **SSL listen port** text box.
4. (Optional) check the **SSL enabled** check box to use SSL.  
Do not enable SSL unless you have a trusted key
5. Click **Next** to save your changes and continue.
6. When finished, configure the new system by returning to the **Select Optional Configuration** screen, checking the **Deployments and Services** checkbox, and then clicking **Next**.

The Target Deployments to Clusters or Server screen appears. See "[Deployments and Services \(Target Deployments to Clusters or Server Screen\)](#)" for details.

### Deployments and Services (Target Deployments to Clusters or Server Screen)

1. **Assign services to servers or clusters**

This window does not appear if you selected Create Oracle Communications Services Gatekeeper Basic Domain.

Use this window to add any additional Managed Servers you listed in the **Configure Managed Servers** window to clusters configured in the **Configure Clusters** window. Select the appropriate cluster in the right pane, the appropriate Managed Server in the left pane, and assign them to each other by clicking the **right arrow button**.

## 2. Configure Machines/Configure Unix Machines

Use this window to add or change information about **Machines**. 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 more information about the various fields, see “Configuring Machines” in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e14140/custom.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e14140/custom.htm)

Click **Next** to continue.

## 3. Assign Servers to Machines

This window does not appear if you selected Create Oracle Communications Services Gatekeeper Basic Domain

Use this window to assign Servers (either Administration or Managed) to their appropriate Machines, if necessary. Select the appropriate Machine in the right pane and the server(s) in the left pane and assign them to each other by clicking the **right arrow button**.

Click **Next** to continue.

## RDBMS Security Store (Configure RDBMS Security Store Database Screen)

1. Select a **Database Type** from the drop-down list.
2. A driver is automatically entered in the **Driver** text box. If necessary, select another driver from the drop-down list.  
The correct Class Name for the driver is automatically filled in.
3. Enter a database session identifier in the **DBMS SID** text box.
4. Enter a database name in the **DBMS Host** text box.
5. (As needed) Replace the default port number in the **DBMS Port** text box.
6. Enter a DBMS administrator user name in the **User Name** text box.
7. Enter a password for the DBMS administrator in the **User Password** text box.
8. Confirm the password.
9. Add any required items to the **Additional Properties** text box.
10. Click **Next** to save your changes and continue.

## Using the Console Configuration Wizard

Use the following instructions if you wish to use the Console-based Configuration Wizard to configure Oracle WebLogic Server for Oracle Communications Services Gatekeeper. Specific instructions on launching the Wizard by platform are found after the next section.

### The Console Configuration Wizard Interface

The Console Configuration Wizard is designed to mimic as closely as possible the choices available in the GUI version, but in a completely text-based form. The following images give you a sense of the way the Console Screen displays certain types of workflow choices.

Most Console Configuration Wizard screens have the same pattern: the top of the screen indicates what is being configured; the center of the screen indicates the range of options; and the bottom of the screen prompts for user input.

Figure 5-5 Select Options

```

C:\ config -mode=console
<----- Oracle Communications Services Gatekeeper Configuration Wizard ----->
Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

  Name*   Listen address   Listen port   SSL listen port   SSL enabled
  ----   -
1 WLNG_NT1 host-nt1.bea.com 8001             N/A               false
2 WLNG_AT1 host-at1.bea.com 8001             N/A               false
3 WLNG_NT2 host-nt2.bea.com 8001             N/A               false
4 WLNG_AT2 host-at2.bea.com 8001             N/A               false

Use above value or select another option:
1 - Add
2 - Modify
3 - Delete

Enter option number to select OR [Exit][Previous][Next]> 1_

```

In Figure 5-5 above, the top of the *current* screen is marked by the Oracle Communications Services Gatekeeper Wizard banner. The top part of the screen displays the set of configuration parameters that can be set - in this case, configuration information for Managed Servers. The center of the screen indicates the range of options - in this case, Add a server, Modify a server, or Delete a server. The bottom part of the screen prompts for the user input that is available in this screen - in this case

Enter option number to select or [Exit][Previous][Next]>

Here you can either enter an option (indicated by number) or use one of the standard navigation commands. In this case, option 1, Add a server, has been chosen. Confirm the entry by pressing the Enter key:

Figure 5-6 Add a Managed Server

```

C:\> config -mode=console

<----- Oracle Communications Services Gatekeeper Configuration Wizard ----->
Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

  Name*   Listen address   Listen port   SSL listen port   SSL enabled
  ----   -
1 WLNG_NT1 host-nt1.bea.com   8001           N/A              false
2 WLNG_AT1 host-at1.bea.com   8001           N/A              false
3 WLNG_NT2 host-nt2.bea.com   8001           N/A              false
4 WLNG_AT2 host-at2.bea.com   8001           N/A              false

Enter name for a new OR [Exit][Previous][Next]> WLNG_NT3_

```

In Figure 5-6, the bottom of the screen displays the user input prompt:

```
Enter name for a new OR [Exit][Previous][Next]>
```

The name for the new Managed Server to be added, `WLNG_NT3`, has been filled in. Again the input is confirmed by pressing the Enter key.

Figure 5-7 Finish Work on the Selected Item

```

C:\> config -mode=console

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

  Name*   Listen address   Listen port   SSL listen port   SSL enabled
  ----   -
1 WLNG_NT1 host-nt1.bea.com   8001           N/A              false
2 WLNG_AT1 host-at1.bea.com   8001           N/A              false
3 WLNG_NT2 host-nt2.bea.com   8001           N/A              false
4 WLNG_AT2 host-at2.bea.com   8001           N/A              false
5-> WLNG_NT3 All Local Addresses 7001           N/A              false

Use above value or select another option:
1 - Modify "Name"
2 - Modify "Listen address"
3 - Modify "Listen port"
4 - Modify "SSL enabled"
5 - Done

Enter option number to select OR [Exit][Previous][Next]> 5

```

In Figure 5-7 the new Managed Server, `WLNG_NT3`, has been added. Note the right arrow (`->`) next to the new Server's name. This indicates that this is the selected item, and that any options chosen will affect that item. To finish with this server and select another item in the list, enter `5 - Done` and the Enter key.

## Launch the Console Configuration Wizard - Windows

To start the Console Configuration Wizard:

1. Log in to the target system
2. Open a command prompt window
3. Go to the `Services_Gatekeeper_Home\common\bin` subdirectory. For example:  

```
cd c:\Services_Gatekeeper_Home\wlserver_10.3\common\bin
```
4. At the prompt, type `config -mode=console` and press Enter.
5. The Configuration Wizard starts in console mode.

## Launch the Console Configuration Wizard - UNIX/Linux

To start the Console Configuration Wizard:

1. Log in to the target system
2. Open a command shell window
3. Go to the `/common/bin` subdirectory. For example:  

```
cd c:\Services_Gatekeeper_Home\wlserver_10.3\common\bin
```
4. Invoke the following script:  

```
sh config.sh -mode=console
```
5. The Configuration Wizard starts in console mode

## Create Your Domain

To create your domain, respond to the prompts in each section by entering the number associated with your choice, pressing Enter, or typing next (or n) to accept the current selection. For information on the different options see the [Configuring Domain Settings](#) section. The screen names are the same for both the Graphical and Console Domain Configuration Wizards.

---



---

**Note:** If you are going to be using any CORBA based functionality that in one way or another connects to a machine other than your own, you should not use the value "localhost" in any of your configuration choices.

---



---

The right arrow (->) indicates the value currently selected. To quit the Configuration Wizard, enter Exit in response to any prompt. To review or change your selection, enter Previous at the prompt.

Instead of typing complete words when you want to enter [Exit], [Previous], and [Next], you can use the following one-letter shortcuts: x, p, and n, respectively.

## Configuring a Domain with Oracle WebLogic Scripting Tool Scripts

This section explains how to monitor and manage Oracle WebLogic Server instances and domains using the Oracle WebLogic Scripting Tool (WLST) instead of the Configuration Wizard GUI.

The WLST scripting environment is based on the Java scripting interpreter, Jython. For more general information on WLST, see "Introduction and Roadmap" in *Oracle Fusion*

Middleware Oracle WebLogic Scripting Tool at:  
[http://download.oracle.com/docs/cd/E12839\\_01/web.1111/e13715/intro.htm](http://download.oracle.com/docs/cd/E12839_01/web.1111/e13715/intro.htm)

---

---

**Caution:** WLST is a powerful, flexible tool, and has a significant learning curve associated with its effective use. If you do not know how to use WLST and do not wish to spend the time to become familiar with it, consider using one of the Configuration Wizards to set up your domains instead.

---

---

## Set Up Your Environment

You must set a number of environment variables for WLST to run properly. To simplify this, the Oracle Communications Services Gatekeeper installer provides shell/cmd scripts that must be run before WLST is invoked. The scripts are located in *Services\_Gatekeeper\_Home/wlserver\_10.3/server/bin*. There are both **setWLSEnv.sh** and **setWLSEnv.cmd** versions available. It is usually enough simply to run the appropriate script, but some shells may require using source, as in:

```
source Services_Gatekeeper_Home/wlserver10.3/server/bin/setWLSEnv.sh
```

If this still does not work, you may need to change shells. There have been some issues reported with bash, particularly on HP-UX machines. If you are having problems with your shell, change to an **sh** shell before running the script.

## Choose from the Provided Scripts

Oracle Communications Services Gatekeeper provides five WLST scripts to set up your environment. The scripts are located in the *Services\_Gatekeeper\_Home/wlserver10.3/common/templates/scripts/wlst/* directory:

- **basic-ocsg-ha.py** uses the domain template **basic-ocsg-ha-domain.jar** for its basic setup. This creates a domain with two servers, each with an AT and an NT instance and a database. Database replication must be set up separately.
- **ocsg-cluster.py** uses the domain template **ocsg-domain.jar** for its basic setup. This creates an all-in-one domain typical of development environments.
- **access-network-cluster.py** uses the domain template **ocsg-access-network-domain.jar** for its basic setup. This creates a domain with separate Access and Network clusters.
- **access-network-rac-cluster.py** uses the domain template **ocsg-access-network-rac-domain.jar** for its basic setup. This creates a domain with separate Access and Network clusters with the additional data sources that a RAC installation requires.
- **ocsg-osb-integ.py** uses the domain template **ocsg-osb-integ-domain.jar** for its basic setup. This creates a domain for integration of Oracle Communications Services Gatekeeper with Oracle Service Bus.

If you are configuring an HP-UX installation, you must run the script using the `-Djava.security.egd` flag. For example, you would invoke the **basic-ocsg-ha.py** script by typing:

```
java -Djava.security.egd=/dev/random weblogic.WLST  
basic-ocsg-ha.py
```



## Edit the Scripts

- The **wlmg-cluster.py** script sets up a development machine, use this script as is.
- If you are using one of the other four scripts, you must set a few variables found at the top of the script, and, in some situations, edit a few other values. See the [Configure Multi-cluster Settings](#) section for details.
- If you are using one of the two other scripts **and** you also wish to create additional servers, you must make more complex edits. See the [Adding Servers to a Multi-cluster Configuration](#) section.
- If you wish to prevent communication services from ever being deployed, you may edit whichever script you are using. See [Keep unused communication services from being deployed](#).

It is also possible to remove communication services after the initial deployment. See the *System Administrator's Guide* for information on accomplishing this.

### Configure Multi-cluster Settings

If you are setting up the standard version of one of the multi-cluster domains, only a few variables need to be set at the top of the script, in the section called **Configuration (INPUT) Parameters**.

#### **Example 5-1 The Configuration (INPUT) Parameters Section from Access-Network-rac.py**

```

=====
# Configuration (INPUT) Parameters
=====

# listen address input parameters
# example: hostname can be DNSName or IPAddress

AdminServerListenAddress = "host-admin.bea.com"
AdminServerListenPort    = 7001
NT1ServerListenAddress   = "host-nt1.bea.com"
NT1ListenPort            = 8001
NT2ServerListenAddress   = "host-nt2.bea.com"
NT2ListenPort            = 8001
AT1ServerListenAddress   = "host-at1.bea.com"
AT1ListenPort            = 8001
AT2ServerListenAddress   = "host-at2.bea.com"
AT2ListenPort            = 8001

NTClusterAddress         = "host-nt1.bea.com:8001,host-nt2.bea.com:8001"
ATClusterAddress         = "host-at1.bea.com:8001,host-at2.bea.com:8001"

NTClusterMultiCastAddress = '237.0.0.101'
NTClusterMultiCastPort    = 8050
ATClusterMultiCastAddress = '237.0.0.102'
ATClusterMultiCastPort    = 8050

# DataSource Settings

# RAC Node-1 Settings

RACNode1URL              = "SETME_URL"

# RAC Node-2 Settings

```

```
RACNode2URL      = "SETME_URL"

# Database settings

OracleXADriver   = "SETME_XADRIVER"
OracleNonXADriver = "SETME_nonXADRIVER"
DBUser           = "SETME_USER"
DBPassword       = "SETME_PASSWORD"
```

### Make these edits to Configure a Multi-cluster Domain

1. Set the `Listen Address` and `Listen Port` for the Administration Server, the two Access Tier servers, and the two Network Tier servers.
  - Replace the `host*.bea.com` values with either the DNS name or the IP Address of the appropriate servers.
  - Replace the `Listen Port` values as necessary. The `Listen Address:Port` combinations must be unique.
1. Fill in the appropriate `Listen Address:Port` combinations to assign the servers to the appropriate clusters. The entry should be comma delimited, with no spaces.
2. Fill in the appropriate Multicast Addresses per cluster.
3. Set the appropriate URLs for each of the RAC instances (only in RAC scripts)
4. Set the appropriate values for the transactional (XA) and localTX(nonXA) datasources (in RAC scripts).  
Set the appropriate values for the `wlmg.datasource` (in non-RAC scripts)
5. Set the appropriate values for the `wlmg.localTX.datasource`. The values should be non-XA (only in non-RAC scripts).

The following change may also need to be made:

6. If you want to be able to use the Administration Console and Node Manager to start remote servers, you must change the `NodeManager ListenAddress` values in the Configure Managed Servers section. To do so edit the following line for each managed server  

```
set('ListenAddress', 'localhost')
```

to change localhost to the correct ListenAddress.
7. The default domain user is **weblogic** and the default password is **weblogic123**. You can modify these values in the script.

### Adding Servers to a Multi-cluster Configuration

If you want to use the WLST script to set up a multi-cluster domain and, at the same time, to add additional servers, first make the edits in the [Configure Multi-cluster Settings](#) section. Then make the following additional edits listed in this section. The specific edits depends on how your particular installation is set up.

WLST in offline mode, which is the mode that Oracle Communications Services Gatekeeper scripts use, can access and update only those configuration objects that have been previously persisted to a configuration file. All the provided WLST scripts create this configuration file automatically as they run, but each adds only those objects that are specified in the domain templates. If you need to add more

configuration objects, such as additional Managed Servers or Machines, you must add statements to the script to create them before you can configure them.

You can also add servers and machines using the Administrative Console GUI after you set up your core domain. This is a simpler way of accomplishing the same goal.

### Create Machines

For example, if you need to **add additional Machines**, you must create them in the script *before* you assign Managed Servers to them.

**Table 5–1 Code to Create Additional Machines**

Comment Section	Code to add	Value
Configure managed servers	<pre>cd('/') create('new_Machine_5', 'Machine') cd('Machine/new_Machine_5') create('new_Machine_5', 'NodeManager')</pre>	Add as many of these statements as you need, replacing <code>new_Machine_5</code> with whatever value is appropriate

### Create Managed Servers

After you create the Machine, you can assign Managed Servers to them. You can also add new Managed Servers. In the code below, the new Managed Server `WLNG_NT3` is created and then assigned to `new_Machine_5`, created above.

**Table 5–2 Code to Create Additional Managed Servers**

Comment Section	Statement to edit	Value
Configure managed servers	<pre>cd('/') create('WLNG_NT3', 'Server') cd('Server/WLNG_NT3') set('ListenPort', 8001) set('ListenAddress', 'myserver5') set('Machine', 'new_Machine_5')</pre>	Create new servers as needed, and set the ListenAddress

### Set NodeManager Listen Address

You must also add a section to configure any new Machine (and its Node Manager) being added.

**Table 5–3 Setting Listen Address for Node Manager**

Comment Section	Statement to add	Value
Configure managed servers	<pre>cd('/') cd('Machine/new_Machine_5') set('Name', 'new_Machine_5') set('Address', 'new_Machine_5') cd('NodeManager/new_Machine_5') set('ListenAddress', 'myserver5') set('ListenPort', 5556)</pre>	One section per added Machine.

### Assign New Managed Servers to the appropriate cluster

You must assign any newly-created managed servers to their appropriate cluster by adding an “assign server” line.

**Table 5–4 Assigning New Managed Servers**

Comment Section	Statement to add	Value
<b>Configure a cluster and assign the Managed Servers to that cluster.</b>	<pre>cd('/') [standard] assign('Server', 'WLNG_ NT3','Cluster','WLNG_NT_Cluster')</pre>	One line per added Managed Server.

### Keep unused communication services from being deployed

It is always possible to remove communication services after the initial deployment of Services Gatekeeper. If you know that your installation is not using one or more communication services and you prefer that they not be deployed at all in your system, you can add the following information to your configuration script. Remember that all communication services consist of two EAR files, an Access Tier version and a Network Tier version. You will need to address both files to completely remove the communication service.

For example, to keep the PX 3.0 Third Party Call communication service from being deployed, add the following to your script:

```
=====
# Unassign applications to target
#=====
cd('/')
unassign('Application', 'wlng_at_third_party_call_px30#4.0 ', 'Target', 'WLNG_AT_Cluster')
unassign('Application', 'wlng_nt_third_party_call_px30#4.0 ', 'Target', 'WLNG_NT_Cluster')
```

## Run the Script

Once you have made all necessary changes to the script, run it using the following command:

```
java weblogic.WLST <appropriate-version>.py
```

## Where to Go From Here

You must now:

- Complete post-installation
- Configure the Services Gatekeeper software

See [Completing Post-Installation](#) for more information.

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## Completing Post-Installation

This chapter describes the tasks you may have to complete after installing Oracle Communications Services Gatekeeper and configuring the WebLogic Server domain for use with it.

### Complete Post-Install Tasks

You may not need to do all of the following tasks depending on the type of installation with which you are working.

#### Create JMS Servers for Any Additional NT Servers

If you have added any Network Tier servers to the initial two provided by the domain template, you must edit the configuration to add support for the EDR Service. Each server in the Network Tier requires its own JMS server in order for the EDR Service to work correctly.

For the following task, you must start the Administrative Server in your Services Gatekeeper installation so that you can use the Administration Console to make the necessary adjustments. Unless you are setting up an all in one domain, you will also need to start at least one Network Tier server (this prevents a null pointer error in initializing the Console). For more information on using the Console, please see *System Administrator's Guide*, a separate document in this set. The following is an overview only.

1. Start Services Gatekeeper on the Administrative Server.

In a command prompt window, go to the **domain/bin** directory. In the default installation, this would be `Services_Gatekeeper_Home/user_projects/domains/ocsg-domain/bin`.

Run the **startWebLogic** script.

The Administrative Server will load.

2. Watch the command prompt window as the server loads. Wait until the prompt indicates that the server is in state RUNNING.
3. Start a Network Tier server.

In a separate command prompt window, go to the **domain/bin** directory. See step 1 above. Enter the following:

```
startManagedWebLogic networknode0-0 t3://adminhost:7001
```

replacing the first parameter with the name of the NT server and the second with the URL of the Administration Server.

---

---

**Note:** You can also log in to the NT server, and run the `startManagedWebLogic` script from there.

---

---

4. Watch the command prompt window as the NT server loads. Wait until the prompt indicates that the server is in state `RUNNING`.
5. Once both servers are in state `RUNNING`, bring up the Administrative Console.

In your browser, enter the following address:

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

where *hostname* is the hostname of the Administrative Server and *port* is the `ListenAddress` assigned during domain configuration.

6. Log in using your login credentials.

If this is the first time you have logged in, you should use username: `weblogic` and a password that you create. There are instructions in the *System Administration Guide* on changing these values once your system is fully configured.

7. Before you can make any changes using the Console, you must click `Lock & Edit` in the `Change Center` on the left side of the window.

(In the example below, assume that the additional server `WLNG_NT3` was created.)

In the Administration Console:

1. Select **Home > Services > Messaging > JMS Servers > New**.
2. In the **Name** text box, enter the name of the JMS Server. In our example, this would be `JMServer-NT3`.
3. In the **Target** dropdown menu, select the appropriate server. In our example, this would be `WLNG_NT3`.
4. Click **Finish**.
5. Click **Activate Changes**.

## Install Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files, if desired

Services Gatekeeper does *not* require the JCE files, but you can install them if you wish to use JCE providers. For more information, see “Using the nCipher JCE Provider with WebLogic Server” in *Oracle Fusion Middleware Securing Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E12839\\_01/web.1111/e13707/ssl.htm](http://download.oracle.com/docs/cd/E12839_01/web.1111/e13707/ssl.htm)

## Install Orbacus

The Orbacus ORB is not provided in the standard Services Gatekeeper installation.

The communication services that rely on Orbacus do not function without the Orbacus ORB, so you need to perform a set of tasks to use these communication services. The communications services that need the Orbacus ORB are:

- Parlay X 3.0 Third Party Call/Parlay MultiParty Call Control
- Parlay X 3.0 Call Notification/Parlay MultiParty Call Control
- Parlay X 3.0 Audio Call/Parlay MultiParty Call Control and Call User Interaction

To install Orbacus ORB:

1. Get Orbacus 4.3.2 from Progress Software.
2. Copy the following JAR files to a temporary directory (*Orbacus\_temp*):
  - OB.jar
  - OBBiDir.jar
  - OBEvent.jar
  - OBNaming.jar
  - OBUtil.jar
3. Change directory to *Services\_Gatekeeper\_Home/ocsg\_5.0/patch\_others/ob*, where *Services\_Gatekeeper\_Home* is the installation directory for Services Gatekeeper.
4. Unzip the **ob\_patch.zip** file to a temporary directory (*Ob\_patch*).
5. Change directory to *Ob\_patch*.
6. If you are using Unix or Linux, run the install script:  

```
ob_patch.sh Orbacus_temp Services_Gatekeeper_home
```

If you are using Windows, run the install script:

```
ob_patch.bat Orbacus_temp Services_Gatekeeper_home
```

Replace *Services\_Gatekeeper\_Home* with the installation directory for Services Gatekeeper.

## Add a Custom Password Validator

Using features available through Oracle WebLogic Server, you can create and configure a Password Validation Provider. This will allow you to enforce rules concerning the composition of passwords used with Services Gatekeeper. In general, the rules include:

- Whether the password may contain the user's name, or the reverse of that name
- A minimum or maximum password length (composition rules may specify both a minimum and maximum length)
- Whether and how many of the following characters must be in the password:
  - Numeric characters
  - Lowercase alphabetic characters
  - Uppercase alphabetic characters
  - Non-alphanumeric characters (e.g., parentheses or asterisks)

For more information, see "Configuring Authentication Providers" in *Oracle Fusion Middleware Securing Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E12839\\_01/web.1111/e13707/atn.htm](http://download.oracle.com/docs/cd/E12839_01/web.1111/e13707/atn.htm)

You will need to use WLST to create and configure your Password Validation Provider.

## Configure Services Gatekeeper

After you have installed the software, configured the domain, and completed any necessary post-installation steps, you can proceed to configuring Services Gatekeeper itself. The specifics for doing these tasks are presented in the *System Administrator's Guide* and *Accounts and SLAs Guide*. The following list gives a general outline of the initial tasks you must perform:

- Create administrative user accounts
- Configure Services Gatekeeper Container Services
- Configure communication services
- Configure connections with OSA/Parlay gateways, as necessary
- Set up and configure Web Services Security and OAM (JMX) Security
- Configure the Partner Relationship Management interfaces, as necessary
- Configure geo-redundancy, if necessary
- Create service provider and application accounts
- Create service provider and application SLAs
- Create network SLAs

## For Further Information

To learn more about installing WebLogic Server products in general, see the WebLogic documentation set page at:

<http://www.oracle.com/technetwork/middleware/weblogic/documentation/index.html>



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## Installing SOA Facades

This chapter describes the tasks necessary to install the Service Oriented Architecture (SOA) Facades for Oracle Communications Services Gatekeeper. It also describes the different deployment types.

### Introduction

The Services Gatekeeper SOA Facades integrate Services Gatekeeper with SOA environments. The SOA Facades are deployed in Oracle Service Bus (OSB) and expose an interface identical to the SOAP interfaces in the Web Services SOAP Facades. From an application point of view, there is no difference between interacting with a SOA Facade or a SOAP Facade. The SOA product must be installed in addition to Services Gatekeeper.

If you use clustering, each SOA Facade must be co-located with an Access Tier but nothing else. Network Tiers must be in a separate cluster.

Both Services Gatekeeper core and communication services are deployed in OSB servers. You use these Service Bus servers *instead* of Access Tier and Network Tier servers.

### Task Overview

These are the main installation steps. They are described in detail in the sections that follow:

1. Install Services Gatekeeper on all servers, see [Install Services Gatekeeper](#).
2. Install OSB on all servers, see [Install Oracle Service Bus](#).
3. Configure the Domain for the SOA Facades. There are different ways to do this:
  - a. [Configure the Domain Using the Graphical Domain Configuration Wizard](#).
  - b. [Configure Oracle Service Bus Domain Using the Console Configuration Wizard](#).
4. Add OSB settings to the domain configuration script. See [Edit and Verify the Domain Configuration Settings](#).
5. Make sure that the Oracle WebLogic Server installation directory is set in the domain configuration file. See [Verify the Domain Configuration Settings](#).

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**Note:** After installing OSB on a UNIX or Linux system, make sure that the directory **/tmp/alsbTempJars** has the same access privileges as the Oracle WebLogic Server home directory. Alternatively, remove the directory **/tmp/alsbTempJars** after the installation if the directory exists.

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6. (As needed) Upgrade your existing SOA facade projects to Services Gatekeeper 5.0 with the instructions in "Managing and Configuring SOA Facades" in *System Administration Guide*, another document in this set.

## Install Services Gatekeeper

Install Services Gatekeeper normally. See "[Installing Oracle Communications Services Gatekeeper](#)". Do not configure a domain yet.

## Install Oracle Service Bus

Install OSB on all Services Gatekeeper AT servers. See *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite 11g* at

[http://download.oracle.com/docs/cd/E13159\\_01/osb/docs10gr3/install/index.html](http://download.oracle.com/docs/cd/E13159_01/osb/docs10gr3/install/index.html)

Use the same Oracle WebLogic Server home directory for OSB and Services Gatekeeper.

## Configure the Domain

Follow the domain configuration in the section below that matches your implementation.

### Configure the Domain Using the Graphical Domain Configuration Wizard

OSB domain configuration is similar to Services Gatekeeper domain configuration. See "[Configuring a Domain With the Graphical Mode Configuration Wizard](#)".

For information on how to start and use the Oracle Service Bus Domain Configuration Wizards, see *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite 11g* at

[http://download.oracle.com/docs/cd/E13159\\_01/osb/docs10gr3/install/index.html](http://download.oracle.com/docs/cd/E13159_01/osb/docs10gr3/install/index.html)

Always use this configuration template during installation:

#### **OCSG OSB Integration configuration**

This configuration template is very similar to the template **OCSG Domain with Access and Network Clusters**. It contains a few specialized configuration settings which are described in "[Configuring Domain Settings](#)".

### Configure Oracle Service Bus Domain Using the Console Configuration Wizard

The Console Configuration Wizard is a text-based version of the Graphical Console Configuration Wizard.

For information on how to start and use the Oracle Service Bus Domain Configuration Wizards, see *Oracle Fusion Middleware Installation Guide for Oracle Service Bus Suite* at

[http://download.oracle.com/docs/cd/E15523\\_01/doc.1111/e13925/toc.htm](http://download.oracle.com/docs/cd/E15523_01/doc.1111/e13925/toc.htm)

For details, see [Using the Console Configuration Wizard](#).

## Edit and Verify the Domain Configuration Settings

Add the Oracle Service Bus definitions to the set domain script (**setDomainEnv.cmd** or **setDomainEnv.sh**). The **StartWeblogic.bat** script uses these scripts to configure domains. Use either the Windows or Linux/UNIX instructions:

### Windows

Edit the *Domain\_Home\bin\setDomainEnv.cmd* script file as follows:

At the top of the script, add the following OSB information, where *Service\_Bus\_Home* is the installation directory for Oracle Service Bus on your system; for example

```
c:\oracle\gatekeeper5.0\bin
```

```
set COMMON_COMPONENTS_HOME=Services_Gatekeeper_home\oracle_common
set ALSB_HOME=Service_Bus_Home
for %%i in ("%ALSB_HOME%") do set ALSB_HOME=%%~fsi
set ALSB_DEBUG_FLAG=true
set ALSB_DEBUG_PORT=7453
```

### Linux/UNIX

Edit the *Domain\_Home/bin/setDomainEnv.sh* script file as follows:

At the top of the script, add the following OSB information. Note that *Service\_Bus\_Home* is the installation directory for Oracle Service Bus on your system; for example **/var/oracle/gatekeeper5.0**

```
set COMMON_COMPONENTS_HOME=Services_Gatekeeper_home/oracle_common
ALSB__HOME="Services_Gatekeeper_home/Service_Bus_Home"
export ALSB_HOME
ALSB_DEBUG_FLAG="true"
export ALSB_DEBUG_FLAG
ALSB_DEBUG_PORT="7453"
export ALSB_DEBUG_PORT
```

## Verify the Domain Configuration Settings

Follow these steps to make sure that your settings are now correct:

1. Verify that the Service Bus installation directory is defined in the domain configuration file:
  - a. Open *Domain\_Home/config/config.xml*.
  - b. Verify that **ALSB\_INSTALL\_DIR** refers to the installation directory for Oracle Service bus, for example **/var/oracle/osb\_10.3**.
2. (Windows only) Verify that your classpath matches the classpath in "Windows". To view the classpath:
  - a. Right click **My Computer**.
  - b. Select **Properties ->Advanced ->Environment Variables**.

## Configure the SOA Facades

In addition to configuring the domain and changing to the environment script, you must also configure the SOA Facades themselves. To do so, follow the information in “Managing and Configuring SOA Facades” in *Services Gatekeeper System Administrator’s Guide*, another document in this set.

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# Upgrading Oracle Communications Services Gatekeeper

This chapter describes upgrading Oracle Communications Services Gatekeeper 4.1.x to Oracle Communications Services Gatekeeper 5.0. It also has reference sections for new and changed CDRs, EDRs, and alarms.

## About Upgrading Services Gatekeeper

An Oracle Communications Services Gatekeeper 4.1.x installation can be upgraded to Oracle Communications Services Gatekeeper 5.0 without shutting down the entire cluster or domain. Applications can use Services Gatekeeper with minimal service interruption during the upgrade. The process is known as a Rolling Upgrade and is a WebLogic Server feature.

After the upgrade, the security identity of Services Gatekeeper is the same as it was before the upgrade.

The process is based on a rolling scheme, where each server in the domain, one at the time, is stopped, upgraded to the new version, and then started. This process upgrades the WebLogic Server and the Oracle Communications Services Gatekeeper Core services, but leaves all communication services as before the upgrade.

After all servers have been upgraded, the communication services in use need to be upgraded. This is done using in-production redeployment, which is a WebLogic Server feature that enables the communication services to be upgraded without any traffic interruption.

The high-level workflow is:

1. Prepare your servers to be upgraded. See "[Preparing to Upgrade](#)".
2. Upgrade each server using a rolling upgrade scheme. See "[Upgrading Server to New Version](#)".
3. Upgrade the communication services and the interceptors using in-production redeployment. See "[Upgrading Communication Services and Interceptors](#)".
4. Verify that new traffic is processed.

You should always upgrade the servers in this order:

1. Administration server
2. Access tier servers
3. Network tier servers.

It is strongly recommended that you back up configuration data prior to the upgrade. See *System Backup and Restore Guide*, another document in this set.

## Limitations

The following limitations apply for the upgrade:

- Do not make configuration changes during the upgrade process until all the servers in the cluster have been upgraded. This is especially important for new configuration options. Servers will silently ignore settings that are not understood, and the local configuration file may not be updated properly. Using new configuration options may remove the capability of un-installing a maintenance upgrade in a rolling fashion.
- For a minor release, during the rolling upgrade, there must be two entirely separate installation directories. That is, the location of the old installation and the location of the new installation must be two different directories.
- After the upgrade it is possible that the panes in the administration console will not display properly. If this occurs, delete the browser's cache and cookies.

## Preparing to Upgrade

When you are preparing to upgrade, you gracefully undeploy a set of WebLogic applications that are discontinued or replaced in this release of Services Gatekeeper. Use WebLogic tools to undeploy the applications. See "Deploying Applications" in *Oracle Fusion Middleware Administrator's Guide*.

You can use both the administration console and the tool `weblogic.Deployer`. [Example 8-1](#) shows how to use `weblogic.Deployer`.

### **Example 8-1 Undeploying an Application Gracefully Using `weblogic.Deployer`.**

```
java weblogic.Deployer
    -adminurl t3://10.182.100.33:7001
    -user weblogic
    -password weblogic
    -name wlng_nt_callable_policy
    -appversion 4.1
    -undeploy
    -graceful
```

To prepare to upgrade:

1. If you are using the administration console to undeploy the applications, log in to the administration console.
2. If you are using `weblogic.Deployer`, set up the correct environment by sourcing the file `Middleware_Home_old/wlserver_10.3/server/bin/setWLSEnv.sh` (UNIX) or invoke `Middleware_Home_old\wlserver_10.3\server\bin\setWLSEnv.cmd` (Windows).
3. If you are not using any of the Parlay Communication services that rely on an ORB, gracefully undeploy the following communication services:
  - Parlay X 3.0 Third Party Call/Parlay MultiParty Call Control. Application name is `wlng_nt_third_party_call_px30`, version is 4.1.x.
  - Parlay X 3.0 Call Notification/Parlay MultiParty Call Control. Application name is `wlng_nt_call_notification_px30`, version is 4.1.x.

- Parlay X 3.0 Audio Call/Parlay MultiParty Call Control and Call User Interaction. Application name is **wlng\_nt\_audio\_call\_px30**, version is 4.1.x.

If an ORB is not installed, undeploying three communication services is required.

4. If you are using a Parlay based communication service, you need to install the ORB later in the process.
5. Gracefully undeploy the existing Native SMPP communication service. The application name is **wlng\_nt\_sms\_smpp**, version is 4.1.x.
6. Gracefully undeploy the Callable Policy service. Application name is **wlng\_nt\_callable\_policy**, version is 4.1.x.

## Upgrading Server to New Version

To upgrade a server:

1. Stop the server gracefully so all in-flight requests are processed before the shutdown starts.

For information on how to stop a server using the administration console, see “Shutdown servers in a cluster” in *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help* at:

[http://download.oracle.com/docs/cd/E15523\\_01/apirefs.1111/e13952/taskhelp/clusters/ServerShutdownCluster.html](http://download.oracle.com/docs/cd/E15523_01/apirefs.1111/e13952/taskhelp/clusters/ServerShutdownCluster.html)

For information about using the Graceful Shutdown command, see “Graceful Shutdown” in *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic* at:

[http://download.oracle.com/docs/cd/E12839\\_01/web.1111/e13708/server\\_life.htm](http://download.oracle.com/docs/cd/E12839_01/web.1111/e13708/server_life.htm)

2. Install the new version of Oracle Communications Services Gatekeeper. See “Installing Oracle Communications Services Gatekeeper”.

Install it under a directory different from *Middleware\_Home* directory used for the old version. Do not configure the domain.

Note that if services requiring an ORB will be retained, the ORB must be installed after Services Gatekeeper is installed.

3. If you are using a communication service that connects to a Parlay Gateway, install the ORB as described in [Chapter 6, “Completing Post-Installation”](#). Do not run `ob_patch.sh` or `ob_patch.bat`.
4. Set up necessary environment variables.

On Windows: run the script `Middleware_Home\wlserver_10.3\server\bin\setWLSEnv.cmd`

On UNIX: source the script `Middleware_Home/wlserver_10.3/server/bin/setWLSEnv.sh`

*Middleware\_Home* refers to the top-level directory for the new installation.

5. Change directory to `Middleware_Home/wlserver_10.3/common/templates/scripts/upgrade`.

*Middleware\_Home* refers to the top-level directory for the new installation.

6. The upgrade script assumes that the JDK was installed in *Middleware\_Home/jdk160\_18* (Oracle SUN) or *Middleware\_Home/jrockit\_160\_17\_R28.0.0-677* (JRockit).

If you are using the generic installer, update the `JAVA_HOME` variable in the file *Middleware\_Home/wlserver\_10.3/common/templates/scripts/upgrade/build.xml*:

Set `JAVA_HOME` to the directory in which the JDK is installed.

7. While upgrading network tier servers from 4.1.1 to 5.0 only (not necessary when upgrading from 4.1.0 to 5.0), update the upgrade script:

- a. Open the file *Middleware\_Home/wlserver\_10.3/common/templates/scripts/upgrade/build.xml*.

- b. Update the ant target `patch.interceptors` from:

```
<target name="patch.interceptors">
<copy file="${nt.server.home}/stage/interceptors/4.1/interceptors.ear"
tofile="${nt.server.home}/interceptors.ear-backup" />
<copy file="${ocsg.home}/applications/interceptors.ear"
tofile="${nt.server.home}/stage/interceptors/4.1/interceptors.ear"
overwrite="true" />
<ear destfile="${nt.server.home}/stage/interceptors/4.1/interceptors.ear"
update="true">
```

to:

```
<target name="patch.interceptors">
<copy file="${nt.server.home}/stage/interceptors/4.1.1/interceptors.ear"
tofile="${nt.server.home}/interceptors.ear-backup" />
<copy file="${ocsg.home}/applications/interceptors.ear"
tofile="${nt.server.home}/stage/interceptors/4.1.1/interceptors.ear"
overwrite="true" />
<ear destfile="${nt.server.home}/stage/interceptors/4.1.1/interceptors.ear"
update="true">
```

- c. Save the file.

8. While upgrading the Administration Server only, add settings for and configure Coherence:

- a. Open the Coherence cluster configuration file *Middleware\_Home/wlserver\_10.3/common/templates/scripts/upgrade/coherence/Coherence-OCSG/Coherence-OCSG-7969-coherence.xml*.

- b. Set the value of the element `unicast-listen-port` to the unicast listen port for the cluster.

The port can be changed. If you change it, use the same value as the NT's listen port.

- c. Define the element `coherence-cluster-well-known-addresses`.

Add the following for each network tier server:

```
<coherence-cluster-well-known-address>
<name>Server_Id</name>
<listen-address>Listen_Address</listen-address>
<listen-port>Listen_Port</listen-port>
</coherence-cluster-well-known-address>
```



Where *Server\_Id* is the Coherence cluster ID for the server (for example, WKA-0, WKA-1, WKA-2, and so on), *Listen\_Address* is the hostname or IP address of the network tier server, and *Listen\_Port* is the port number.

- d. Save the file.
  - e. Open Coherence cluster configuration update file *Middleware\_Home\wlserver\_10.3\common\templates\scripts\upgrade\configCoherence.py*.  
*Middleware\_Home* refers to the installation directory for the new Services Gatekeeper version.
  - f. Update the parameter for `readDomain(...)` to refer to *Domain\_Home*.  
*Domain\_Home* is the domain configuration directory.
  - g. Update the parameter for `set(...)` where the first parameter is **Target** by setting the second parameter to the name of the network tier cluster.
  - h. Configure Coherence by running `java weblogic.WLST configCoherence.py`.
9. Run the upgrade ant script. The script executes different ant targets for different server types. The script takes a set of arguments. See [Table 8–1, "Arguments to the Upgrade Script"](#).

To upgrade

- the administration server, execute the target **upgrade.admin**.
- an access tier server, execute the target **upgrade**.
- a network tier server, execute the target **upgrade.nt**

See [Example 8–2, "Upgrading the Administration Server"](#), [Example 8–3, "Upgrading an Access Tier Server"](#), and [Example 8–4, "Upgrading a Network Tier Server"](#).

**Table 8–1 Arguments to the Upgrade Script**

Argument	Description
-Ddomain41.home	Domain configuration directory used in the old version
-Dbea41.home	Installation directory for the old installation
-Dbea50.home	Installation directory for the new installation
-Dwlsold.home	Installation directory used for WebLogic Server in the old installation
-Dwlsnew.home	Directory used for WebLogic Server used in the new installation
-Docsg.home	Directory used for Services Gatekeeper in the new installation
-Ddomain41.name	Name of the domain in the existing installation
-Dadmin.host	Host name or IP address of the administration server
-Dadmin.port	Administration port number for the administration server
-Dserver.name	Name of the server to upgrade
-Dnt.server.home	Directory of the network tier server to upgrade. Used only when upgrading an network tier server.

**Example 8–2 Upgrading the Administration Server**

```
ant upgrade.admin
-Ddomain41.home=C:\temp\bea\ocsg410\user_
projects\domains\ocsg-access-network-domain
```

```

-Dbea41.home=C:\temp\bea\ocsg410
-Dbea50.home=C:\temp\bea\ocsg500
-Dwlsold.home=C:\temp\bea\ocsg410\wlserver_10.3
-Dwlsnew.home=C:\temp\bea\ocsg500\wlserver_10.3
-Docsg.home=C:\temp\bea\ocsg500\ocsg_5.0
-Ddomain41.name=ocsg-domain
-Dadmin.host=10.182.100.111
-Dadmin.port=7001
-Dserver.name=AdminServer

```

### Example 8-3 Upgrading an Access Tier Server

```

ant upgrade
-Ddomain41.home=C:\temp\bea\ocsg410\user_projects\domains\ocsg-domain-at1
-Dbea41.home=C:\temp\bea\ocsg410
-Dbea50.home=C:\temp\bea\ocsg500
-Dwlsold.home=C:\temp\bea\ocsg410\wlserver_10.3
-Dwlsnew.home=C:\temp\bea\ocsg500\wlserver_10.3
-Docsg.home=C:\temp\bea\ocsg500\ocsg_5.0
-Ddomain41.name=ocsg-domain
-Dadmin.host=10.182.100.111
-Dadmin.port=7001
-Dserver.name=AT1

```

### Example 8-4 Upgrading a Network Tier Server

```

ant upgrade.nt
-Ddomain41.home=C:\temp\bea\ocsg410\user_
projects\domains\ocsg-access-network-domain
-Dbea41.home=C:\temp\bea\ocsg410
-Dbea50.home=C:\temp\bea\ocsg500
-Dwlsold.home=C:\temp\bea\ocsg410\wlserver_10.3
-Dwlsnew.home=C:\temp\bea\ocsg500\wlserver_10.3
-Docsg.home=C:\temp\bea\ocsg500\ocsg_5.0
-Ddomain41.name=ocsg-domain
-Dadmin.host=10.182.100.111
-Dadmin.port=7001
-Dnt.server.home=C:\temp\bea\ocsg410\user_
projects\domains\ocsg-access-network-domain\servers\WLNG_NT1
-Dserver.name=NT1

```

10. If you are upgrading the administration server, set the environment variable **OCSG50\_INSTALL\_HOME** to the new installation directory.

11. If you are upgrading the administration server, unpack the file *Middleware\_home/wlserver\_10.3/common/templates/scripts/migration.zip*.

12. If you are upgrading the administration server, run the configuration update script. The syntax is:

```

runConfigurationMigration.Extension DB_type DB_Host DB_Port DB_Name DB_
User Password Domain_Home

```

Where:

- *Extension* is the filename extension. Use **sh** for UNIX and **bat** for Windows.
- *DB\_type* is the database type. Use **oracle** for Oracle Database or **mysql** for MySQL.
- *DB\_Host* is the host name, or IP address, of the server running the database.
- *DB\_Port* is the port number used by the database.

- *DB\_Name* is the database name for a MySQL database or the service name for an Oracle database.
  - *DB\_User* is the user ID used to connect to the database.
  - *Password* is the password associated with *DB\_User*.
  - *Domain\_Home* is the directory for the domain configuration.
13. Change directory to *Domain\_Home/bin*.
  14. Set access privileges on the files. Change permission to read/write/execute on all files, by entering:
 

```
chmod 755 *
```
  15. The new version has introduced a set of new and changed EDR, CDR, and alarm definitions.
 

If you are upgrading the administration server, update a set of new and changed EDR, CDR, and alarms definitions:

    1. Extract the file *Middleware\_Home/wlserver\_10.3/common/templates/domains/ocsg-domain.jar*.
    2. Copy the *config\custom\wlng-edr.xml* file to the *Domain\_Home/config/custom* directory.
  16. Start the server.

## Upgrading Communication Services and Interceptors

After the upgraded Oracle Communications Services Gatekeeper domain has been started, each Communication Service needs to be upgraded. This is done using a hitless upgrade procedure.

See “Hitless Upgrade Using Production Redeployment” in *Oracle Communications Services Gatekeeper System Administrator’s Guide* and “Redeploying Applications in a Production Environment” in *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*.

To upgrade service interceptors and communication services:

1. Re-deploy **wlng\_at\_session** and **wlng\_nt\_session**, because they are used by all the communication services.
2. Deploy the file *Services\_Gatekeeper\_Home\_new/applications/wlng\_nt\_native\_smpp\_sms.ear*, where *Services\_Gatekeeper\_Home\_new* is the installation directory for the new version.

After deployment, restart the service manually.

3. Redeploy the file *Services\_Gatekeeper\_Home\_new/applications/interceptors.ear* using the WebLogic Server production redeployment strategy. See *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*
4. Redeploy the communication services using the WebLogic Server production redeployment strategy. The applications are located in the directory *Services\_Gatekeeper\_Home\_new/applications*.

The file names of the EAR files for each communication service are detailed in *Oracle Communications Services Gatekeeper System Administrator’s Guide* in the Properties tables in the chapters that describe how to manage and configure each communication service.

## Reference: Added and Changed Alarm Definitions

Added alarm definitions:

- 102843 to 102846
- 110619
- 400200 to 400207
- 400300 to 400302
- 400310 to 400312
- 400400 to 400407
- 400500 to 400513
- 400600 to 400606
- 400610 to 400617
- 406010

Changed alarm definitions:

- 111704
- 111709 to 111710
- 110600 to 110606
- 110613 to 110618
- 110680

## Reference: Added and Changed EDR Definitions

Table 8–2 outlines the added and changed CDR definitions

**Table 8–2 Added and Changed EDR Definitions**

Communication Service	Changed Range	Added Range
Parlay X 2.1/Terminal Status	None	4012 to 4017
Parlay X 2.1 SMS/SMPP	7000 to 7009 7011 to 7015	7016 to 7017
Extended Web Services/SMPP	7101 to 7203 7301 to 7307	None
SMPP Facade	400020 to 400020	400051 to 40070 400102 to 400103 400108 to 400109 400113 to 400113
Native UCP	None	402001 to 402004 402010 to 402013 402020 to 402021 402030 to 402031
Parlay X 3.0 Device Capabilities/LDAP	None	403001 to 403002
Parlay X 2.1 Audio Call/SIP	None	405001 to 405002

## Reference: Added and Changed CDR Definitions

The following sections describes the added and changed CDR definitions in the new version.

### Parlay X 2.1 Multimedia Messaging/MM7

```

<cdr>
  <filter>
    <method>
      <name>void deliver(NotificationInfoHolder, DeliverReqType)</name>
      <class>com.bea.wlcp.wlmg.plugin.multimediamessaging.mm7.
        messagenotification.south.DeliverAdapter
      </class>
      <position>after</position>
    </method>
    <method>
      <name>void deliver(NotificationInfoHolder, DeliverReqType)</name>
      <class>oracle.ocsg.plugin.multimediamessaging.mm7.
        rel6mm714.messagenotification.south.DeliverAdapter</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>void deliveryReport(MessageDeliveryInfoHolder,
        DeliveryReportReqType)</name>
      <class>com.bea.wlcp.wlmg.plugin.multimediamessaging.mm7.
        messagenotification.south.DeliveryReportAdapter</class>
      <position>after</position>
    </method>
    <method>
      <name>void deliveryReport(MessageDeliveryInfoHolder,
        DeliveryReportReqType)</name>
      <class>oracle.ocsg.plugin.multimediamessaging.mm7.
        rel6mm714.messagenotification.south.DeliveryReportAdapter</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

```

### Parlay X 2.1 Short Messaging and EWS Binary SMS/SMPP

```

<cdr>
  <filter>
    <method>
      <name>void processSmsReceptionNotification</name>
      <class>oracle.ocsg.plugin.sms.smpp.SMPPNorthboundHandler</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>SendSmsResponse sendSms(SendSms)</name>

```

```

        <class>oracle.ocsg.plugin.sms.smpp.SMPPPluginInstanceImpl</class>
        <position>after</position>
    </method>
</filter>
</cdr>

<cdr>
    <filter>
        <method>
            <name>SendBinarySmsResponse sendBinarySms(SendBinarySms)</name>
            <class>oracle.ocsg.plugin.sms.smpp.SMPPPluginInstanceImpl</class>
            <position>after</position>
        </method>
    </filter>
</cdr>

<cdr>
    <filter>
        <method>
            <name>void processSmsBinaryReceptionNotification</name>
            <class>oracle.ocsg.plugin.sms.smpp.SMPPNorthboundHandler</class>
            <position>after</position>
        </method>
    </filter>
</cdr>

<cdr>
    <filter>
        <method>
            <name>void handleReceivedSMSDeliveryReport(SmsMessageState,
                DeliverSm)</name>
            <class>oracle.ocsg.plugin.sms.smpp.SMPPNorthboundHandler</class>
            <position>after</position>
        </method>
    </filter>
</cdr>

```

## Native UCP

```

<cdr>
    <filter>
        <method>
            <name>void deliverSM(UcpPDU, String)</name>
            <class>oracle.ocsg.plugin.nativefacade.ucp.south.
                NativeUCPPluginSouthImpl</class>
            <position>after</position>
        </method>
    </filter>
</cdr>

<cdr>
    <filter>
        <method>
            <name>void submitSM(UcpPDU, ServerPort, String)</name>
            <class>oracle.ocsg.plugin.nativefacade.ucp.north.
                NativeUCPPluginNorthImpl</class>
            <position>after</position>
        </method>
    </filter>
</cdr>

```

```

<cdr>
  <filter>
    <method>
      <name>void ack(UcpPDU, String)</name>
      <class>oracle.ocsg.plugin.nativefacade.ucp.south.
        NativeUCPPluginSouthImpl</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>void deliveryNotification(UcpPDU, String)</name>
      <class>oracle.ocsg.plugin.nativefacade.ucp.south.
        NativeUCPPluginSouthImpl</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

```

## Parlay X 2.1 Terminal Status/MAP

```

<cdr>
  <filter>
    <method>
      <name>StatusNotificationResponse statusNotification</name>
      <class>oracle.ocsg.plugin.terminal_status.map.
        south.notification.NotificationSouth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

```

## SMPP Facade

```

<cdr>
  <filter>
    <method>
      <name>void receiveSubmitSmResponse</name>
      <class>com.bea.wlcp.wlmg.plugin.legacy.smpp.north.
        UpstreamSmppAgentImpl</class>
      <position>before</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>void receiveSubmitSmMultiResponse</name>
      <class>com.bea.wlcp.wlmg.plugin.legacy.smpp.
        north.UpstreamSmppAgentImpl</class>
      <position>before</position>
    </method>
  </filter>
</cdr>

```

```
<cdr>
  <filter>
    <method>
      <name>void sendDeliverSmResp</name>
      <class>com.bea.wlcp.wlng.plugin.legacy.smpp.southbind.
        SmpPluginSouthImpl</class>
      <position>before</position>
    </method>
  </filter>
</cdr>
```

## Parlay X 3.0 Payment/Diameter

```
<cdr>
  <filter>
    <method>
      <name>ChargeAmountResponse chargeAmount</name>
      <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
        AmountChargingPluginNorth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>RefundAmountResponse refundAmount</name>
      <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
        AmountChargingPluginNorth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>ChargeSplitAmountResponse chargeSplitAmount</name>
      <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
        AmountChargingPluginNorth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>ReserveAmountResponse reserveAmount</name>
      <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
        ReserveAmountChargingPluginNorth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
```



```

<filter>
  <method>
    <name>ReserveAdditionalAmountResponse reserveAdditionalAmount</name>
    <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
      ReserveAmountChargingPluginNorth</class>
    <position>after</position>
  </method>
</filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>ChargeReservationResponse chargeReservation</name>
      <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
        ReserveAmountChargingPluginNorth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>ReleaseReservationResponse releaseReservation</name>
      <class>com.bea.wlcp.wlng.plugin.payment.diameter.north.
        ReserveAmountChargingPluginNorth</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

```

## Native SMPP

```

<cdr>
  <filter>
    <method>
      <name>void submitSmResponse</name>
      <class>oracle.ocsg.plugin.nativesmpp.south.SMPPPluginSouthImpl</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>void submitMultiResponse</name>
      <class>oracle.ocsg.plugin.nativesmpp.south.SMPPPluginSouthImpl</class>
      <position>after</position>
    </method>
  </filter>
</cdr>

<cdr>
  <filter>
    <method>
      <name>void deliverSmResponseForMO</name>
      <class>oracle.ocsg.plugin.nativesmpp.north.SMPPPluginNorthImpl</class>

```

```
        <position>after</position>
    </method>
</filter>
</cdr>
```

## Parlay X 2.1 Audio Call/SIP

```
<cdr>
  <filter>
    <method>
      <name>void callConnected</name>
      <class>oracle.ocsg.plugin.audio_call.sip.south.call.
        AudioCallCdrContext</class>
      <position>after</position>
    </method>
  </filter>
</cdr>
<cdr>
  <filter>
    <method>
      <name>void callReleased</name>
      <class>oracle.ocsg.plugin.audio_call.sip.
        south.call.AudioCallCdrContext</class>
      <position>after</position>
    </method>
  </filter>
</cdr>
```