

Oracle® Communications Online Mediation Controller

Release Notes

Release 6.1

E38950-01

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This document provides release notes for Oracle Communications Online Mediation Controller 6.1.

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New Features

This section describes new features and feature enhancements in this release of Online Mediation Controller.

Integration with Oracle Communications Elastic Charging Engine

Online Mediation Controller now integrates with Oracle Communications Elastic Charging Engine (ECE) to mediate Diameter charging messages between a Diameter network and ECE. This integration is in addition to the existing integration with Oracle Communications Billing and Revenue Management (BRM). Online Mediation Controller supports concurrent integrations to both ECE and BRM in the same domain.

The Online Mediation Controller integration with ECE also supports RADIUS authentication and accounting requests.

See the chapters on setting up Diameter Ro online mediation and setting up RADIUS mediation for authentication and authorization in *Oracle Communications Service Broker Online Mediation Controller Implementation Guide*, for more information.

Oracle Communications Billing and Revenue Management Based SPR

Online Mediation Controller now supports using the Oracle Communications Billing and Revenue Management (BRM) database as the Subscriber Store data repository. Service Providers implementing both Online Mediation Controller and BRM can use BRM subscriber data, such as resource counters and balance information, when configuring Online Mediation Controller behavior.

See the chapter on configuring the Subscriber Store in *Oracle Communications Service Broker Online Mediation Controller Implementation Guide*, for more information.

Degraded Mode Supported by Online Mediation Controller

Degraded mode is an operating mode that ensures service continuity for end users if integrated instances of Oracle Communications Billing and Revenue Management (BRM) or Oracle Communications Elastic Charging Engine (ECE) become unavailable.

Online Mediation Controller actively monitors the health of the BRM or ECE instance. If the instance becomes unavailable for any reason, Online Mediation Controller temporarily assumes the charging function, providing a default response to requests and writing CDRs for subscriber activity. CDRs are stored for playback to BRM or ECE when the instance becomes available again.

See “Using Degraded Mode” in *Oracle Communications Service Broker Online Mediation Controller Implementation Guide*, for more information.

CDR Offload Capability

Online Mediation Controller now supports the offloading of subscriber usage from an Oracle Communications Billing and Revenue Management (BRM) to a local OCS based on charging message attributes. Service Providers can determine the type of BRM subscribers eligible for offloading and a default charging request response based on information in the customer profile. Offloaded sessions are recorded into CDRs for later replay.

See the chapter on offloading subscriber usage in *Oracle Communications Service Broker Online Mediation Controller Implementation Guide*, for more information.

Session Redirection

Online Mediation Controller can interactively redirect online charging system Diameter Credit Control Answers (CCA) to another Online Mediation Controller application, such as the Announcement Player Application, based on CCA message criteria. Service Providers can configure redirection based on CCA attributes such as low balance or Final-Unit-Indication (FUI).

See the chapter on configuring the Redirection Application in *Oracle Communications Service Broker Online Mediation Controller Implementation Guide*, for more information.

Session Tracing Tool

The session tracing tool lets you trace an individual session when it runs through the Online Mediation Controller’s components.

For more information, see the discussion about tracing sessions in *Oracle Communications Service Broker System Administrator’s Guide*.

IM-UIX-USSD Module

A new network-facing module was added, **IM-UIX-USSD SMPP**, that enables Online Mediation Controller to send USSD messages to Short Message Service Centers (SMSCs) through the Short Message Peer-to-Peer Protocol (SMPP).

For more information, see the discussion on configuring the IM-UIX-USSD SMPP module, in *Oracle Communications Service Broker Modules Configuration Guide*.

Orchestration Logic No Longer Requires An Initial Condition Node

When you build an orchestration logic in Orchestration Studio, you are not required to start the orchestration logic with a Condition node.

Orchestration Logic Supports Merging Conditional Routes

In Orchestration Studio, the user can now add a node (IM or Condition) that accepts a flow from two different nodes. This allows the user to merge conditional routes that were previously split based on conditions back to a single flow.

For more information about merging conditional routes, see *Oracle Communications Service Broker Orchestration User's Guide*.

Routing Based on Parameters in the Headers and Body of an Incoming Message

Criteria in the orchestration logic can now be based on any parameter in the message, including parameters in either the header or body of the message. You specify the parameter that needs to be matched using an XPath expression. The structure of messages of the various supported protocols is described in XSD files provided by the Online Mediation Controller installation.

For more information about checking parameters in the body of messages, see the discussion on building orchestration logic with the Orchestration Studio in *Oracle Communications Service Broker Orchestration User's Guide*.

Coherence Upgrade

Online Mediation Controller now incorporates Oracle Coherence Release 3.7.1.6.

See the *Oracle Coherence Release 3.7.1.6* documentation set for more information.

Servers IP Address Configuration Available in the Administration Console

You can now specify whether you want to use IP unicasting or multicasting for communication between servers in domains using the Administration Console.

For more information on specifying the communication method, see "Managing Clusters" in *Oracle Communications Service Broker System Administrator's Guide*.

Oracle Database and Oracle Berkeley DB Persistence

Online Mediation Controller now provides integrated support for Oracle Database and Oracle Berkeley DB persistence. Online Mediation Controller features introduced in release 6.1 can use either mechanism for their data storage requirements. Storable data includes subscriber information and degraded mode Charging Data Records (CDRs).

For more information about data persistence, see *Oracle Communications Service Broker Installation Guide*.

Oracle Berkeley DB Now Optional

An option has been added in the installation wizard **Available Product Components** screen that enables users to skip installing BDB if it will not be used in the deployment.

Support of Service Mode Option by Multi-domain Deployments

If you create a multi-domain deployment with separate processing and signaling domains, you can choose whether to turn service continuity on or off. Previously, the service mode option was available only for unified domains.

Note: Turning service continuity off improves performance significantly.

Standalone Administration Console is Not Supported

Previously, you could run the Administration Console in a standalone mode which appeared as a Java client. The Administration Console modes that are now available are Web-browser access and scripting. The standalone client is not supported.

Support for 64-bit Operating Systems

Install Online Mediation Controller only on a 64-bit architecture systems. Previously, Online Mediation Controller could be installed on either 32-bit or 64-bit architecture systems.

Support for Multiple Domain Type Combinations

When creating a domain, you can now choose any combination of domain types: Service Controller, Policy Controller, Online Mediation Controller. Previously, you could select either a single product or a pre-defined combination of products such as Service Controller and Online Mediation Controller.

Installation of Only an Administration Server or a Managed Server

The Online Mediation Controller installer allows you to install either only an Administration Server or single managed server on a host. This new feature simplifies setting up redundant, highly-available computer tiers.

Previously, on a given host you were required to install both the administration server and a managed server.

Installation Modes Consolidated

The console installation mode is no longer supported because of its similarity to silent installation. Previously, there were three Online Mediation Controller installation modes: graphical wizard, console (interactive), and silent (response file).

XML Configuration Data for Software Bundles Updates are Now Stored in a Separate JAR File

Previously, XML configuration data for a software bundle was stored inside the JAR file of the bundle that owns the configuration.

Now only the initial XML configuration data is stored inside the software bundle, and subsequent configuration updates are stored in a separate JAR file in the domain. Decoupling the software bundle and configuration changes for that bundle simplifies software upgrading, patching, and configuration versioning.

This enhancement is seen on the file system where versioning jars are stored in the *domains/archives* directory.

Changing the Content Type in the Resulting XSL Transformation

SM-PME now supports writing an XSL transformation that changes the content type of a body in the transformation result using the **<Content-Type-Result>** element. If you do not specify this element, then the content type of the body in the transformation result is the same as in the original message.

For more information about using the **<Content-Type-Result>** element, see the discussion on changing a Content Type in SM-PME in *Oracle Communications Service Broker Modules Configuration Guide*.

Support for Custom Diameter AVPs Configuration Using the Administration Console

You can now add custom Diameter AVPs to the Online Mediation Controller Diameter stack using the Administration Console.

For more information on adding custom Diameter AVPs, see the discussion on adding custom Diameter AVPs in *Oracle Communications Service Broker Policy Controller Implementation Guide*.

Unified Configuration MBeans Naming Convention

The name of all of the Online Mediation Controller's configuration MBeans have been unified. Configuration MBeans have been renamed as follows:

MBeans of type=`com.convergin` are now of type=`oracle.axia.cm.ConfigurationMBean`
MBean attributes are now represented by individual MBeans
Hyphens (-) and underscores (_) have been replaced by capital letters.

Examples:

```
remote_system_reconnect_period is now remoteSystemReconnectPeriod  
info-keep-alive-interval is now infoKeepAliveInterval  
announcement-info-table is now announcementInfoTable  
x_wcs_additional_header_content is now xwcsAdditionalHeaderContent
```

Support for Enhanced Configuration Validation

Previously, configuration validation was performed differently if made through online or offline mode.

Now Online Mediation Controller validates the current configuration if made through either online or offline mode.

Support for Configurable SNMP Traps

The Administration Console now displays GUI panels that enable users to define their own mappings from JMX notifications to SNMP traps. Any JMX notification generated by the Online Mediation Controller managed servers can be mapped to an SNMP trap.

See the discussion on configuring JMX notification mappings in *Oracle Communications Service Broker System Administrator's Guide*, for more information.

System Requirements Version Updates

Table 1 lists system requirements products that have been upgraded in this release.

Table 1 System Requirements Version Updates

Name	Old Version Number	New Version Number
Oracle Database	11g	11g Release 2
Berkeley Database	4.1.16	4.1.21
JDK	Java SE 6 update 30	Java SE 6 update 35
JRockit JDK	JRockit 28.2.0	JRockit 28.2.5

For more information on software requirements, see *Oracle Communications Service Broker Installation Guide*.

Weighted Load Strategy to Distribute Messages along Network Entities

To distribute messages among different network entities that share the same alias, Online Mediation Controller Signaling Service Units (SSU) use the weighted load strategy. This strategy determines a peer that receives a message based on the weight that you assign to the peer. The weight determines a relative share of the traffic that the peer should receive.

For more information about the weighted load strategy, see chapters dedicated to specific SSUs in *Oracle Communications Service Broker Signaling Server Units Configuration Guide*.

Enhanced Overload Protection for Online Mediation Controller

Online Mediation Controller overload protection is now enhanced as follows:

- All Service Broker products (Service Controller, Online Mediation Controller, and Policy Controller) now use the same overload protection based on the Oracle AXIA foundation. Previously, only Service Controller had an overload protection capability.
- In addition to overload protection at the system-wide level, now any runtime MBean for Service Controller, Online Mediation Controller, and Policy Controller can be configured as Key Overload Indicators. This enables flexibility for enforcing product-specific overload protection.
- The Administration Console GUI panels have been changed under these nodes:
 - Platform and Interworking Module settings: Expand Platform then OCSB then Processing Tier then Tier Management and then Monitoring | Overload Protection | Overload and Tracing

- Policy Controller settings: Expand PCRF then OCSB then Session Parameters and then Statistics
- A new runtime SystemStatusRuntimeMBean is available to poll the status of the system. It has these attributes: CurrentLoadState, ExceededThresholds, and ForceOverload

Fixes in This Release

Table 2 describes known problems from the previous release that have been resolved in this release.

Table 2 Fixes in This Release

SR Number	BugDB ID	Description
NA	8941118	When an outage is resolved, a subset of the cluster may be forcefully shutdown to avoid messing up the state of the remaining cluster. Any sessions on the shutdown servers will be lost. These servers will need to be restarted manually.
NA	11825282, 13075127	In the Diameter SSU, the first time you add a server to the Default Route of a Diameter node, the new server was inserted in the second row of the Servers table. The added server was therefore not effective. The Diameter SSU configuration screens have been improved and this problem is now resolved.
NA	12903091	When the web Administration Console was accessed, occasionally, the two main user interface tabs, Platform and Studio , did not show. This problem is now solved.
NA	13598591, 13598573	The configuration option in R-IM-OCF Ro, IM-OCF Ro, and IM-OCF PCP that allows tunneling of XER of messages can now be safely used.
NA	13598528	R-IM-OCF has a configuration that defines how the charging service should be activated; External or None. The default is None. The None option tunnels the information. The External option means that the R-IM-OCF looks at allocation/requests and requests the network to monitor usage. The additional functionality available by this configuration is that an application can request thresholds for announcements and other services. In a network that uses multiple MSCC in requests and responses the External option was not supported and therefore damaging the messages passed. This problem is now solved.
NA	13593646	In IM-OCF-PCP, a default value for the AVP carry_over_avps is now provided.
NA	13551191	In the Administration Console, when selecting a top level tab, other than the default, then toggling between subtabs causes the tab to be displayed without content. This problem is now solved.

Table 2 (Cont.) Fixes in This Release

SR Number	BugDB ID	Description
NA	13509468	Configuration fields in the Administration Console of type Boolean no longer use text input fields, but rather a clear selection between True and False .
NA	13422985	All menu items are now displayed correctly when first starting the Administration Console user interface and the Orchestration Studio user interface
NA	13570563	The entry fields for editing the credentials in the Administration Console are now open for edit when in Lock and Edit state.
NA	13514438	When creating an SSL enabled domain, the creation script now prompts for the SSL keystore password only once.
NA	12868674	Online Mediation Controller supports AVP attributes defined in vendor specific dictionaries and custom dictionaries.
NA	12809541, 12857070	On certain hardware, primarily SPARC running on Solaris operating system, an exception was thrown and printed to the standard output when the Administration Console was started. This problem is now solved.

Known Issues

This section describes known issues in this release.

Netra 6000 High Availability Manager is Disabled

The Online Mediation Controller Netra 6000 High Availability Manager is disabled in this release.

Cannot Use Oracle Communications Billing and Revenue Management as Subscriber Store in Some Cases

BugDB number: 16226577

Oracle Communications Billing and Revenue Management (BRM) cannot be used as the Subscriber Store source for Online Mediation Controller when using orchestration based on subscriber counter data stored in the BRM database.

Orchestration based on subscriber counter data stored in the Local Subscriber Store (LSS) is not affected by this issue.

IVR Check Balance Does Not Identify if Balance is Positive or Negative

BugDB number: 12906136

The balance amount returned by the check balance operation through the IVR interface does not indicate whether the amount is a positive or negative value.

Redirection for NO_MONEY_NOTIFICATION Criteria Returns Wrong Error

BugDB number: 16076142

During session redirection, when a NO_MONEY_NOTIFICATION criteria is missing, the returned error is wrong.

For a NO_MONEY_NOTIFICATION, the SM-Redirect return error result code provided is "4010 Diameter_End_User_Service_Denied", as in all other cases, and not a more specific error for this case, "4012 Diameter_Credit_Limit_Reached"

Work around: To supply the correct error code, apply the SM-PME on the orchestration chain to replace the incorrect error code with the correct code. See the discussion on SM-PME in *Oracle Communications Service Broker Modules Configuration Guide*, for more information.

Authentication Credentials not Supported for the Web Services SSU

BugDB number: 13244144

The Web Services SSU does not support adding authentication credentials to outgoing messages. As a result, Balance Manager features that invoke the Balance Manager SOAP API do not work if you enable client authentication requirements for the API.

Redundant Element Added in the Orchestration Logic When Defining a Sequence of Conditions in the Orchestration Studio

BugDB number: 15935431

When using the Orchestration Studio, if you create an orchestration logic with two or more concatenated conditions, a redundant <SPT> element with an x-wcs-history value in the <Header> element is automatically added in the iFC, causing the sequence of conditions to fail. Example of the redundant element:

```
<SPT>
<Group>99</Group>
<ConditionNegated>1</ConditionNegated>
<SIPHeader>
<Header>x-wcs-history</Header>
</SIPHeader>
</SPT>
```

To work around this problem, edit the iFC format of the orchestration logic, and remove the redundant <SPT> element.

Orchestration Doesn't Work Properly after Upgrade

BugDB number: 15910341

Orchestration does not work as expected after upgrading Online Mediation Controller to release 6.1. This happens because the upgrade changes the value of the **By Service Key** field in the SM-LSS.

To work around this, manually reconfigure the value of the **By Service Key** field after the upgrade, to be the same as it was before the upgrade. If the value of the **By Service Key** field was -1 before the upgrade, then after the upgrade clear this field.

Problem to Disable Backward Compatibility

BugDB number: 15842296

Disabling backward compatibility using configuration MBeans doesn't work. Setting the `systemprop.ocsb.backward.compatibility` property using the `setDomainProperty` operation of the `axia.api.management.ds.DomainServiceMBean` to false, doesn't take affect.

To work around this use JConsole to rename the **systemprop.ocsb.backward.compatibility** domain property to a different name. This way, in the absence of this property, Online Mediation Controller will adopt the default behavior which is to disable backward compatibility.

Monitoring Configuration Does Not Migrate Properly Upon Upgrade

BugDB number: 15829551

The monitoring configuration in the processing tier does not migrate properly upon upgrading.

To work around this, manually configure the monitoring and notifications parameters after upgrades.

New Button Disabled in the IM Management Tab

BugDB number: 14745009

In the Administration Console, in the **IM Management** tab, the **New** button sometimes remains disabled after clicking the **Lock & Edit** button.

To work around this, select again the **IM Management** node in the navigation tree.

Orchestration Logic Not Saved in the LSS Profile

BugDB number: 16077687

When using the Orchestration Studio to create an orchestration logic, the logic cannot be saved in a new LSS profile, but only in the default profile.

To be able to save orchestration logic in other LSS profiles than the default profile, edit the profile and set some text in the OLP Data field. Then go the Orchestration Studio, select the new profile that you just created, create an orchestration logic, and save it.

Orchestration Studio Does Not Function Upon Reload of Orchestration Logic that Has No SPTs

BugDB number: 16077627

The Orchestration Studio does not function when reloading an orchestration logic that has no SPTs in it.

To work around this, in the LSS, edit the profile and erase its orchestration logic (**OLP Data** field). Save the changed profile and restart the Administration Console.

SM-PME Runtime MBeans are Disabled

BugDB number: 16044802

The runtime MBeans for monitoring SM-PME are disabled in this release.

Documentation Updates

This section covers the major updates to the documentation set:

Configuration Guides

The *Oracle Communications Service Broker Processing Domain Configuration Guide* was renamed to *Oracle Communications Service Broker Modules Configuration Guide*, and now contains reference information about configuring the various Service Controller modules. It no longer contains information on other components in the processing domain, such as the Orchestration Engine.

The *Oracle Communications Service Broker Signaling Domain Configuration Guide* was renamed to *Oracle Communications Service Broker Signaling Servers Configuration Guide*.

Orchestration User's Guide

Oracle Communications Service Broker Orchestration Studio User's Guide was renamed to *Oracle Communications Service Broker Orchestration User's Guide*. It now consolidates all the information about orchestration: concepts, administration, and about using the Orchestration Studio.

Online Mediation Controller Protocol Implementation Conformance Statement (PICS)

Oracle Communications Service Broker Online Mediation Controller Protocol Implementation Conformance Statement (PICS) was added, providing statement about the Online Mediation Controller's compliance with charging protocols.

JavaDoc Consolidated

JavaDoc for:

- Platform MBean Java API Reference
- Modules MBean Java API Reference

has been added and consolidated into one single set.

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.

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