

**Oracle® Communications Marketing and  
Advertising**

System Administrator's Guide

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# Preface

This guide describes the system administration tasks associated with Oracle Communications Marketing and Advertising. Marketing and Advertising runs in the context of Oracle WebLogic Server, and is managed using the WebLogic Server Administration Console, with specialized extensions. The system owner user also configures a number of Marketing and Advertising system values in the Web GUI.

## Audience

This document is intended for system administrator's tasked with running and maintaining the servers for Marketing and Advertising.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Related Documents

For more information, see the following documents in the Oracle Fusion Middleware WebLogic Server Release 11g Release1 documentation set or in the Oracle Communications Services Gatekeeper Release 5.0 documentation set:

- *Introduction to Oracle WebLogic Server*
- *Configuring and Managing JDBC for WebLogic Server*
- *Oracle Communications Services Gatekeeper System Administrator's Guide*
- *Oracle Communications Services Gatekeeper Concepts Guide*



Oracle Communications Marketing and Advertising is a Web application that allows communications service providers, applications, and advertisers to interact to create messaging-based advertising to be delivered over the service network.

Managing the application is accomplished largely through the browser-based GUI that the application provides and related SOAP-based Web services, but a substantial number of configuration and management activities at the system-wide level must be done before the application itself is usable. This configuration, and overall management of the system, are done by the system administrators, also called management users. This guide provides information for those system administrators.

Marketing and Advertising is built on Oracle Communications Services Gatekeeper 5.0, which runs in the context of Oracle Fusion Middleware WebLogic Server 11.g Release 1 (10.3.1). Services Gatekeeper and WebLogic Server are automatically installed as part of a Marketing and Advertising installation.

The tasks performed by the system administrator can be divided into three categories:

- [Setting Up the Container](#)
- [Setting Up the Delivery Mechanism](#)
- [Setting Up the Web Application](#)

You perform these tasks using the Administration console. For general instructions on using the console, see "[Using the Administration Console](#)".

## Setting Up the Container

Some of the tasks that the system administrator must perform are those associated with the generic running of any WebLogic Server instance. These include:

- ["Starting and Stopping the Servers"](#)
- ["Setting Up Web Services Security and JMX Policy"](#)
- ["Setting Up Embedded LDAP Replication"](#)
- ["Setting Up Management Users"](#)
- ["Backing Up and Restoring"](#)
- ["Upgrading and Patching"](#)

## Setting Up the Delivery Mechanism

Interacting with the underlying service network requires significant configuration of the delivery mechanism, a subset of Services Gatekeeper. For information on configuring Services Gatekeeper, see:

- ["Managing and Configuring Traffic Users"](#)
- ["Managing and Configuring Channels"](#)
- ["Managing and Configuring Container Services"](#)
- ["Managing and Configuring EDRs, CDRs and Alarms"](#)

## Setting Up the Web Application

The Web application itself needs a certain amount of configuration. You must supply basic information to allow the container and the application to work together. These tasks include:

- ["Configuring the Oracle Communications Marketing and Advertising Web Application"](#)

You can also customize the look and feel of the browser GUI. See:

- ["Customizing the Appearance of the Application"](#)

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## Using the Administration Console

The Administration console for Oracle WebLogic Server, and its two console extensions: one for Oracle Communications Marketing and Advertising and one for the embedded Oracle Communications Services Gatekeeper. These extensions provide a browser-based graphical user interface for configuring, managing, and provisioning the overall system.

To perform general WebLogic Server tasks, you use the main Administration console. To configure the Web application, you use the Marketing and Advertising extension. To configure the delivery mechanism, you use the Services Gatekeeper extension.

Marketing and Advertising servers that are started after you log in to the Administration Console are not displayed in the Administration Console. To see them, you must log out and log in again.

### Accessing the Administration Console

Make sure the Administration server and at least one Core server is started and in the RUNNING state. See "[Starting and Stopping the Servers](#)" for information on doing this. Using a supported Web browser, go to `http://server:port/console` where *server* is the instance set up as the Marketing and Advertising Administration server during the Domain Configuration stage of installation. Supported Web browsers include Internet Explorer 7.0 and greater and Mozilla Firefox 2.0 and greater.

Log in using the administrative log-in credentials you established in the Domain Configuration stage. After you have logged in the first time, you can add other administrative users using the instructions described in "[Setting Up Management Users](#)". If you wish, you can remove the initial user.

For general information about the Administration console, see "Overview of the Administration Console" in *Oracle Fusion Middleware Introduction to Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13752/toc.htm#INTRO127](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13752/toc.htm#INTRO127)

For information about adding users, see the WebLogic Server Administration Console Online Help when you are in the console or a Web version at:

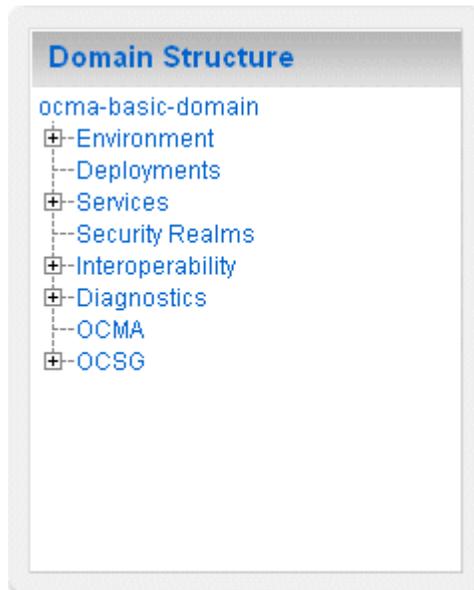
[http://download.oracle.com/docs/cd/E12839\\_01/apirefs.1111/e13952/core/index.html](http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/core/index.html)

## The Domain Structure Panel

The configuration tasks described in this guide are accessed using the nodes displayed in the Domain Structure panel on the left side of the main console window.

Figure 2–1 shows the layout for a domain named "ocma-basic-domain".

**Figure 2–1** The Domain Structure Panel



The top six items provide access to generic WebLogic Server functions. You use these items to accomplish the [Setting Up the Container](#) tasks and other general server maintenance functions. The seventh item, **OCMA**, provides access to Marketing and Advertising configuration options. It is used set up the Web application. The eighth item, **OCSG**, provides access to the configuration options associated with Services Gatekeeper.

## The OCMA Panel

To accomplish the [Setting Up the Web Application](#) tasks, click **OCMA** in the Domain Structure panel. The **OCMA** panel opens on the right.

Figure 2-2

The screenshot shows the OCMA configuration interface. At the top, there are several tabs: General, Mail Server, OCSG Client, Statistics, Licensing, Data Retention, BAM, Siebel, and Caching. The 'General' tab is selected. Below the tabs is a 'Save' button. A message reads: 'Use this page to configure OCMA features and default behavior.' Below this are several configuration rows, each with a help icon, a label, a value field, and a description:

Label	Value	Description
Locale:	United States [en_US]	Locale information, used to set currency. Info...
Default Fraction Digits:	2	The default number of fractional digits to b with the currency. More Info...
OcsG Network Provider:	ocsgNetworkProvider	The OCMA Network Provider name, to be n the OCSG instance. More Info...
Notification Message Active Period:	0	The period (in hours) that notification mess shown in the GUI. More Info...
Frequent Task Time Interval(Seconds):	60	The time interval (in seconds) for running " periodic tasks". More Info...
Seldom Task Time Interval (Days):	1	The time interval(in days) for running "infe periodic tasks". More Info...
Seldom Task Start Time (hour):	2	The time of day to start "infrequent periodi Should be between 0 to 23. More Info...

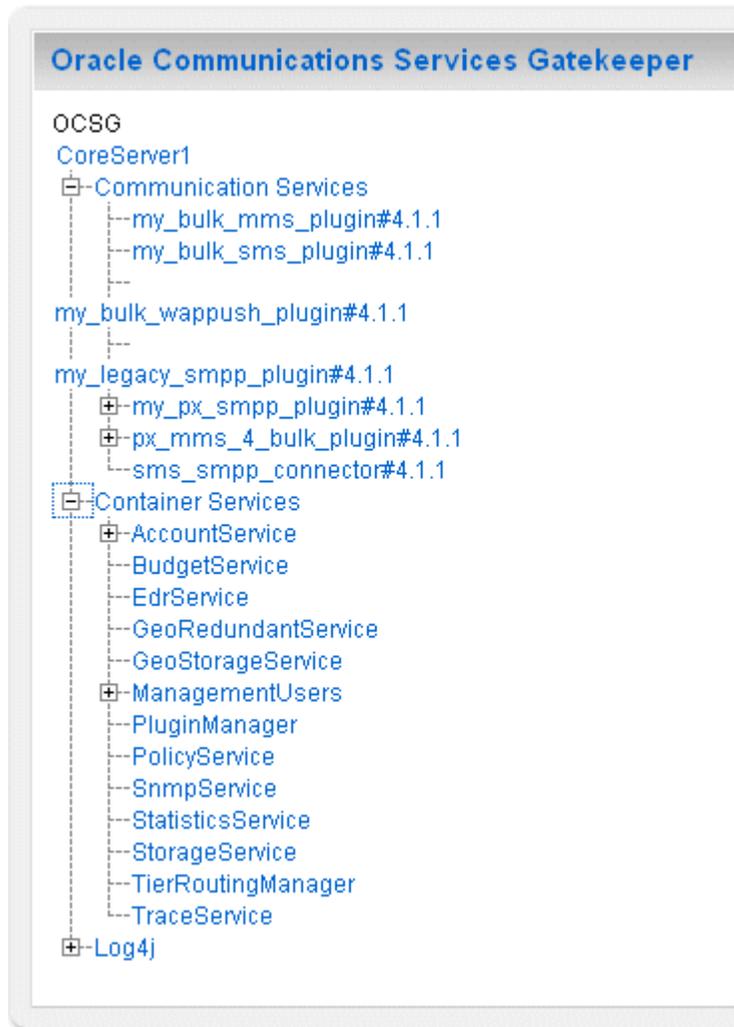
Each of the tabs at the top represents a different Marketing and Advertising resource. In the Java Management Extensions (JMX) technology that implements the product, these resources are represented by objects called MBeans. So in JMX, each tab represents one MBean and each of the fields within a tab is an attribute on that MBean.

These MBeans can also be accessed using JMX.

See [Chapter 9, "Configuring the Oracle Communications Marketing and Advertising Web Application"](#) for information about the features in this panel.

## The OCSG MBean Panel

To accomplish the tasks in [Setting Up the Delivery Mechanism](#), click `OCSG->ServerName`. The Services Gatekeeper panel opens on the right.

**Figure 2–3 Sample OCSG MBean Panel**

To access the operations and attributes that are available on any of these items, click the name in the MBean panel. Each item represents a management object that is also accessible via JMX.

Clicking an item opens the related **Attributes** and **Operations** tabs below the MBean panel.

[Figure 2–4](#) shows the **Attributes** tab of a bulk SMS plug-in instance.

To change the value of an attribute:

1. Check the box next to the attribute.
2. Enter the new value.
3. Click the **Update Attributes** button.

Figure 2-4 The Attributes Pane

Configuration and Provisioning on AdminServer  
 Deployment Name: wing\_nt\_bulk\_sms\_ews#4.1.1  
 Instance Name: my\_bulk\_sms\_plugin  
 MBean Type: com.bea.wtp.plugin.bulk.sms.management.BulkSmsMBean

To make changes to any attributes please select the check box. To invoke an operation, please select the operation from the list

**Update Attributes:**

<input type="checkbox"/>	<b>MaxSubscriberNumOfChunkSms:</b>	<input type="text" value="1000"/> (int)	MaxSubscriberNumOfBulkSmsOrder indicates max number of subscribers in one chunk SMS. Format: int
<input type="checkbox"/>	<b>MaxSubscriberNumOfBulkSmsOrder:</b>	<input type="text" value="100000"/> (int)	MaxSubscriberNumOfBulkSmsOrder indicates max number of subscribers in one bulk SMS order. Format: int
<input type="checkbox"/>	<b>ChunkSmsTaskHeartbeatInterval:</b>	<input type="text" value="300"/> (int)	ChunkSmsTaskHeartbeatInterval indicate how long will one chunk be taken over from one failed node which occupy it. Format: int
<input type="checkbox"/>	<b>NodeBudgetDetectInterval:</b>	<input type="text" value="30"/> (int)	NodeBudgetDetectInterval indicate how long will BulkSmsOrderScheduler detects the latest budget info at the given interval second. Format: int
<input type="checkbox"/>	<b>AllowedBudgetUsagePercent:</b>	<input type="text" value="0"/> (int)	The budget percent can be shared by bulk sms service. allow to be set in {0-100}. 0 means no budget is shared by bulk. 100 means all the budget can be shared by bulk. Format: int

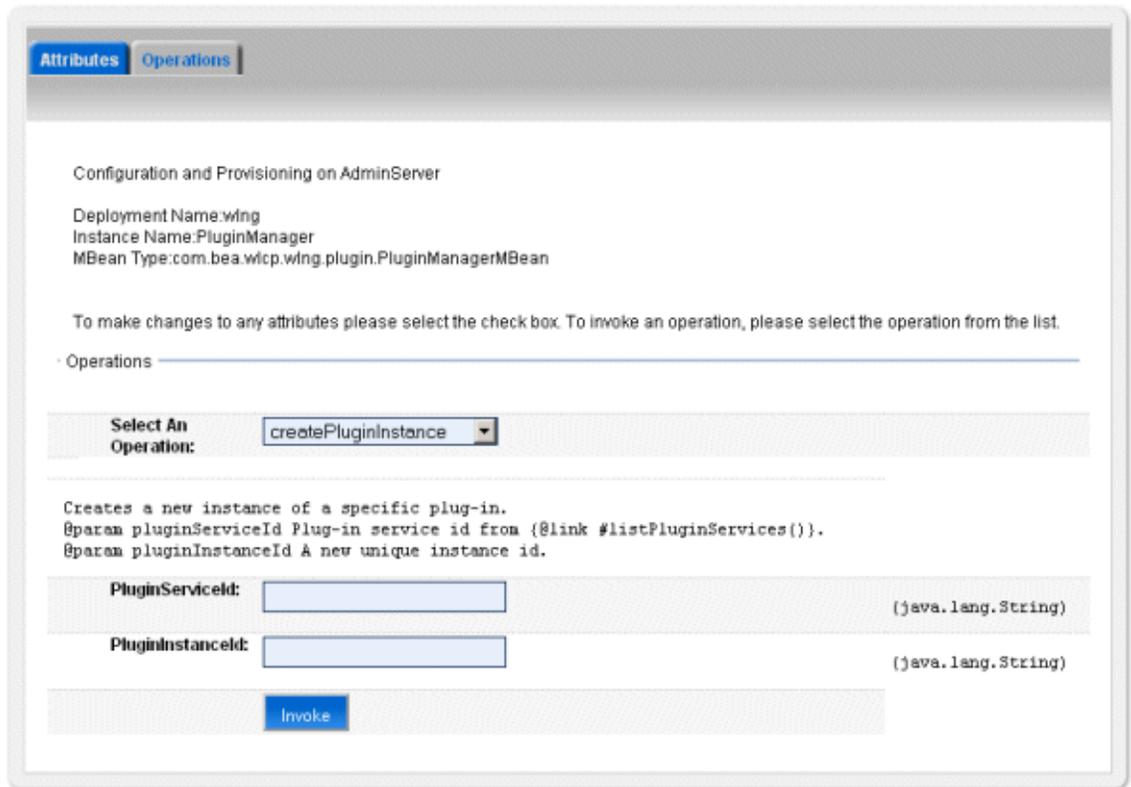
Operations either display data, set data, or perform an action. Use the **Select An Operation** list to find the operation you are interested in. The necessary parameters with descriptions appear. Enter the appropriate information and click the **Invoke** button

To access operations, click the **Operations** tab. The Operations pane opens.

To perform an operation:

1. Select the operation from the **Select An Operation** list.
2. If parameter fields are displayed enter values for the parameters.  
Not all operations have parameters.
3. Click **Invoke**.

Figure 2–5 The Operations Pane



## Additional information

For general information on using the Administration console, or for information on using JMX or WSLT to access the administration MBeans, see "Operations and Maintenance: General" in the *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_oam.htm#sthref18](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_oam.htm#sthref18)

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## Starting and Stopping the Servers

This chapter explains how to start and stop Oracle Communications Marketing and Advertising servers.

Marketing and Advertising runs in the context of Oracle WebLogic server, so its startup and shutdown procedures are similar to those of other WebLogic servers.

This chapter describes two simple methods for starting Marketing and Advertising servers:

- [Starting Up Using Scripts](#)
- [Starting Up Using Node Manager](#)

It also describes:

- [Shutting Down Servers Using the Administration Console](#)
- [Shutting Down Servers Using Scripts](#)

Always start Core Servers (the Network Cluster) before Web Servers (the Web Cluster) to prevent a database error.

For more complete information on the various ways to start and stop WebLogic Servers generally, see "Starting and Stopping Servers" in *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#CJAHBCDF](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13708/overview.htm#CJAHBCDF)

### Starting Up Using Scripts

You can start a Marketing and Advertising Administration server using the `startWebLogic` script that was installed *domain\_home/bin* in your Marketing and Advertising installation.

You can start a Marketing and Advertising Managed server using the `startManagedWebLogic` script located in *domain\_home/bin* of the machine on which that server runs. You must be logged into that machine. You specify the name of the server to start and the location of the Administration server.

The following example starts up the server named "managedserver1":

```
startManagedWebLogic.sh managedserver1 http://adminhost:8001
```

By default, the Marketing and Advertising server starts in production mode, so you will need to provide credentials. For information about how to do this, see the "Provide User Credentials to Start and Stop Server" section of at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13708/overview.htm#i1068887](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13708/overview.htm#i1068887)

## Special Instructions for HP-UX Installations

If you are starting servers in an HP-UX installation, you must add the **-Djava.security.egd=/dev/random** flag to the **startWebLogic.sh** script before running it.

Using a text editor, scroll down in the script until you come to the following section:

```
echo starting weblogic with Java version:
```

```
%JAVA_HOME%\bin\java %JAVA_VM% -version
```

```
if "%WLS_REDIRECT_LOG%"==" " (  
echo Starting WLS with line:
```

Insert the flag in the next line, which starts:

```
echo %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -Dweblogic.Name=%SERVER_NAME%  
-Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy  
at that point in the text.
```

When you are finished, the entire line should read:

```
echo %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% -Dweblogic.Name=%SERVER_NAME%  
-Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy  
-Djava.security.egd=/dev/random %JAVA_OPTIONS% %PROXY_SETTINGS% %SERVER_CLASS%
```

## Starting Up Using Node Manager

Node Manager is a WebLogic Server utility that enables you to start, stop, and restart administration servers and managed server instances from a remote location. Node Manager relies on a small demon process that must be running on each machine.

Using NodeManager, you can start Marketing and Advertising Managed servers from the Administration console. The console contacts the demon process, which starts the server.

For a complete description of the ways to use Node Manager, see *Oracle Fusion Middleware Node Manager Administrator's Guide for 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)

The following instructions offer a simple Java-based method for starting production servers running on Linux or UNIX. Equivalent Microsoft Windows versions exist but are not described here because Windows is not supported for production servers.

To set up the Node Manager.

1. Start the Node Manager.

The best practice is to do this as part of the normal machine boot up sequence. To start it manually, log in into the server and change to the *Middleware\_Home/wlserver\_10.3/server/bin* directory.

Run the **startNodeManager.sh** script.

2. Edit the *Middleware\_Home/wlserver\_10.3/common/nodemanager/nodemanager.domains* file.

This file specifies the domains that a Node Manager instance controls.

See *Oracle Fusion Middleware Node Manager Administrator's Guide for 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)

for a description of **nodemanager.domains**.

A sample entry is:

```
ocma-domain=/Middleware_Home/user_projects/domains/ocma-domain
```

3. Edit the *Middleware\_Home/wlserver\_10.3/common/nodemanager/nodemanager.properties* file.

This file is created the first time you start the Node Manager.

Make sure that `StartScriptEnabled` is set to `true`.

4. Restart the Node Manager, as described in Step 1 above.
5. Create a startup script.

In the *domain\_home* directory, create a file called **startWeblogic.sh**. Add a line to it specifying the start command, the server and the port:

```
./bin/startManagedWebLogic.sh [SERVER_NAME] [ADMIN_HOST_PORT]
```

For example:

```
./bin/startManagedWebLogic.sh OCM2 http://192.168.1.42:7001
```

6. Make sure that Listen Address is configured in the Administration console.

In **Domain Structure**, select **Environment** -> **Machines** -> *machine\_name* -> **Node Manager**. You must use **Activate Changes** to persist any changes.

At this point the Node Manager is set up. You can use the Node Manager to start Marketing and Advertising Managed servers from the domain's administration console.

To start Marketing and Advertising Managed servers from the domain's administration console:

1. Select **Environment** -> **Servers**.
2. On the **Summary of Servers** page, select the **Control** tab.
3. Select the checkbox(es) for the Marketing and Advertising server(s) that you want to start.
4. Click **Start**.

## Shutting Down Servers Using the Administration Console

You can stop an Marketing and Advertising server from the Administration console following these steps:

1. From the Administration console, click **Environment** -> **Servers**.
2. On the Summary of Servers page, select the **Control** tab.
3. Select the checkbox(es) for the Marketing and Advertising server(s) that you want to shut down.
4. Select **Shutdown** from the menu.
5. Select from the menu's alternatives: to stop the server when its work completes or to stop it immediately.

## Shutting Down Servers Using Scripts

You can stop Marketing and Advertising Managed servers using the **stopManagedWeblogic** script and the Administration server using the **stopWeblogic** script. These scripts were installed when you installed Marketing and Advertising.

To use the scripts, set `SERVER_NAME`, `ADMIN_URL`, `USERID`, and `PASSWORD` as environment variables or specify them on the command line. Run these scripts from `domain_home/bin` in your the Marketing and Advertising installation.

The following example stops the Marketing and Advertising server named "om3", assuming that the `ADMIN_URL`, `USERID`, and `PASSWORD` are set in the environment:

```
stopManagedWeblogic.sh ocm3
```

If you specify the parameters on the command line, they must be in order shown below:

```
stopManagedWeblogic.sh managed_server_name admin_url username password
```

The next example stops the administration server, using the same assumptions that `ADMIN_URL`, `USERID`, and `PASSWORD` are set in the environment. If no server is specified, the administration server is stopped by default.

```
stopWeblogic.sh
```

For more information about stopping WebLogic servers, see *Shutting Down Instances of WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13708/overview.htm#i1069181](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13708/overview.htm#i1069181)

---

## Setting Up Web Services Security and JMX Policy

This chapter provides a high level overview of security settings for Web services and for Operation and Management (OAM) MBeans in Oracle Communications Marketing and Advertising.

It describes two types of security settings:

- Web Services Security: controls Marketing and Advertising's interactions with administration Web service clients
- MBean Security: controls access to the servers, which governs who can perform OAM functions; implemented by Java Management Extension (JMX policy)

### Web Services Security

Web services security provides end-to-end message-level security for Web services through an implementation of the WS-Security standard. It defines a mechanism for adding three levels of security to SOAP messages:

- Authentication: The client authenticates by supplying a username or X.509 token.
- Confidentiality: W3C's XML encryption standard enables the XML body or portions of it to be encrypted to ensure message confidentiality.
- Integrity: W3C's XML digital signatures lets the message be digitally signed to ensure message integrity. The signature is based on the content of the message itself (by applying the hash function and public key), so if the message is altered en route, the signature becomes invalid.

Marketing and Advertising uses an Oracle WebLogic Server mechanism for Web Services Security -WSSE policies. For information about WebLogic Security, see *Oracle Fusion Middleware Understanding Security for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13710/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13710/toc.htm)

Authentication is handled transparently by WS-Security and subsequently by the configured authentication providers and login modules of the WebLogic Security framework. WS-Security also supports signing and encrypting a message by providing a security token hierarchy associated with the keys used for signing and to ensure message integrity and confidentiality.

The following outlines the general WebLogic security configurations that can be performed, either automatically using a script or manually from the Administration console.

## Deploying the Web Services EAR

The administration Web services EAR, **ocma-ws.ear**, is not deployed by default in any installation except for those using the basic collocated domain template.

If you wish to use the administration Web services in other environments, you need to deploy this EAR. The EAR file can be found in *Middleware\_Home/ocma\_5.1/applications*.

There are many ways to deploy applications in WebLogic Server. See *Deploying Applications to Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13702/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13702/toc.htm)

## Using WS-Policy

This section describes how to apply an existing WS-Policy. It also describes where to find more information on creating and using custom WS-Policies.

### Apply WS-Policy to a Web Service

Use this overview to apply a WSSE policy to a Web service endpoint in Marketing and Advertising.

Marketing and Advertising uses standard WebLogic Server mechanisms. See the online help for the WebLogic Server Administration console for a full description of how to associate a WS-Policy file with an administration Web service.

To associate a WS-Policy with an operation

1. In the Domain Structure panel, select **Deployments**.

The Summary of Deployments screen appears.

2. Select the **Control** tab if it is not already selected.
3. Expand the ocma-ws section by clicking the +.
4. Under Web services, click the Web service on which you wish to apply Web Services security: for example, AccountManager or CampaignManager.

The Settings for *Web Service* screen appears.

5. Click the **Configuration** tab.
6. Click **WS-Policy** sub-tab.
7. Do one of the following:

- To apply a policy to a single operation, expand the operations list by clicking the + next to *Web ServiceTypePort* and select the operation whose WS-Policy you wish to edit.
- To apply a policy to all the operations in a Web service, click *Web ServiceTypePort*

The Configure a Web Service Policy page appears.

8. Use the first page if you wish to configure WS-Policy for both inbound and outbound requests. Click **Next** if you wish to specify only inbound options and **Next** again if you wish to specify only outbound options.

To apply a policy, select the policy and click the right-facing arrow to it from the Available Policies to the Chosen Policies.

To revoke a policy, select a policy and click the left arrow to move it from the Chosen Policies to the Available Policies.

9. When you are done, click **Finish**.

### Available Default WS-Policies

WS-Policy files can be used to require applications clients to authenticate, digitally encrypt, or digitally sign SOAP messages. For a list of the WS-SecurityPolicy 1.2 files supplied by WLS, see *Using WS-SecurityPolicy 1.2 Policy Files* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13713/message.htm#WSSOV310](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13713/message.htm#WSSOV310)

By default, a default\_x509\_cp credential provider is set up for Marketing and Advertising, but you can modify it to suit your installation. If the built-in WS-Policy files do not meet your security needs, you can build custom policies as described in [Creating and Using Custom WS-Policy](#). WS-Policy assertions are used to specify a Web service's requirements for digital signatures and encryption, along with the related security algorithms and authentication mechanisms.

### Creating and Using Custom WS-Policy

For information about creating and using a custom policy file for message-level security, see *Oracle Fusion Middleware Securing WebLogic Web Services for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13713/toc.htm](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13713/toc.htm)

There is also information about associating a WS-Policy file with a Web service in the on-line help for WebLogic Server Administration console at:

[http://download.oracle.com/docs/cd/E12839\\_01/apirefs.1111/e13952/taskhelp/webservices/ConfigureWSPolicyFile.html](http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/taskhelp/webservices/ConfigureWSPolicyFile.html)

## Creating a Web Service Security Configuration

When a deployed WebLogic Web service has been configured to use message-level security (encryption and digital signatures, as described by the WS-Security specification), the Web services runtime determines whether a Web service security configuration is also associated with the service. This security configuration specifies information such as whether to use an X.509 certificate for identity, whether to use password digests, the keystore to be used for encryption, and so on. A single security configuration can be associated with many Web services.

WebLogic Web services are not required to be associated with a security configuration. If the default behavior of the Web services security runtime is adequate, no additional configuration is needed. If, however, a Web service requires different behavior from the default (such as using an X.509 certificate for identity, rather than the default username/password token), the Web service must be associated with a security configuration.

The default security configuration is **default\_wss**. It must be created using the Administration console, following the steps in *Create a Web Service security configuration* in the *Administration Console Online Help* at:

[http://download.oracle.com/docs/cd/E12839\\_01/apirefs.1111/e13952/pagehelp/J2EEwebserviceswebservicessecuritycreatetitle.html](http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/pagehelp/J2EEwebserviceswebservicessecuritycreatetitle.html)

## Setting Up JMX Policy

You use Java Management Extension (JMX) MBeans Access to control access to the OAM functionality of Marketing and Advertising, both through the Administration console and through external mechanisms. Access to these MBeans is controlled by JMX Policy, which associates management user groups with access privilege levels. When Marketing and Advertising is installed, there are no controls established by default on access to the OAM MBeans. Each installation must make decisions about access based on its own needs.

## Management Groups

Management users and groups are set up as described in "[Setting Up Management Users](#)". To control how these users have access to MBeans, and thus OAM functionality, you must assign JMX Policy to these user groups. You use WebLogic Server Administration console to do this, as described in the on-line help for the Administration console at:

[http://download.oracle.com/docs/cd/E12839\\_01/apirefs.1111/e13952/core/index.html](http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/core/index.html)

Each policy can do the following:

- Control read access for all an MBean's attributes or for specific attributes that you select.
- Control write access for all an MBean's attributes or for specific attributes that you select.
- Control invoke access for all an MBean's operations or for specific operations that you select.

## Management Service Groups

In addition to controlling access to OAM functionality in a general way (ReadOnly, ReadWrite, etc.), you may also wish to control access by service group. For example, if you have users whose job is limited to setting up and managing some aspects of provisioning, but not all, you might want to give them, and only them, ReadWrite privileges, but only to a subset of the available MBeans. To do this you have to create custom XACML policies to attach to these subsets. Oracle Communications Services Gatekeeper uses the standard WebLogic Server mechanisms for doing this. For the basic process you must:

- Determine the special identifier (called the resourceId) for each MBean.
- Create an XACML policy for a security role.
- Specify one or more Rule elements that define which users, groups, or roles belong to the new security role.
- Attach this role to the MBean by way of the resourceId.

For more information, see "Using XACML Documents to Secure WebLogic Resources" in *Oracle Fusion Middleware Securing Resources Using Roles and Policies for Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13747/xacmlusing.htm#i1276253](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13747/xacmlusing.htm#i1276253)

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## Setting Up Embedded LDAP Replication

If you have configured a clustered or basic HA domain, you must set up the embedded LDAP server to propagate the Web application organization and user information to all servers. If you do not set replication up, user provisioning will not work correctly.

To set up embedded LDAP replication in the Administration console:

1. Click the *domain\_name* at the top of the Domain Structure panel.  
The Settings for *domain\_name* panel appears.
2. Click the **Security** tab.
3. Click the **Embedded LDAP** tab in the second row of tabs.
4. Configure the embedded LDAP server by filling in the fields. They are described in the panel and in "Domain: Security: Embedded LDAP" in *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help* at:  
[http://download.oracle.com/docs/cd/E12839\\_01/apirefs.1111/e13952/pagehelp/Securitysecuritydomaindomainconfigembeddedldaptitle.html](http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/pagehelp/Securitysecuritydomaindomainconfigembeddedldaptitle.html)
5. Click **Save**.
6. Make sure the Messages at the top of the screen are green and indicate success.
7. Restart the cluster.

For general information, see "Managing the Embedded LDAP Server" in *Oracle Fusion Middleware Securing Oracle WebLogic Server* at:

[http://download.oracle.com/docs/cd/E15523\\_01/web.1111/e13707/ldap.htm#i1104934](http://download.oracle.com/docs/cd/E15523_01/web.1111/e13707/ldap.htm#i1104934)



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## Setting Up Management Users

This chapter explains how to set up system administrators with access to the Oracle Communications Marketing and Advertising Administration console.

### System Administrator Overview

Marketing and Advertising system administrators have privileges to manage the product at the server level. They are known as management or administrative users. They use the Administration console or other JMX-based tools. They have permission to perform management and administrative functions.

Organizational users within the Marketing and Advertising system are set up inside the application by someone who is logged in as an organizational user, such as a system owner user. For information about setting up organizational users such as system owner users, network provider users, ad service provider users, ad space owner users, and advertiser users, see the online help within Marketing and Advertising.

The default administrative user, created during the domain configuration phase following product installation, is by default a member of the Administrators user group. Users in this group have a user level of 1000, which provides the most privileged level of access. This level grants permission to:

- View, modify and administer server configuration; includes permission to list, add, and delete users and to change passwords.
- Deploy applications.
- Start, resume, and stop servers.
- Create users in the Administrative user group and in groups that have lesser privileges.

Marketing and Advertising management users are created and managed using standard Oracle WebLogic Server mechanisms.

For an overview of those mechanisms, see "Manage users and groups" from *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help* at:

[http://download.oracle.com/docs/cd/E12839\\_01/apirefs.1111/e13952/taskhelp/security/ManageUsersAndGroups.html](http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/taskhelp/security/ManageUsersAndGroups.html)

The default administrative user must also be a user in the Marketing and Advertising system owner organization. This is so that the administrative user username and password can be used for the initial login to Marketing and Advertising. After this initial login, the administrative user should create additional separate system owner users. In a standard installation/domain configuration, this is taken care of

automatically, but if you are setting up an overlay installation, this will require an additional step. You can do one of the following:

- From the Administration console, add the main administrative user from a previous Oracle Communications Services Gatekeeper installation to the systemowner group.
- Run a special script called `ocma-update-user-group.py` found in your Marketing and Advertising installation in `Middleware_Home/wlserver_10.3/common/templates/scripts/wlst`.

## Creating Management Users

To create a management user:

1. In the Domain Structure panel, select **Security Realms**.

The Summary of Security Realms pane opens.

2. Click **myrealm**.

The Settings for myrealm pane opens.

3. Click the **Users and Groups** tab.

The tab opens.

4. Select the **Users** tab if it is not selected.

---

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**Note:** The list of users on the Users tab includes both management users and organization users from the application. Creating and managing Marketing and Advertising organization users should be done through the application or the Marketing and Advertising provisioning Web Services. Do not use the Administration console for this purpose.

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5. Click the **New** button.

The Create a New User screen appears.

6. Fill in the form fields. The **Provider** field should be left at **DefaultAuthenticator**.

7. Click **OK**.

The User created successfully message appears at the top of the page.

## Adding Management Users to Groups

To add a management user to a group:

1. In the Domain Structure panel, select **Security Realms**.

The Summary of Security Realms panel opens.

2. Click **myrealm**.

The Settings for myrealm page opens.

3. Click the **Users and Groups** tab.

The tab opens.

4. Select the **Users** tab if it is not selected.

5. Click the name of the management user you wish to associate with a management user group. The Settings for *username* page opens.
6. Select the **Groups** tab if it is not selected.
7. Under the Available list on the left, select the name of the management group you to which you wish to assign this user. For example, to add this user to the Administrators group, select **Administrators**.

---

**Note:** Do not use this method to assign Marketing and Advertising organization users to organization type groups, even though you can see these groups in the **Available** list. Management users should belong to one of the following standard WLS management groups:

- Administrators
- AppTesters
- Deployers
- Monitors
- Operators

See the Administration console online help for information on these groups or on setting up your own groups.

---

8. Click the right pointing arrow to move the selected group name from the Available list to the Chosen list to the right.
9. Click **Save**.  
The User created successfully message appears at the top of the page.



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## Maintaining Databases

This chapter describes basic maintenance for the database tables underlying Oracle Communications Marketing and Advertising and Oracle Communications Services Gatekeeper.

### Maintenance for Marketing and Advertising Tables

All of the Marketing and Advertising database tables are cleaned automatically based on the data retention values set in the **Data Retention** tab of the OCMA extension in the WebLogic Administration console.

You can separately configure retention time for statistics tables and for deleted entities, such as old campaigns and ad spaces.

For more information, see [Data Retention](#).

### Maintenance for Services Gatekeeper Tables

This section describes manual cleanup for the charging data record (CDR), alarms, and statistics tables and how to manage storage data expiration for all Services Gatekeeper database tables.

#### Manual Database Cleanup

Most of the Services Gatekeeper tables are cleaned automatically, but the following three tables in the database underlying Services Gatekeeper must be periodically cleaned manually to prevent them from growing too large:

- SLEE\_ALARM
- SLEE\_CHARGING
- SLEE\_STATISTICS\_DATA

Use the instructions provided for your database to delete rows from these tables.

Oracle recommends cleaning the SLEE\_STATISTICS\_DATA table once a month and the SLEE\_ALARM table every two months.

The interval for cleaning the SLEE\_CHARGING table depends on the amount of charging traffic, so it is difficult to specify a recommended interval. There is usually one row in this table per plug-in transaction. A row can contain up to 300 bytes of data.

Typically, operators export charging data from the SLEE\_CHARGING table to a file either by using a scheduled script or by integrating with a billing system such as Oracle Communications Billing and Revenue Management.

Charging data is contained in CDRs, which are a type of event data record (EDR). Typically CDRs are integrated by means of EDR listeners. You can also listen for alarms by setting up an SNMP/EDR listener. If this is done, it is possible to disable storage of CDRs and alarms in the database by setting the EDR Service's **StoreAlarms** or **Store CDRs** attributes to `false`. Oracle recommends storing alarms for some period of time, however, for trouble-shooting purposes. For general information about EDRs, CDRs, and alarms, as well as about the **StoreCDRs** and **StoreAlarms** attributes, see "Managing and Configuring EDRs, CDRs and Alarms" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_edr.htm#i1124350](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_edr.htm#i1124350)

For more detailed information about creating an EDR listener see "Creating an EDR Listener and Generating SNMP MIBs" in the *Oracle Communications Services Gatekeeper Platform Development Studio Developer's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16619/pds\\_edrlistener.htm#i1114303](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16619/pds_edrlistener.htm#i1114303)

## Storage Data Expiration

To prevent the databases underlying the Storage service from growing too large, data in the Storage service can be set to expire, after which time the data is deleted. One of the visible consequences of this is that the status of delivery receipt can be unsuccessful if an old message is deleted from storage because it aged beyond the configured expiration period.

You can configure both the data expiration period for a communication service and the interval that Services Gatekeeper checks whether data in the stores has expired.

### Configuring the Expiration Period

To set the data expiration period:

1. Locate the store schema JAR file for the store that you want to configure.  
These jar files are in under the *Domain\_Home/config/store\_schema* directory.  
For example, the JAR file for the common smpp store is *Domain\_Home/config/store\_schema/com.bea.wlcp.wlng.sms.common.store*.
2. Extract the files from the JAR file for the store that you want to configure.
3. Open the `wlng-cachestore-config-extensions.xml` file.
4. In the extensions file, create or edit the `<expiry>` element, setting its **expiry\_age** value. The value is in seconds.
5. Save the file.

If **expiry\_age** is not set, the data never expires.

The following example shows the configuration of the MO message store setting the expiration period to 604800 seconds (one week).

```
<!-- MO message store (common) start -->
<db_table name="pl_sms_mo_sms">
  <key_column name="msg_id" data_type="VARCHAR(30)"/>
  <bucket_column name="smsdata" data_type="BLOB"/>
```

```

<value_column name="notif_correlator" data_type="VARCHAR(30)">
  <methods>
    <get_method name="getNotificationInfoCorrelator"/>
    <set_method name="setNotificationInfoCorrelator"/>
  </methods>
</value_column>
<expiry expiry_age="604800"/> <!-- 1 week -->
</db_table>

```

### Configuring the Checking Interval

At the system level, Services Gatekeeper checks whether Storage data has expired at a set interval defined by the `com.bea.wlcp.wlng.storage.expiry_period` variable. The default for the **expiry\_period** is every 1800000 milliseconds (thirty minutes).

You can configure this value on server startup by passing it as a Java option when you restart the server. The option is:

```

JAVA_OPTIONS="${JAVA_OPTIONS} -Dcom.bea.wlcp.wlng.storage.expiry_
period=expiry_period_value"

```

For example, the following flag configures Services Gatekeeper to check for expired data once an hour:

```

JAVA_OPTIONS="${JAVA_OPTIONS} -Dcom.bea.wlcp.wlng.storage.expiry_
period=3600000"

```



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## Backing Up and Restoring

Oracle Communications Marketing and Advertising runs within the context of Oracle WebLogic Server. System failure prevention and recovery follow standard WebLogic Server patterns.

See *Oracle Communications Services Gatekeeper System Backup and Restoration Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16624/toc.htm](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16624/toc.htm)

for an overview of backup and restore tasks for Services Gatekeeper. Marketing and Advertising runs on a modified Services Gatekeeper foundation. Backup and restore tasks for Marketing and Advertising are similar to Services Gatekeeper.

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**Note:** The Geo-Redundancy features of Services Gatekeeper are not supported in Marketing and Advertising.

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### Marketing and Advertising Database Tables

You need to periodically back up the database tables underlying Marketing and Advertising. For information on backing up and restoring the database, see the database backup and restore instructions for the database product you are using.

For the list of Services Gatekeeper tables to back up, see the appendix to the *Oracle Communications Services Gatekeeper Backup and Restore Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16624/brs\\_dbtables.htm#sthref18](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16624/brs_dbtables.htm#sthref18)

The following list that shows all the tables to be backed up that are created specifically for the Marketing and Advertising database:

ADMIN\_ABSTRACT  
ADMIN\_ADV  
ADMIN\_ASO  
ADMIN\_ASP  
ADMIN\_NO  
ADMIN\_SO  
ADUNIT\_ABSTRACT  
BULK\_SELECTION\_CRITERIA  
CAMPAIGN\_ABSTRACT  
CAMPAIGN\_APP

CAMPAIGN\_BLK  
CAMPAIGN\_BLK\_AVAIL\_SUBSCR\_LIST  
CAMPAIGN\_BLK\_SUBSCRIBER\_LIST  
CAMPAIGN\_COUNTERS  
CAMPAIGN\_DYNAMIC  
CAT\_TYPE  
CAT\_TYPE\_ACTIVE  
CAT\_TYPE\_PLUGINS  
CAT\_VALUE  
CAT\_VERSION  
CAT\_VERSION\_ACTIVE  
CAT\_VERSION\_DIS\_TYPE  
CAT\_VERSION\_DIS\_VALUE  
CAT\_VERSION\_EN\_TYPE  
CAT\_VERSION\_EN\_VALUE  
CC\_ABSTRACT  
CC\_BULK  
CC\_BULK\_HOURS  
CC\_MSG\_SERVICE  
CC\_MSG\_SERVICE\_LA  
CC\_OMA\_SERVER  
CDR\_ABSTRACT  
CDR\_CLICKTHROUGH  
CHANGES\_READ  
CONTENT\_ABSTRACT  
CONTENT\_BANNER\_IMAGE  
CONTENT\_MMS  
CONTENT\_MMS\_ADUNIT\_ABSTRACT  
CONTENT\_SHTML  
CONTENT\_SHTML\_BANNER  
CONTENT\_SMS  
CONTENT\_TXT  
CONTENT\_URL  
CONTENT\_WAPPUSH  
DEMOGRAPHY\_CC\_FEATURE  
DEMOGRAPHY\_CMP\_FEATURE  
DYNAMIC\_AS\_CATEGORIES

DYNAMIC\_CMP\_CATEGORIES  
EMAIL\_QUEUE  
EVENT\_ABSTRACT  
EVENT\_ADSPACE  
EVENT\_CAMPAIGN  
EVENT\_CC  
EVENT\_ORG  
FILE\_DATA  
FILTER\_ABSTRACT  
GEO\_CC\_FEATURE  
GEO\_CMP\_FEATURE  
LOCATION\_SYS\_CONFIG  
LOCATION\_TRAFFIC\_ADDRESS\_STORE  
LOCATION\_TRAFFIC\_STORE  
MMS\_MEDIA\_ADUNIT  
MMS\_TEXT\_ADUNIT  
OCMA\_CDR\_MAPPING  
ORG\_ABSTRACT  
ORG\_ADSPACEOWNERS  
ORG\_ADVERTISERS  
ORG\_NETWORKPROV  
ORG\_SERVICEPROV  
PERSONALIZATION\_CC\_FEATURE  
PERSONALIZATION\_CMP\_FEATURE  
PLUGIN  
PLUGIN\_CC\_FEATURE  
PLUGIN\_CMP\_FEATURE  
PLUGIN\_CONFIG  
RESPONSEMGMT\_CC\_FEATURE  
RESPONSEMGMT\_CMP\_FEATURE  
SPACE\_ABSTRACT  
SPACE\_APP  
SPACE\_BULK  
SPACE\_CAMPAIGN\_ID  
SPACE\_CMP\_COUNTER  
SPACE\_DYNAMIC  
STAT\_CATEGORY

STAT\_DAILY\_SO  
STAT\_TIME  
SUBSCAPPING\_CC\_FEATURE  
SUBSCAPPING\_CMP\_FEATURE  
SUBSCR\_SYS\_CONFIG  
SUBSCRIBER\_DATA\_BULK  
SUBSCRIBER\_DATA\_SCHEMA  
SUBSCRIBER\_DATA\_SCHEMA\_MAPPING  
SUBSCRIBER\_DATA\_SOURCE  
SUBSCRIBER\_INFO\_LIST  
SUBSCRIBER\_INFO\_LIST\_DATA  
SUBSCRIBER\_LIST\_MINED  
SYS\_CONFIG  
UPLOADED\_LIST  
UPLOADED\_LIST\_DATA  
VERSION\_COMPAT  
VERSION\_PRODUCT

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# Configuring the Oracle Communications Marketing and Advertising Web Application

This chapter describes how to configure the Oracle Communications Marketing and Advertising Web application.

## Accessing the OCMA Console Extension

You use the OCMA extension in the WebLogic Administration console to configure the Web application.

To access the console extension, in the Domain Structure panel, click **OCMA**.

The **OCMA** panel opens.

These are the areas that you can configure in this panel:

- [General](#)
- [Mail Server](#)
- [OCSG Client](#)
- [Statistics](#)
- [Licensing](#)
- [Data Retention](#)
- [BAM](#)
- [Siebel](#)
- [Caching](#)

## General

The **General** tab covers a range of general setup information. Fill in the fields according to [Table 9-1](#).

Configuration of any of the values in this tab require that you redeploy the module or restart the server for the changes to take effect.

**Table 9-1** *The General Tab*

Field Name	Description
Locale	A menu used to set the currency type and the email locale. It has no effect on the language displayed in the Web application, which is controlled by the browser language setting.

**Table 9–1 (Cont.) The General Tab**

Field Name	Description
Default Fraction Digits	Default number of fractional digits to be used with the currency
Ocsg Network Provider	The name of the Network Provider created in the Web application GUI by the System Owner user. This is mapped to the OCSG instance.
Notification Message Active Period	The period (in hours) that notification messages are shown in the Web application GUI
Frequent Task Time Interval	How often, in seconds, "frequent periodic tasks" are run. These are tasks such as finding and processing notifications for time triggered events and sending any unsent email.
Seldom Task Time Interval	How often, in days, "infrequent periodic tasks" are run. These are tasks such as deleting old statistics, enforcing license policies, and finding any items marked to be deleted and actually deleting them from the database.
Seldom Task Start Time	The time of day to start "infrequent periodic tasks". The value should be between 0 to 23
Address List Block Size	The number of addresses in a scheduling "block", used by the Bulk Service and criteria-based subscriber lists
Country Calling Code	The country calling code defined by ITU-T recommendations E.123 and E.164; also called IDD or ISD code
OCMA Web URL	URL for the Web application, used to generate the link the Web application creates to deliver user passwords
Max Token Age	The length of time (in minutes) a password reset token is valid. Users are sent notifications with a token-based link to set up their password. This value describes how long the token is valid.

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.GeneralBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/General`.

## Mail Server

The **Mail Server** tab sets up the SMTP server information used to deliver notifications in email. Fill in the fields according to [Table 9–2](#). Click **Save** when your changes are completed.

**Table 9–2 The Mail Server Tab**

Field Name	Description
Mail Server Address	The address of the mail server used to send email notifications to users, for example: mail.mycompany.com
Mail Server Port	The port to be used with the mail server, for example: 25
Mail Sender	The username@host combination that should appear in the From: field of the email, for example: ocma-admin@mycompany.com
Enable SSL	If checked, SSL authentication is supported.
Mail Server User Name	The username the Web application should use to log into the mail server (leave blank if no login is necessary)
Mail Server password	The password the Web application should use to log into the mail server (leave blank if no login is necessary)

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.MailServerBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/MailServer`.

## OCSG Client

The **OCSG Client** tab sets up the part of the Web application that acts as a client to the delivery mechanism for bulk messaging. Fill in the fields according to [Table 9–3](#).

Configuration of the **Push Proxy Gateway Domain Address** value in this tab requires that you redeploy the module or restart the server. for the changes to take effect.

**Table 9–3 The OCSG Client Tab**

Field Name	Description
OCSG Service Address	The URL of the Services Gatekeeper Session Manager Web service, used to create sessions for bulk campaigns
Bulk MMS Address	The URL for the Services Gatekeeper bulk MMS Web service
Bulk MMS Order Max Queue Size	The maximum number of MMS orders Marketing and Advertising can submit to the Services Gatekeeper queue for processing
Bulk SMS Address	The URL for the Services Gatekeeper bulk SMS Web service
Bulk SMS Order Max Queue Size	The maximum number of SMS orders Marketing and Advertising can submit to the Services Gatekeeper queue for processing
Bulk WAP Push Address	The URL for the Services Gatekeeper bulk WAP Push Web service
Bulk WAP Push Order Max Queue Size	The maximum number of WAP Push orders Marketing and Advertising can submit to the Services Gatekeeper queue for processing
User Name	The username the client uses to authenticate with Services Gatekeeper Web services
Password	The password the client uses to authenticate with Services Gatekeeper Web services
Push Proxy Gateway Domain Address	The push proxy gateway domain address, required for WAP Push addresses, appended to the number part of the address with TYPE=PLMN@. For example: ppg.o.com

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.OCSGClientBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/OCSGClient`.

## Statistics

The **Statistics** tab sets up how often the Event data Records (EDRs) used for creating statistical information for the Web application are stored. Fill in the fields according to [Table 9–4](#).

Click **Save** when your changes are complete. Configuration of any of the values in this tab require that you redeploy the module or restart the server for the changes to take effect.

**Table 9–4 The Statistics Tab**

Field Name	Description
Max EDR Buffer Size	Max size of EDRs buffer. The module which creates statistical information for the GUI aggregates information from the EDRs in memory and writes the result to the DB either when the size of the buffer reaches this value or when no new EDR arrives within Max Wait Time.
Max Wait Time	Max time the statistics module will wait for a new EDR before flushing the cache to the DB

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.StatisticsBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/Statistics`.

## Licensing

Licensing costs for Marketing and Advertising are based on a value known as "Ads Served". This value is equal to the number of promotional messages, either Advertising or Marketing campaign based, that are successfully delivered to the network by the delivery mechanism during a 24 hour period, and on the aggregated total of all messages during a month.

The **Licensing** tab allows you to set limits for all types of messages. If your system hits 95% of any of the daily limits within a 24 hour period, a warning email is sent to system owner users. At 100%, a violation alert is sent. The overall monthly limit sends equivalent alerts. Warnings and violations are also stored in log files. Traffic flow is not interrupted if the limit is reached or surpassed.

Fill in the fields according to [Table 9–5](#).

**Table 9–5 The Licensing Tab**

Field Name	Description
SMS Marketing Limit	SMS marketing license limit, given as number of ads served during a 24 hour period
SMS AdCampaign Limit	SMS advertising campaign license limit, given as number of ads served during a 24 hour period
MMS Marketing Limit	MMS marketing license limit, given as number of ads served during a 24 hour period
MMS AdCampaign Limit	MMS advertising campaign license limit, given as number of ads served during a 24 hour period
WAP Marketing Limit	WAP marketing license limit, given as number of ads served during a 24 hour period
Overall Monthly Limit	Overall monthly license limit, given as total aggregated number of ads served during a calendar month by all campaign types and calculated on the first of each month

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.LicensingBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/Licensing`.

## Data Retention

The **Data Retention** tab is used to configure how long the data on which the statistical information presented in the Web application is based is kept in the Marketing and Advertising database. Fill in the fields according to [Table 9–6](#).

Click **Save** when your changes are complete. Configuration of any of the values in this tab require that you redeploy the module or restart the server for the changes to take effect.

**Table 9–6 The Data Retention Tab**

Field Name	Description
Hourly statistics retention time	How long, in days, hourly statistics data is kept in the database before being cleaned up
Logically deleted data retention time	How long, in days, logically deleted entities are retained in the database. For example, campaigns and ad spaces are deleted logically first, but are cleared from the database only after this retention period.

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.DataRetentionBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/DataRetention`.

## BAM

The **BAM** tab is used to set up integration with Oracle Business Activity Monitoring (BAM). Marketing and Advertising publishes ongoing campaign information to a JMS queue where it can be fetched by BAM for real-time analysis. Fill in the fields according to [Table 9–7](#).

Click **Save** when your changes are complete. Configuration of any of the values in this tab require that you redeploy the module or restart the server for the changes to take effect.

**Table 9–7 The BAM Tab**

Field Name	Description
Enable BAM	Check this to enable BAM integration
JMS Server Address	The URL of the JMS server to which the information is published
JMS Server user name	The login username for the JMS server
JMS Server password	The login password for the JMS server
JMS topic JNDI name	The JNDI name for the JMS topic to which the information is published, must be identical to the value set up in the BAM server.
JMS Connection Factory JNDI name	The JNDI name for the JMS Connection Factory, must be identical to the value set up in the BAM server.

The JMX-accessible MBean with these attributes is named `com.bea:Name=ocma,Type=oracle.ocma.configuration.beans.BAMBean,Parent=[ocma-basic-domain]/CustomResources[ocma],Path=Resource[ocma]/BAM`.

## Siebel

For information about the fields in this tab, see the "Integrating with Siebel Enterprise Marketing Suite" chapter in *Integration Guide*, another document in this set.

Configuration of any of the values in this tab require that you redeploy the module or restart the server for the changes to take effect.

## Caching

The **Caching** tab is used to configure the counters that control the frequency of ads sent to a single subscriber by a single campaign. The counters are stored in cache and in the database.

You can configure frequency duration that the counter cache is dumped and the counter cache size using the fields in [Table 9–8](#).

Click **Save** when your changes are complete. Configuration of any of the values in this tab require that you redeploy the module or restart the server for the changes to take effect.

**Table 9–8 The Caching Tab**

Field Name	Description
Counter Age	Age of a counter in minutes. Valid values are 1 through 30. This is the interval at which the counter in cache is dumped to the database.
Counter Cache Size	Number of entries in the counter cache. Default is 10000.

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# Customizing the Appearance of the Application

The system administrator can customize the look and feel of the Oracle Communications Marketing and Advertising application, including the main logo, by editing the cascading style sheet (css) file attached to the application.

## Customizing Overview

Changes can be set at the system owner level or the ad service provider level, depending on which files are edited.

Changes at the system owner level affect the appearance of the entire application as it is seen by all users. Changes at the ad service provider level change the way the application appears to an ad service provider and to the ad space owners and advertisers that the ad service provider manages. Different ad service providers can create different styles for the entities that they control.

Example CSS files are supplied for changes at both levels to serve as a model. For more detailed information about customizing the appearance of an application, see "Customizing the Appearance Using Styles and Skins" in *Oracle Fusion Middleware Web User Interface Developer's Guide for Oracle Application Development Framework* at:

[http://download.oracle.com/docs/cd/E12839\\_01/web.1111/b31973/af\\_skin.htm](http://download.oracle.com/docs/cd/E12839_01/web.1111/b31973/af_skin.htm)

## Locating the Style Sheets

To locate the style sheets:

1. Navigate to the *Middleware\_Home***ocma\_5.1/applications** directory.
2. Find the EAR file named **ocma-admin-adf-ear.ear**.
3. Copy that EAR to another location for editing.
4. Unzip the EAR file.
5. Locate the **ocma-admin-adf-viewcontroller-5.0-SNAPSHOT.war** file.
6. Unzip the WAR file.
7. Open the **skins** directory.
8. Do one of the following:
  - To change the appearance at the system ownerlevel open the **so** directory.
  - To change the appearance at the ad service provider level, open the **sp** directory.

## Changing the Style at the System Owner Level

To change the style at the system owner level:

1. In the **so** directory using the **so\_example.css** file as a model, make your style changes in the **so.css** file.
2. Save the **so.css** file.
3. If you want to change the logo, over-write the **so\_logo.png** file with your own PNG file.
4. Zip the WAR file and then zip it into the EAR file.
5. Copy the EAR file to its previous location in the *Middleware\_Home/ocma\_5.1/applications* directory.
6. Redeploy the application.

## Changing the Style at the Ad Service Provider Level

To change the style at the ad service provider level:

1. In the **sp** directory, open the **sp\_example.css** file.
2. Save the **sp\_example.css** file as *ASPName.css* where *ASPName* is your Ad Service Provider name.
3. Make your style changes in the *ASPName.css* file.
4. Save the *ASPName.css* file.
5. Save your logo as the name you specified for the logo in the *ASPName.css* file.
6. Zip the WAR file and then zip it into the EAR file.
7. Copy the EAR file to its previous location in the *Middleware\_Home/ocma\_5.1/applications* directory.
8. Redeploy the application.

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## Managing and Configuring Traffic Users

To enable the delivery mechanism to accept messages for delivery, the entities that are sending those messages must have accounts on the delivery mechanism system.

These accounts are for users called traffic users, because they send traffic through the system. Their accounts allow for authentication with the system. The account ids are also supplied in event data records (EDR)s and charging data records (CDRs) for use in billing and system troubleshooting. For an overview of the entire account system in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16617/toc.htm](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16617/toc.htm)

### Account Structure

Account structures are arranged in a hierarchy.

At the base is the application instance, which is associated with the username (also called an application instance ID) and password that are used to authenticate with Oracle Communications Service Gatekeeper.

The application instance belongs to an application account.

The application account, in turn, belongs to a service provider account.

The application account also belongs to an application group and the service provider belongs to a service provider group.

In the standard installation of Services Gatekeeper, the application group and the service provider group are associated with Service Level Agreements (SLAs) that define contractual Quality of Service (QoS) and maximum throughput levels, but the modified version of Services Gatekeeper provided with Marketing and Advertising does not use either account or service provider level SLAs. However, if you are using an existing standard instance of Services Gatekeeper, you should set up all accounts in the normal way for that system, including setting up all levels of SLAs.

### Setting Up a Traffic User for Marketing and Advertising

The messages that make up marketing campaigns are sent by the OCSG Client module in Marketing and Advertising. This client module must be provisioned with a set of accounts for sending messages through the modified Services Gatekeeper.

For the OCSG Client module to function, you must set up:

- [The Application Instance](#)
- [The Application Account and the Service Provider Account](#)

- [The Application Group and the Service Provider Group](#)

## The Application Instance

To set up an application instance for the OCSG Client module, follow the instructions in "Managing Application Instances" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16617/sla\\_instances.htm#i1118793](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16617/sla_instances.htm#i1118793)

## The Application Account and the Service Provider Account

To set up the application account and the service provider account for the OCSG Client module, follow the instructions in "Managing Service Provider and Application Accounts" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16617/sla\\_accounts.htm#i1120919](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16617/sla_accounts.htm#i1120919)

## The Application Group and the Service Provider Group

To set up the application group and the service provider group for the OCSG Client module, follow the instructions in "Managing Groups" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E14148\\_01/wlcp/ocsg41\\_otn/spappmgmt/groups.html](http://download.oracle.com/docs/cd/E14148_01/wlcp/ocsg41_otn/spappmgmt/groups.html)

It is not necessary to set up SLAs for this group set unless you are using an overlay installation.

## Setting Up Traffic Users for Ad Space Owners

The messages that are used in advertising campaigns originate outside of the system either from an application that is offering space in its own messages (called an ad space owner) or from subscribers who send messages to those applications that Marketing and Advertising intercepts. These are called, respectively, Application to Person (A2P) campaigns or Person to Application (P2A) campaigns. An application that is involved in either of these scenarios must also have a full set of related account structures in Services Gatekeeper.

To enable ad space owners to interact with the delivery mechanism, you must set up:

- [The Application Instance](#)
- [The Application Account and the Service Provider Account](#)
- [The Application Group and the Service Provider Group](#)

## The Application Instance

To set up an application instance for each ad space owner/application, follow the instructions in "Managing Application Instances" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16617/sla\\_instances.htm#i1118793](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16617/sla_instances.htm#i1118793)

## The Application Account and the Service Provider Account

To set up the application account and the service provider account for each ad space owner/application, follow the instructions in "Managing Service Provider and Application Accounts" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16617/sla\\_accounts.htm#i1120919](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16617/sla_accounts.htm#i1120919)

## The Application Group and the Service Provider Group

To set up the application group and the service provider group for each ad space owner/application, follow the instructions in "Managing Groups" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E14148\\_01/wlcp/ocsg41\\_otn/spappgmt/groups.html](http://download.oracle.com/docs/cd/E14148_01/wlcp/ocsg41_otn/spappgmt/groups.html)

It is not necessary to set up SLAs for this group set.

## Setting Up A Global Node SLA

Marketing campaigns, which send messages to subscribers in bulk, use an internal budget mechanism to monitor the load that the system is sending to the network at any given time. The rules for what the system can send to each network node are established through the use of a Global Node SLA, which is an XML file that defines the conditions under which individual network nodes can be used.

To set up a Global Node SLA, follow the instructions in "Defining Global Node and Service Provider Group Node SLAs" in *Oracle Communications Services Gatekeeper Accounts and SLAs Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16617/sla\\_defnodes.htm#i1122622](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16617/sla_defnodes.htm#i1122622)



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## Managing and Configuring Channels

Oracle Communications Marketing and Advertising delivers traffic to the network using three channels:

- Short Messaging (SMS)
- Multimedia Messaging (MMS)
- WAP Push

Advertising Campaigns use the SMS and MMS channels. Marketing campaigns use SMS, MMS, and WAP Push.

Setting up these channels requires creating and configuring plug-ins, which are the parts of the Oracle Communications Services Gatekeeper Communication Services that interact with the underlying network elements. Those plug-in services that are used by Marketing and Advertising are included as part of the standard installation and are configured using the same system that is used in Services Gatekeeper.

Some plug-ins use special services designed to support their functionality (e.g. the Heartbeat Service and the Short Code Mapper Service).

In addition, because marketing campaigns send out bulk messages, a function that is not supported in Services Gatekeeper 5.0, new plug-ins were created to support the scheduling activities associated with this functionality.

This chapter provides an overview of the information needed to configure these plug-ins. Before configuring channels in Marketing and Advertising be sure that you have properly setup the **OCSG Client** tab in the WebLogic Administration Console. See "[OCSG Client](#)" for information on how to configure the OCSG Client.

For information about configuring Open Mobile Alliance (OMA) campaigns that use text, URL and simple HTML snippet ad content see the "Using Oracle Communications Marketing and Advertising as an Ad Server" chapter in *Integration Guide*, another document in this set.

### Bulk Management Plug-ins

Services Gatekeeper monitors the traffic it sends to the network to make sure the underlying network elements are not overloaded. It does this using an internal budget, which also accounts for other traffic that may be flowing through the system.

To handle scheduling, special bulk plug-ins interact with the budget to schedule time slots for sending its messages. These plug-ins divide the messages into chunks that are then sent on to the appropriate Services Gatekeeper plug-in to be delivered to the network

These special bulk management plug-ins are:

- EWS Bulk SMS plug-in
- EWS Bulk MMS plug-in
- EWS Bulk WAP Push plug-in

## Configuring the SMS Channel

The SMS channel is supported by three plug-ins, depending on the type of campaign being used.

SMS-based marketing campaigns use the EWS Bulk SMS plug-in to manage scheduling tasks. They use the Parlay X 2.1 Short Messaging/SMPP communication service to deliver messages to the network. The Parlay X 2.1 Short Messaging/SMPP plug-in supports the use of short codes, so short code mapping must be configured.

SMS-based advertising campaigns use the Native SMPP communication service to deliver messages to the network. Because of the nature of this communication service, a second component, the SMPP Server Service, must also be configured.

For information about configuring the SMS channel, see:

- [Setting Up the EWS Bulk SMS Plug-in](#)
- [Setting Up the Parlay X 2.1 Short Messaging/SMPP Plug-in](#)
- [Setting Up Short Code Mapping](#)
- [Setting Up the Native SMPP Plug-in](#)
- [Setting Up the SMPP Server Service](#)

## Setting Up the EWS Bulk SMS Plug-in

Set up a EWS Bulk SMS plug-in instance to manage scheduling the sending of bulk SMSs.

### Creating the EWS Bulk SMS Plug-in Instance

To create an EWS Bulk SMS plug-in instance:

1. In the Domain Structure panel of the Administration console, expand the **OCSG** item.
2. Click the name of the server on which you want to create the plug-in instance.  
The Oracle Communications Services Gatekeeper panel appears.
3. Expand the **Container Services** item.
4. Under **Container Services**, click **PluginManager**.  
The PluginManager panel appears.
5. Select the **Operations** tab if it is not already selected.
6. From the **Select An Operation** list, choose **createPluginInstance**.
7. In the **PluginServiceId** field, enter "Plugin\_ews\_bulk\_sms".

If you do not know the exact name of the plug-in service for which you want to create an instance, use the **listPluginServices** operation from the Select An Operation list to display the available plug-in services.

8. In the **PluginInstanceId** field, enter a name of your choosing for the plug-in instance.

9. Click **Invoke**.

The plug-in instance is created.

For more information about the Plug-in Manager see "Managing and Configuring the Plug-in Manager" in *Oracle Communications Services Gatekeeper System Administrator's Guide*.

### Configuring the EWS Bulk SMS Plug-in instance

To configure the EWS Bulk SMS Plug-in instance:

1. In the Domain Structure panel of the Administration console, expand the **OCSG** item.
2. Click the name of the server on which you created the plug-in instance.  
The Oracle Communications Services Gatekeeper panel appears.
3. In the **Oracle Communications Services Gatekeeper** panel, expand the **Communication Services** item.
4. Click the name of the EWS Bulk SMS plug-in instance that you created in [Creating the EWS Bulk SMS Plug-in Instance](#).

The panel for the EWS Bulk SMS plug-in instance appears

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**Note:** If you are using an MBean browser instead of the console, navigate to the name of the plug-in instance you created. It will be of type `com.bea.wlcp.wlmg.plugin.bulk.sms.management.BulkSmsMBean`.

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5. Click the **Attributes** tab if it is not already selected.
6. Configure the attributes using the information in [Table 12-1](#).

**Table 12-1 EWS Bulk SMS Attributes**

Attribute Name	Attribute Description
MaxSubscriberNumOfChunkSms	The maximum number of targeted addresses in one messaging chunk
MaxSubscriberNumOfBulkSmsOrder	The maximum number of subscribers for one bulk SMS Order
ChunkSmsTaskHeartbeatInterval	The interval (given in seconds) for updating the heartbeat timestamp of a chunk that is being processed. The completion status of the chunk is evaluated at this time.
NodeBudgetDetctInverval	The interval (given in seconds) at which the BulkOrderScheduler checks the budget available for sending messages
AllowedBudgetUsagePercent	How much of the overall budget can be shared by the bulk service, as a percent. If 0, the bulk service only sends out messages when there is no other pending traffic.

To change an attribute value, click the check box beside the name and enter the new value. You can also keep the default values.

All of these attributes have a cluster-wide scope.

- When you have finished making your changes, click the **Update Attributes** button.

The screen refreshes and the changes are saved.

### Understanding EWS Bulk SMS EDRs

The EWS Bulk SMS Plug-in generates the EDRs listed in [Table 12-2](#).

**Table 12-2 EWS Bulk SMS Plug-in EDRs**

EdrID	Method Called
17001	submitBulkSmsOrder
17002	getBulkSmsOrderStatus
17003	cancelBulkSmsOrder

These EDRs contain the same information as Services Gatekeeper's communication services with one additional piece of information, the `bulk_order_id`.

For information about the general structure of EDRs, see the "Event Handling in the Network Tier" section of "Events, Alarms, and Charging" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_edrcommon.htm#i1000079](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_edrcommon.htm#i1000079)

## Setting Up the Parlay X 2.1 Short Messaging/SMPP Plug-in

To deliver messages to the network, SMS-based Marketing Campaigns rely on the Parlay X 2.1 Short Messaging/SMPP Plug-in.

### Creating the Parlay X 2.1 Short Messaging/SMPP Plug-in Instance

To create the Parlay X 2.1 Short Messaging/SMPP plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#) except in step 7 where in the `PluginServiceId` field, you should enter "Plugin\_px21\_short\_messaging\_smpp".

### Configuring the Parlay X 2.1 Short Messaging/SMPP Plug-in Instance

To configure the plug-in instance, follow the instructions in "Managing and Configuring Short Messaging Communications Services" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tpsshortmess.htm#i1119710](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tpsshortmess.htm#i1119710)

### Understanding Parlay X 2.1 Short Messaging/SMPP EDRs

For information on the EDRs, CDRs, and statistics generated by this plug-in, see the "Configuration Specifics" section of "Parlay X 2.1 Short Messaging Communication Service" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_shortmsg.htm#i1081755](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_shortmsg.htm#i1081755)

## Setting Up Short Code Mapping

To set up short code mapping for the Parlay X 2.1 Short Messaging/SMPP plug-in instance, follow the instructions in "Managing and Configuring Shortcode Mappings" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_shrtcodempr.htm#i1094941](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_shrtcodempr.htm#i1094941)

## Setting Up the SMPP Server Service

Both the Native SMPP Communication Service and the Parlay X 2.1 Short Messaging/SMPP Communication Service rely on Services Gatekeeper's SMPP Server Service to establish and manage connections to the network.

To configure the SMPP Server Service, see the "Properties for SMPP Server Service", "System Properties for SMPP Server Service", and "Reference: Attributes and Operations for SMPP Server Service" sections in "Managing and Configuring Native SMPP Communication Services" in the *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tpnativesmpp.htm#CEGICEIH](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tpnativesmpp.htm#CEGICEIH)

## Setting Up the Native SMPP Plug-in

To deliver messages to the network, SMS-based advertising campaigns rely on the Native SMPP Plug-in.

### Creating the Native SMPP Plug-in Instance

To create the Native SMPP plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#) except in step 7 where in the **PluginServiceId** field, you should enter "Plugin\_sms\_smpp".

### Configuring the Native SMPP Plug-in Instance

To configure the plug-in instance, follow the instructions in "Managing and Configuring Native SMPP Communication Services" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tpnativesmpp.htm#CEGICEIH](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tpnativesmpp.htm#CEGICEIH)

### Understanding Native SMPP EDRs

For information on the EDRs, CDRs, and statistics generated by this plug-in, see the "Configuration Specifics" section of "Native SMPP Communication Service" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_nativesmpp.htm#i1003220](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_nativesmpp.htm#i1003220)

## Configuring the MMS Channel

The MMS channel is supported by three plug-ins, depending on the type of campaign being used.

MMS-based marketing campaigns use the EWS Bulk MMS plug-in to manage scheduling tasks. They use the Parlay X 2.1 Multimedia Messaging/MM7

communication service to deliver messages to the network. The Parlay X 2.1 Multimedia Messaging/MM7 plug-in supports the use of short codes, so short code mapping must be configured.

The Parlay X 2.1 Multimedia Messaging to MM7 plug-in supports a heartbeat module to keep the plug-in aware of the status of the underlying network node, so the heartbeat module must be configured.

MMS-based advertising campaigns use the Native MM7 communication service to deliver messages to the network.

For information about configuring the SMS channel, see:

- [Setting Up the EWS Bulk MMS Plug-in](#)
- [Setting Up the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in](#)
- [Setting Up Short Code Mapping](#)
- [Setting Up the Heartbeat Module](#)
- [Setting Up the Native MM7 Plug-in](#)

## Setting Up the EWS Bulk MMS Plug-in

Set up a EWS Bulk MMS plug-in instance to manage scheduling the sending of bulk MMSs.

### Creating the EWS Bulk MMS Plug-in Instance

To create the EWS Bulk MMS Plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#) except in step 7 where in the `PluginServiceId` field, you should enter "Plugin\_ews\_bulk\_mms".

### Configuring the EWS Bulk MMS Plug-in Instance

To configure the plug-in instance, follow the instructions in [Configuring the EWS Bulk SMS Plug-in instance](#) with the following changes:

- In step 4, click the name of the EWS Bulk MMS plug-in instance that you created in [Creating the EWS Bulk MMS Plug-in Instance](#).
- In step 6, refer to [Table 12-3](#) to complete the fields in the attributes tab.

**Table 12-3 EWS Bulk MMS Attributes**

Attributes	Attribute Description
NodeBudgetDetctInterval	The interval (given in seconds) at which the BulkOrderScheduler checks the budget available for sending messages
AllowedBudgetUsagePercent	How much of the overall budget can be shared by the bulk service, as a percent. If 0, the bulk service only sends out messages when there is no other pending traffic
MaxSubscriberNumOfChunkMms	The maximum number of targeted addresses in one messaging chunk
MaxSubscriberNumOfBulkMmsOrder	The maximum number of subscribers for one bulk MMS Order
ChunkMmsTaskHeartbeatInterval	The interval (given in seconds) for updating the heartbeat timestamp of a chunk that is being processed. The completion status of the chunk is evaluated at this time.

If you are using an MBean browser instead of the console, the plug-in instance you created will be of type `com.bea.wlcp.wlmg.plugin.bulk.mms.management.BulkMmsMBean`.

### Understanding EWS Bulk MMS EDRs

The EWS Bulk MMS Plug-in generates the EDRs listed in [Table 12-4](#).

**Table 12-4 EWS Bulk MMS Plug-in EDRs**

EdrID	Method Called
18001	submitBulkMmsOrder
18002	getBulkMmsOrderStatus
18003	cancelBulkMmsOrder

These EDRs contain the same information as Services Gatekeeper's communication services with one additional piece of information, the `bulk_order_id`.

For information about the general structure of EDRs, see the "Event Handling in the Network Tier" section of "Events, Alarms, and Charging" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_edrcommon.htm#i1000079](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_edrcommon.htm#i1000079)

## Setting Up the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in

To deliver messages to the network, MMS-based Marketing Campaigns rely on the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in.

### Creating the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in Instance

To create the Parlay X 2.1 Multimedia Messaging/MM7 plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#), except in step 7 where in the `PluginServiceId` field, you should enter "Plugin\_px21\_multimedia\_messaging\_mm7".

### Configuring the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in Instance

To configure the plug-in instance, follow the instructions in "Managing and Configuring Multimedia Messaging Communications Services" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tpmmmess.htm](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tpmmmess.htm)

### Understanding Parlay X 2.1 Multimedia Messaging/MM7 EDRs

For information on the EDRs, CDRs, and statistics generated by this plug-in, see the "Configuration Specifics" section of "Parlay X 2.1 Multimedia Messaging Communication Service" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_multimediamsg.htm#i1088437](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_multimediamsg.htm#i1088437)

### Setting Up Short Code Mapping

To set up short codes for use with the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in, follow the instructions in "Managing and Configuring Shortcode Mappings" in the *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_shrtcodempr.htm#i1094941](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_shrtcodempr.htm#i1094941)

### Setting Up the Heartbeat Module

To set up the heartbeat functionality for use with the Parlay X 2.1 Multimedia Messaging/MM7 Plug-in, follow the instructions in "Configuring Heartbeats" in the *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_heartbeat.htm#i1095415](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_heartbeat.htm#i1095415)

## Setting Up the Native MM7 Plug-in

To deliver messages to the network, MMS-based advertising campaigns rely on the Native MM7 Plug-in.

### Creating the Native MM7 Plug-in Instance

To create the Native SMPP plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#) except in step 7 where in the **PluginServiceId** field, you should enter "Plugin\_multimedia\_messaging\_mm7".

### Configuring the Native MM7 Plug-in Instance

To configure the plug-in instance, follow the instructions in "Managing and Configuring Native MM7 Communication Services" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tplegacymm7.htm#sthref375](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tplegacymm7.htm#sthref375)

### Understanding Native MM7 EDRs

For information on the EDRs, CDRs, and statistics generated by this plug-in, see the "Configuration Specifics" section of "Native MM7 Communication Service" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_legacyymm7.htm#i1001225](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_legacyymm7.htm#i1001225)

## Configuring the WAP Push Channel

The WAP Push channel is supported by two plug-ins. WAP Push-based marketing campaigns use the EWS Bulk WAP Push plug-in to manage scheduling tasks. They use the EWS WAP Push communication service to deliver messages to the network.

The WAP Push plug-in supports the use a heartbeat module to keep the plug-in aware of the status of the underlying network node.

For information about configuring the WAP Push channel, see:

- [Setting Up the EWS Bulk WAP Push Plug-in](#)
- [Setting Up the EWS WAP Push Plug-in](#)

- [Setting Up the Heartbeat Module](#)

## Setting Up the EWS Bulk WAP Push Plug-in

Set up a EWS Bulk WAP Push plug-in instance to manage scheduling the sending of bulk WAP Push messages.

### Creating the EWS Bulk WAP Push Plug-in Instance

To create the EWS Bulk WAP Push plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#) except in step 7 where in the `PluginServiceId` field, you should enter "Plugin\_ews\_bulk\_pushmessage".

### Configuring the EWS Bulk WAP Push Plug-in Instance

To configure the plug-in instance, follow the instructions in [Configuring the EWS Bulk SMS Plug-in instance](#) with the following changes:

- In step 4, click the name of the EWS Bulk WAP Push plug-in instance that you created in [Creating the EWS Bulk WAP Push Plug-in Instance](#).
- In step 6, refer to [Table 12–5](#) to complete the fields in the attributes tab.

**Table 12–5 EWS Bulk WAP Push Attributes**

Attributes	Attribute Description
NodeBudgetDetctInterval	The interval (given in seconds) at which the BulkOrderScheduler checks the budget available for sending messages
AllowedBudgetUsagePercent	How much of the overall budget can be shared by the bulk service, as a percent. If 0, the bulk service only sends out messages when there is no other pending traffic
MaxSubscriberNumOfChunkPushMessage	The maximum number of targeted addresses in one messaging chunk
MaxSubscriberNumOfBulkPushMessageOrder	The maximum number of subscribers for one bulk WAP Push Order
MaxNumberOfBulkPushMessageOrders	The maximum number of bulk WAP Push orders overall
ChunkPushMessageTaskHeartbeatInterval	The interval (given in seconds) for updating the heartbeat timestamp of a chunk that is being processed. The completion status of the chunk is evaluated at this time.

If you are using an MBean browser instead of the console, the plug-in instance you created will be of type `com.bea.wlcp.wlmg.plugin.bulk.pushmessage.management.BulkPushMessageMBean`.

### Understanding EWS Bulk WAP Push EDRs

The EWS Bulk WAP Push Plug-in generates the EDRs listed in [Table 12–6](#).

**Table 12–6 EWS Bulk WAP Push Plug-in EDRs**

EdrID	Method Called
19001	submitPushMessageOrder
19002	getBulkPushMessageStatus
18003	cancelPushMessageOrder

These EDRs contain the same information as Services Gatekeeper's communication services with one additional piece of information, the `bulk_order_id`.

For information about the general structure of EDRs, see the "Event Handling in the Network Tier" section of "Events, Alarms, and Charging" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_edrcommon.htm#i1000079](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_edrcommon.htm#i1000079)

## Setting Up the EWS WAP Push Plug-in

To deliver messages to the network, WAP Push-based marketing campaigns rely on the Extended Web Services WAP Push/PAP Plug-in.

### Creating the Extended Web Services WAP Push/PAP Plug-in Instance

To create the Extended Web Services WAP Push/PAP plug-in instance, follow the instructions in [Creating the EWS Bulk SMS Plug-in Instance](#), except in step 7 where in the `PluginServiceId` field, you should enter "Plugin\_ews\_push\_message\_pap".

### Configuring the Extended Web Services WAP Push/PAP Plug-in Instance

To configure the plug-in instance, follow the instructions in "Managing and Configuring WAP Push Communication Services" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tpwappush.htm#i1085395](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tpwappush.htm#i1085395)

### Understanding Extended Web Services WAP Push/PAP EDRs

For information on the EDRs, CDRs, and statistics generated by this plug-in, see the "Configuration Specifics" section of "Extended Web Services WAP Push Communication Service" in *Oracle Communications Services Gatekeeper Communications Services Reference* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16612/csv\\_wappush.htm#i999999](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16612/csv_wappush.htm#i999999)

### Setting Up the Heartbeat Module

To set up the heartbeat functionality for use with the Extended Web Services WAP Push/PAP plug-in, follow the instructions in "Configuring Heartbeats" in the *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_heartbeat.htm#i1095415](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_heartbeat.htm#i1095415)

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## Managing and Configuring Container Services

This chapter describes how to manage and configure container services used by Oracle Communications Marketing and Advertising.

Container services are specialized extensions of the basic Oracle WebLogic Server container functionality that have been added to support network traffic managing and monitoring needs. They are part of Oracle Communications Services Gatekeeper.

These services include:

- [EDR Service](#)
- [Plug-in Manager Service](#)
- [SNMP Service](#)
- [Statistics Service](#)
- [Storage Service](#)
- [Tier Routing Manager Service](#)
- [Trace Service](#)

To access the settings for these services in the Administration console:

1. In the Domain Structure panel of the Administration console, expand the **OCSG** item.
2. Select the name of the server on which you want to manage and configure container services.

The Oracle Communications Services Gatekeeper panel appears.

3. Expand the **Container Services** item.
4. Select the service that you wish to configure

### EDR Service

The EDR service controls the management details for event data records (EDRs), charging data records (CDRs) and alarms.

You can display and reset EDR-related statistics and set various attributes affecting EDRs, such as whether CDRs or alarms are persisted or how many EDRs are sent in a batch.

These operations and attributes are described in the Reference: Attributes and Operations for EDRService section of "Managing and Configuring EDRS, CDRs, and Alarms" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_edr.htm#i1124350](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_edr.htm#i1124350)

## Plug-in Manager Service

Marketing and Advertising uses a modified version of Services Gatekeeper to manage the traffic delivery aspect of the system. Traffic is delivered to and received from the network using specialized connectors called plug-ins, which are based on the type of traffic that is being delivered.

The Plug-in Manager is a utility for managing these plug-ins. This section gives a very high level overview of the tasks for which you will use the Plug-in Manager. For more detailed information, see "Managing and Configuring the Plug-in Manager" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_pluginmgr.htm#i1096758](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_pluginmgr.htm#i1096758)

You use the Plug-in Manager to:

- [Create Plug-in Instances](#)
- [Route Traffic](#)

### Create Plug-in Instances

You can create and specify individual routing for multiple instances of each plug-in type. This allows system owners the greatest possible flexibility in setting up and routing traffic.

When the system is first started up, there are only plug-in services. These services have service IDs. Before traffic can be routed to or from the network, active instances of these services must be created using the Plug-in Manager. You can use the **listPluginServices** operation to get a list of available services from which to create instances. You can then use the **createPluginInstance** operation to create a specific plug-in instance, which you must give a name. The name is used when routing is being set up.

For a detailed example of the individual steps involved in creating a plug-in instance, see [Creating the EWS Bulk SMS Plug-in Instance](#).

### Route Traffic

After you have created the plug-in instances that your system will use, you must set up routes.

Plug-in routing matches the data in and associated with a traffic request with routing logic defined in a routing XML file. The result is the selection of the appropriate plug-in instance for the request.

Routing can be based on such parameters as destination address, the method being invoked in moving the message, and the source of the message, among others. Routing makes it possible to target a plug-in instance, and thereby a network node all based on data available in an individual request.

For information about routing, see the sections on plug-in routing logic in "Managing and Configuring the Plug-in Manager" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_pluginmgr.htm#i1096758](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_pluginmgr.htm#i1096758)

## SNMP Service

The SNMP service collects system generated alarms and distributes them as SNMP traps.

Using the **SnmService** container service, you can add, delete and list trap receivers. You can also configure the attributes of the SNMP service. These operations and attributes are described in the reference section of that chapter.

For more information, see "Managing and Configuring the SNMP Service" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_snmp.htm#i1093879](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_snmp.htm#i1093879)

## SMPP Service

The **SMPPService** provides connectivity services for the Parlay X 2.1 Short Messaging/SMPP and Native SMPP communication services used to send and receive short messages.

See [Setting Up the SMPP Server Service](#) for information on how to configure this service.

## Statistics Service

The system maintains statistical information on usage in terms of the number of transactions handled over time.

Transactions are grouped into transaction types. Transaction types are used for calculating usage costs and for grouping reports. Transaction types are in turn grouped into categories. The **StatisticsService** lets you run statistics operations to get statistics and create reports as well and configure statistics service attributes.

For information about statistics reports, see "Managing and Configuring Statistics and Transaction Licenses" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_statistics.htm#i1100466](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_statistics.htm#i1100466)

## Storage Service

The storage service helps optimize database access by creating one or more named stores.

The **StorageService** allows you to activate and deactivate the storage service by setting an attribute and to perform operations that provide you with information about stores in the domain.

For information about the storage service, see "Managing and Configuring the Storage Service" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_storage.htm#i1099323](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_storage.htm#i1099323)

Services Gatekeeper's storage service uses Oracle Coherence to provide cluster-wide storage. If Marketing and Advertising is running in a clustered environment, you need to configure Coherence. For information on how to do this, see "Configuring Coherence" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_coherence.htm#sthref62](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_coherence.htm#sthref62)

## Tier Routing Manager Service

Delivery notifications coming from the network as a result of Application to Person (A2P) requests pose particular problems for routing. The Tier Routing service allows those notifications to be properly routed to the appropriate application.

The routing mechanism uses tier routes to identify how to route network-triggered requests. A tier route is identified by an index and defined by two parameters:

- An endpoint expression that describes the destination to which to message is to be ultimately delivered
- The name of the cluster for which the route is valid

The **TierRoutingManager** allows you to add, remove and list tier routes. For more information, see "Managing and Configuring the Tier Routing Manager" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_tierroutingmgr.htm#i1099093](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_tierroutingmgr.htm#i1099093)

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**Note:** In this chapter, the term Service Enabler is roughly equivalent to the plug-in layer. The sections on the various Service Facades available in Oracle Communications Services Gatekeeper are not relevant to Oracle Communications Marketing and Advertising.

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## Trace Service

The trace service is based on Log4J, an Apache Java-based logging utility.

The log file is named **default.log**. Each service instance writes to this log file in the local file system of the server on which it executes. The trace service itself writes log files in the directory `$DOMAIN_HOME/servers/server name/trace` directory.

The trace service supports basic tracing in which the root logger **rootdefault** maintains the trace file. It also supports context tracing in which log messages are filtered based on the context of a request.

For more information about the **TraceService**, see "Managing and Configuring the Trace Service" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_trace.htm#i1101992](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_trace.htm#i1101992)

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## Managing and Configuring EDRs, CDRs and Alarms

This chapter describes how to configure and manage Event Data Records (EDRs), Charging Data Record (CDRs), and Alarms for your Oracle Communications Marketing and Advertising installation.

Basic information about the status of the server is created through the server's internal event mechanism. An event is fired at designated times as the server functions, for example, whenever a request crosses module boundaries, specific methods are called, or exceptions are thrown. This event information is sent to the EDR Service, where an XML-based filter processes the events, separating them into types. The filters can also be used to transform the data in the original event, including adding other useful information.

There are three built-in filters that produce three distinct types of data: EDRs, CDRs, and Alarms. After the information has been processed by the filters, it is delivered to type-specific listeners. This event-based information can also be published to a standard JMS topic and delivered to any JMS-based external listener, which can be anywhere on the network.

EDRs document basic functional information. Simple EDRs are distributed to listeners, but not persisted in the database.

CDRs document information needed to charge for services. You can choose to persist CDRs to the database using the EDR Service configuration panel.

Alarms are produced by unexpected system events that may require corrective action. You can choose to persist alarms to the database using the EDR Service configuration panel.

This chapter focuses on aspects of these facilities as they relate to Marketing and Advertising. The mechanism itself was originally developed for Oracle Communications Services Gatekeeper.

For a complete explanation of EDRs, CDRs and alarms in that context, see "Managing and Configuring EDRs, CDRs and Alarms" in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_edr.htm#i1124350](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_edr.htm#i1124350)

## EDRs

There are two types of configuration associated with EDRs: changes to the XML EDR configuration file, which is where the type filters are defined, and changes to the EDR Service itself.

### EDR Configuration File

The Marketing and Advertising installation comes with a default set of descriptors (filters) that define what constitutes plain EDRs, CDRs and alarms:

For many users, the standard settings should be sufficient. However you can view and edit the default configuration from the Administration console:

1. In the Domain Structure panel of the Administration console, expand the **OCSG** item.
2. Select **EDR Configuration**.

The default EDR descriptors appear in the right panel.

For information about how to edit these descriptors, see the "EDR categories and XML markup" section in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_edr.htm#i1124350](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_edr.htm#i1124350)

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**Note:** These descriptors include information for all aspects of Services Gatekeeper, even those that are not available in the modified version of the software that is distributed as the delivery mechanism for Marketing and Advertising.

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### EDR Service

To make changes to the EDR Service itself, for example, to store CDRs in the database, use the EDR Service panel:

1. In the Domain Structure panel of the Administration console, expand the **OCSG** item.
2. Select *ServerName* -> **Container Services** -> **EdrService**.

For information on attributes and operations available in this panel, see the "Reference: Attributes and Operations for EdrService" section in *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_edr.htm#i1124350](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_edr.htm#i1124350)

## CDRs

You define what constitutes a CDR using the same mechanism used to define EDRs, the EDR Configuration panel. Using the Administration console, you can view a filtered list of CDRs, based on a number of criteria.

You can also set up the CDRtoDiameter service as a mechanism to prepare for the transfer of CDR-based information via Diameter Rf to Oracle Communications Billing and Revenue Management (BRM) or to other Diameter Rf based billing systems.

## CDR Display

To view CDRs in the Administration console:

1. In the Domain Structure panel of the Administration console, expand the **OCSG** item.
2. Select **CDRs**.

The CDRs panel appears.

For information about the fields in this panel, see Table 3-2 in the "Operation and Maintenance: General" chapter of *Oracle Communication Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_oam.htm#sthref18](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_oam.htm#sthref18)

## CDRs and Diameter

The CdrToDiameter service prepares CDRs to be forwarded to a Diameter server using the Diameter Rf interface. This enables Oracle Communications Marketing and Advertising to use Oracle Communications Billing and Revenue Management (BRM) for billing.

The CDRtoDiameter service is not deployed by default. For instructions on how to deploy, configure and manage the service, see *CDRs and Diameter* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_cdrtodiameter.htm#i1128987](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_cdrtodiameter.htm#i1128987)

Marketing and Advertising provides slightly different information in its AVPs than those sent by Services Gatekeeper. [Table 14–1](#) provides these Attribute-Value Pairs (AVPs), which are not identical to those in the cited chapter.

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**Note:** In the case of overlay installations, a single CDR for an Advertising campaign can create two Diameter Rf messages, one using the Services Gatekeeper message structure and one using the Marketing and Advertising structure. This allows BRM to track both the application (the ad space owner) that initially sent the message and the advertiser who created the campaign that uses the message as a bearer of its own ad content, facilitating charging and revenue sharing arrangements.

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**Table 14–1 AVPs**

AVP	AVP Code	Type	Specification	Description
Session_ID	263	UTF8String	RFC 3588	Used to identify a specific session
Origin-Host	264	DiameterIdentity	RFC 3588	Identifies the endpoint that originated this message. Is equal to the delivery-mechanism host
Origin_Realm	296	DiameterIdentity	RFC 3588	Identifies the Realm of the originator of the delivery-mechanism
Destination-Host	293	DiameterIdentity	RFC 3588	Identifies the destination host

**Table 14–1 (Cont.) AVPs**

<b>AVP</b>	<b>AVP Code</b>	<b>Type</b>	<b>Specification</b>	<b>Description</b>
Destination-Realm	283	DiameterIdentity	RFC 3588	Identifies the Realm of the destination host.
Accounting-Record-Type	480	Enumerated	RFC 3588	The type of accounting record being sent.
Accounting-Record-Number	485	Unsigned32	RFC 3588	Identifies this record within this session.
Acct-Application-ID	259	Unsigned32	RFC 3588	Advertises support of the Accounting portion of an application. The field corresponds to the application ID of the Diameter Accounting Application and is defined with the value .3
User-Name	1	UTF8String	RFC 3588	The Advertiser External ID, assigned when the organization was created.
Event-Timestamp	55	Time	RFC 3588	Time the event happened, in seconds since January 1, 1900 00:00 UTC
Service-Indication	704	OctetString	3GPP 29.329	Always "advertisement-service".
Event-Type	823	Grouped	3GPP 32.299	Contains information about the type of event for which the accounting-request is generated.
Event-Type.Event	825	UTF8String	3GPP 32.299	Specifies the Ad-event type. Possible values: <ul style="list-style-type: none"> <li>■ AtoP-ad-served</li> <li>■ AtoP-ad-impression</li> <li>■ AtoP-ad-CT</li> <li>■ Bulk-ad-served</li> <li>■ Bulk-ad_impression</li> <li>■ AtoP-ad-CT</li> </ul>
Participants-Involved	887	UTF8String	3GPP 32.299	Lists the external ID of the related ASO, ASP and NP. The IDs are delimited by comma.
CC-Money	413	Grouped	RFC4006	Specifies the monetary amount in the given currency, used for storing the price of the ad message.
CC-Money.Unit-Value	445	Grouped	RFC4006	Specifies the units as decimal value.
Unit-Value.Value-Digits	447	Integer64	RFC4006	Contains the significant digits of the number.
Unit-Value.Exponent	429	Integer32	RFC4006	Contains the exponent value to be applied for the Value-Digit AVP within the Unit-Value AVP.
CC-Money.Currency-Code	425	Unsigned32	RFC4006	Specifies the currency, given as the numeric values defined in the ISO 4217 standard.

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**Note:** Billing and Revenue Management does not natively understand Diameter Rf, so the use of an additional product, Oracle Communications Network Mediation is required to translate the Diameter Rf into the proprietary Solution42 format that BRM requires.

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## Alarms

You can use the Administration console to view and filter system alarms:

1. In the Domain Structure panel, under your the Oracle Communications Marketing and Advertising domain, expand the **OCSG** item.
2. Select **Alarms**.

The Alarms pane appears. For information about the fields in this pane, see the WebLogic Oracle Communications Services Gatekeeper Alarms pane section of "Operations and Maintenance: General" in *Oracle Communications Services Gatekeeper System Administrator's Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16623/adm\\_oam.htm#sthref18](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16623/adm_oam.htm#sthref18)

All of the alarms raised are from the Services Gatekeeper components of the product. A complete list can be found in *Oracle Communications Services Gatekeeper Alarm Handling Guide* at:

[http://download.oracle.com/docs/cd/E16625\\_01/doc.50/e16614/toc.htm](http://download.oracle.com/docs/cd/E16625_01/doc.50/e16614/toc.htm)

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**Note:** Alarms can also be distributed as traps to standard SNMP trap receivers. See [SNMP Service](#) for more information.

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This chapter covers areas that may cause issues and offers suggestions for handling them.

## Changing Coherence Multicast Settings

If you are having problems with Oracle Coherence in the processing of advertising campaigns, either A2P or P2A, you may need to change your Coherence settings. There is a Coherence configuration override file, **tangosol-coherence-override-gk.xml**, located in the *Domain\_Home/config/custom* directory. For information on the contents of this file and possible edits you might make see the "Operational Override File" section in *Coherence 3.5 User Guide* at

<http://coherence.oracle.com/display/COH35UG/Operational+Configuration+Elements#OperationalConfigurationElements-OperationalOverrideFile>

## Configuring the Coherence Multicast-Listener Element

In environments where Marketing and Advertising cluster server nodes do not reside in the same network segment you must configure the **time-to-live** element within the **multicast-listener** element of the override file. Use a time-to-live value consistent with the number of network hops needed for Marketing and Advertising packets to transverse between server cluster nodes including any routers that are in place along the path. This setting will ensure that Marketing and Advertising functions properly in a clustered environment.

For more information see "multicast-listener" in *Coherence 3.5 User Guide* at:

<http://coherence.oracle.com/display/COH35UG/multicast-listener>

## Issues with Multicast Protocol When Establishing a Cluster

If your environment is experiencing issues using the multicast protocol to establish a Marketing and Advertising cluster or if multicast is unavailable in your environment, configure the **well-known-addresses** element within the **multicast-listener** element of the override file. Setting the well-known-address list in environments using multiple network segments may also resolve cluster connection issues.

For more information see "well-known-addresses" in *Coherence 3.5 User Guide* at:

<http://coherence.oracle.com/display/COH35UG/well-known-addresses>

