

Policy Management

Release Notes



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1

Introduction

This document provides information about new features and enhancements to the existing features for Oracle Communications Policy Management, and includes:

- Supported hardware baseline
- Software and documentation
- Supported upgrade paths
- Compatibility
- Resolved bugs
- Customer-known bugs

Directions for accessing key Oracle sites and services are also identified in the [Oracle References and Services](#).

Release notes are available on [Oracle Help Center](#) and are made available for every software release.

Disclaimer

Before installing third-party software on the same server with Oracle products (for example, DSR, PCRF, UDR, PIC, EAGLE and so on), please be aware of the following information:

- Oracle is not responsible for installation, operation, maintenance, etc. of any non-Oracle distributed software with Oracle products (for example, DSR, PCRF, UDR, PIC, EAGLE and so on).
- Additional due diligence including testing is recommended to be performed in the lab before deploying non-Oracle software on production sites to avoid potential issues.
- Oracle is not responsible for validating or integrating non-Oracle software with Oracle products (for example, DSR, PCRF, UDR, PIC, EAGLE and so on). Additionally, persistence of the non-Oracle software over upgrade of the Oracle product may or may not occur, and Oracle does not guarantee the non-Oracle software will persist.
- Oracle Support may require that the customer uninstall the non-Oracle software and reinstall Oracle products (for example, DSR, PCRF, UDR, PIC, EAGLE and so on) to recover the system to address a field issue.

2

Enhancement Descriptions

This release of Oracle Communications Policy Management adds the enhancements described in this chapter.

Supports Large VM Capacity for Migration from BareMetal to Virtual Solution - ER 35696759

With this release, a new virtual flavor of 46vCPU has been introduced. This incorporates the KPI statistic requirements for HP Gen8/Gen9 and support one-to-one migration from BareMetal (BM) to VM for Large BM profiles. For more details, refer **Appendix B** in *Oracle Communications Policy Management Cloud Installation Guide*.

Support for OLVM - ER 36061120

Oracle Linux Virtualization Manager (OLVM) support is available with this release. OLVM is a server virtualization management platform that can be deployed to configure, monitor, and manage an Oracle Linux Kernel-based Virtual Machine (KVM) environment.

Support for ATS - ER 36066286

This release supports OCPM Automated Test Script (ATS), which is a separately packaged software that could be used on the system under test to check if the system is functioning as expected. For more details, refer in *Oracle Communications Policy Management ATS Guide*.

3

Software and Documentation

Oracle Communications Policy Management software is available for download on the Oracle software delivery website. Documentation is delivered electronically on [Oracle Help Center](#). Both the software and the documentation are listed in this section.

3.1 Software

All components are available for download from the software delivery website.



Note:

These files are available in the following format:

- BareMetal is not supported from OCPM release 15.0. Only Virtual is supported. Virtual PCRf is tested on the following hypervisor platforms:
 - VMware ESXi 7.0.3
 - KVM QEMU 6.2.0, libvirt 8.0.0
 - OpenStack Yoga
- *.ova for VMware and OLVM deployments
- *.qcow2.tar.bzip2 for OpenStack and KVM deployments

Software

- Oracle Communications Policy Management Configuration Management Platform 15.0.0.0.0_20.1.0
- Oracle Communications Policy Management Multimedia Policy Engine 15.0.0.0.0_20.1.0
- Oracle Communications Policy Management Policy Front End 15.0.0.0.0_20.1.0
- Oracle Communications Tekelec Platform Distribution (TPD) 8.8.0.0.0_120.2.0

This list is accurate at the time of release, but is subject to change. View the Oracle Software Delivery Cloud site for the latest information.

MAC Algorithms

Only the following MAC algorithms are supported from 12.6.0 onwards:

- hmac-sha2-256
- hmac-sha2-512

Packages Removed

The following packages are removed from 12.6.0 and later:

- Telnet

- PHP

nxframe-tool package is removed from 12.6.1.0.0 and later.

3.2 Documentation

All documents available for download from Oracle Help Center (<http://docs.oracle.com/en/industries/communications>).



Note:

This list is accurate at the time of release but is subject to change. See [Oracle Help Center](#) for all available documents.

- Platform Configuration User's Guide
- Configuration Management Platform Wireless User's Guide
- Policy Wizard Reference
- SNMP User's Guide
- OSSI XML Interface Definitions Reference
- Policy Front End User's Guide
- Troubleshooting Reference
- Analytics Data Stream Reference
- Policy Variables Reference
- Network Impact Report
- Software Installation Guide
- Migration Guide
- Disaster Recovery Guide
- Concepts for Wireless Networks
- ATS Guide
- Licensing Information User Manual

3.3 Security Certification Declaration

This section lists the security tests and the corresponding dates of compliance for Oracle Communications Policy Management Release 15.0.0.0.0:

Table 3-1 Oracle Communications Policy Management Security Certification Declaration

Compliance Test Description	Test Completion Date	Summary
Static Source Code Analysis Assesses adherence to common secure coding standards	Nov 10, 2023	Fortify Scans run. All critical issues addressed
Dynamic Analysis (including fuzz testing) Tests for risk of common attack vectors such as OWASP Top 10 and SANS 25	Nov 10, 2023	OWASP ZAP and REST Fuzz Scans run. No Critical or High Issues detected.
Vulnerability Scans Scans for CVEs in embedded 3rd party components	Nov 3, 2023	Black Duck Scans run. No Critical, High, and Medium issues unmitigated at the time of completion.
Malware Scans Scans all deliverable software packages for the presence of known malware	Nov 3, 2023	OSCS Malware and McAfee scans run. No issues detected.

4

Performance Numbers

Below table shows the performance profile and achievement in this release.

Table 4-1 Performance Profile and Achievement

Profile	Performance Achievement
VM (Virtualized) 12 vCPU Generic Call Model	(Hosted on Gen8) 20M bindings for MRA 3M sessions for MPE 24000 TPS per MRA 4000 TPS per MPE
VM (Virtualized) 46 vCPU Generic Call Model	(Hosted on X9-2) 40M bindings for MRA 15M sessions for MPE 91500 TPS per MRA 12500 TPS per MPE
VM (Virtualized) 46 vCPU Custom Call Model	(Hosted on X9-2) 40M bindings for MRA 15M sessions for MPE 64000 TPS per MRA 9000 TPS per MPE

Note:

- If larger profile VMs are deployed on the different base hardware other than X9-2, the performance numbers may vary.
- For servers hosting 46 vCPU profile servers, it is recommended NOT to have 2 Active MRA nodes in the same KVM for optimal performance. You can have CMP + MPE, CMP + MRA, CMP + CMP, MPE + MPE, MPE + MRA as preferable pairs of servers in single KVM host.
- For 46 vCPU MRA cluster, few advanced settings are required to be configured for optimum performance. For information about the advance settings, see **Appendix B** in the *Oracle Communications Policy Management Cloud Installation Guide*.
- For larger profile VM, it is recommended to have CPU pinning enabled for optimal performance.

5

Compatibility and Software Migration Paths

This chapter provides a Policy Management compatibility matrix and a table of migrate paths.

5.1 UDR and Policy Management Compatibility Matrix

The firmware documents are available from Oracle Help Center.

Below table lists which releases of Policy Management are compatible with each release of UDR.

Table 5-1 UDR and Policy Management Compatibility Matrix

UDR Software Release	Compatible Policy Management Software Releases
9.1	9.1, 10.5
9.3	9.1, 10.5, 11.5, 12.1, 12.2
10.0	10.5, 11.5, 12.1
10.2	11.5, 12.1, 12.2
12.1	11.5, 12.1*, 12.2, 12.3, 12.4, 12.5
12.2	12.1, 12.2, 12.3, 12.4, 12.5
12.4	12.1, 12.2, 12.3, 12.4, 12.5, 12.6,12.6.1, 15.0
12.10	12.1, 12.2, 12.3, 12.4 , 12.5, 12.6 ,12.6.1, 15.0
12.11	12.1, 12.2, 12.3, 12.4 , 12.5, 12.6 ,12.6.1, 15.0
15.0	12.6.1.x, 15.0

* If you decide to use the UDR enterprise pools feature in UDR release 12.2, then Policy Management release 12.2 is required. A special upgrade sequence order is required:

1. Upgrade to Policy Management 12.2.
2. Upgrade to UDR 12.2.
3. Upgrade to Policy Management 12.2.2.

After this is complete, the UDR enterprise pools feature can be enabled.

6

Supported Migration Paths

This release has been tested for migration from specific prior releases; this chapter contains the exact paths for migration for the wireless mode. Verify that your current installed release is listed on a valid migration paths.

6.1 Supported Migration Paths

This release has been tested for migration from specific prior releases. This chapter contains the exact paths for migration. Verify that your current installed release is listed on a valid migration path. The possible migration paths to Policy Management 15.0 are listed in [Table 6-1](#).

Table 6-1 Migration Paths

From	To
12.6.1.1.0	15.0.0.0.0
12.6.1.1.1	15.0.0.0.0
12.6.1.2.0	15.0.0.0.0
12.6.1.3.0	15.0.0.0.0



Note:

- If the official migration paths mentioned in the release documents of each supported version is not followed, please contact Oracle Support before migrating to 15.0.
- Upgrade to OCPM 15.0 is NOT supported. You need to migrate from OCPM 12.6.1.x to OCPM 15.0 using migration procedures. For more information about the migration procedures, see *Oracle Communications Policy Management Migration Guide*.

7

Resolved and Known Bugs

This chapter lists the resolved and known bugs for this release of Oracle Communications Policy Management.

These bug lists are distributed to customers with a new software release at the time of general availability (GA) and are updated for each maintenance release.

7.1 Severity Definitions

The resolved and known bug tables in this document refer to bug severity levels listed in this section. Definitions of these levels can be found in the publication *TL 9000 Quality Management System Measurement Handbook*.



Note:

A problem report is a report from a customer or on behalf of the customer concerning a product or process defect requesting an investigation of the issue and a resolution to remove the cause. The report may be issued via any medium. Problem reports are systemic deficiencies with hardware, software, documentation, delivery, billing, invoicing, servicing, or any other process involved with the acquisition, operation, or performance of a product. An incident reported simply to request help to bring back the service or functionality to normal without the intent to investigate and provide a resolution to the cause of the incident is not a problem report.

- Critical: Conditions that severely affect the primary functionality of the product and, because of the business impact to the customer, requires non-stop immediate corrective action, regardless of time of day or day of the week as viewed by a customer on discussion with the organization such as the following:
 1. Product inoperability (total or partial outage)
 2. A reduction in the traffic/data handling capability, such that expected loads cannot be handled
 3. Any loss of emergency capability (for example, emergency 911 calls)
 4. Safety hazard or risk of security breach
- Major: Product is usable, but a condition exists that seriously degrades the product operation, maintenance, or administration, etc., and requires attention during pre-defined standard hours to resolve the situation. The urgency is less than in critical situations because of a lesser immediate or impending effect on product performance, customers, and the customer's operation and revenue such as the following:
 1. Reduction in the product's capacity (but still able to handle the expected load)
 2. Any loss of administrative or maintenance visibility of the product and/or diagnostic capability

- 3. Repeated degradation of an essential component or function
- 4. Degradation of the product's ability to provide any required notification of malfunction
- Minor: Other problems of a lesser severity than Critical or Major such as conditions that have little or no impairment on the function of the system.
- Minor: No Loss of Service. Oracle severity is outside what is defined by TL 9000.

The numbered severity levels in the tables below correspond to these definitions:

- 1 - Critical
- 2 - Major
- 3 - Minor
- 4 - Minor: No Loss of Service.
Oracle severity is outside what is defined by TL 9000.


7.2 Customer-Known Bugs

Below table lists customer-known bugs in this release:

Table 7-1 Oracle Communications Policy Management Release 15.0 Customer-Known Bugs

Severity	Bug Number	Title	Customer Impact	Work Around
3	36031036	MRA Upgrade stuck at initiate upgrade	MRA Upgrade gets stuck at initiate upgrade during upgrade process.	<p>Follow this procedure:</p> <ol style="list-style-type: none"> 1. Run the command: <code>/var/TKLC/backout/diUpgrade --clearError</code> on the node where this issue is observed. 2. This makes the node zombie, take the node out of the zombie state by running the command: <pre>python /opt/camiant/lib/python/udclient.py declare_good_server \$ {nodeid} \${new-state} on the active CMP node.</pre> 3. Retrigger the upgrade on the affected node.

**Table 7-1 (Cont.) Oracle Communications Policy Management Release 15.0
Customer-Known Bugs**

Severity	Bug Number	Title	Customer Impact	Work Around
3	36031069	After Rollback of MRA, alarm generated related to Persistent database failure	Alarm 70046: Persistent database failure is observed in setup.	<p>Follow this procedure:</p> <ol style="list-style-type: none">1. Log in the node on which the alarm is encountered.2. Reboot the node.3. Wait for some time and check if the node role becomes fine and if the node is up and not in the OOS state. <div> Note: The alarm may take up to 12 hours to clear.</div>
3	36031108	Trending Report data is not visible in CMPGUI in 15.0.0.0.0_10.1.0 build	Trending Report data is not visible in CMP GUI. This is observed mostly on fresh installation 15.0 servers.	<p>Follow this procedure:</p> <ol style="list-style-type: none">1. Log in the active node through CLI.2. Run <code>service qp_procmgr restart</code> and check if dc.log has no failure.

**Table 7-1 (Cont.) Oracle Communications Policy Management Release 15.0
Customer-Known Bugs**

Severity	Bug Number	Title	Customer Impact	Work Around
3	3603113	Observed alarm "70023-The MySQL slave is lagging the master " upon fresh installation of GR setup and also post upgrade to 12.6.1.3	Observed alarm "70023-The MySQL slave is lagging the master " upon fresh installation of GR setup.	<p>Compare the output of the following command on the primary active CMP server and the server on which alarm is present:</p> <pre>sudo cat /var/camiant/db/mysql/lib/auto.cnf</pre> <ol style="list-style-type: none"> If the output is the same: <ol style="list-style-type: none"> Detach the affected server with alarm from the topology. Do Cluster Configuration Removal on detached server (su - platcfg -> Policy Configuration -> Cluster Configuration Removal) Reattach the server. If the output is not the same, run the following commands on the server with the alarm: <ol style="list-style-type: none"> <pre>service qp_procmgr stop</pre> <pre>manageMySQL ResetDatabase</pre> <pre>service qp_procmgr start</pre> <p>Alarm should auto clear in some time.</p>
4	36035502	Server Backup is not getting restored post Server Restore	Server Backup does not get restored while running Server Restore.	<p>After Backup is complete, run the following commands on server before doing restore:</p> <ol style="list-style-type: none"> <pre>sudo su</pre> <pre>run /usr/bin/mount -o ro -o loop /var/camiant/backup/local_archive/serverbackup/<BACKUP_ISO_NAME> /mnt/backup</pre>

7.3 Resolved Bug Listing

Table 7-2 lists bugs that are resolved in this release:

Table 7-2 Oracle Communications Policy Management Release 15.0 Resolved Bugs

Severity	Bug Number	SR Number	Title
1	35825943	-	vPCRF 15.x custom Deployment without MRA
3	35980943	3-33910897421	PCRF: COR2-vMRAs: Many SWO after upgrade

8

Oracle References and Services

This chapter describes how to obtain help, where to find related documentation, and provides other general information.

8.1 My Oracle Support

My Oracle Support (<https://support.oracle.com>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support can assist you with My Oracle Support registration.

Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>. When calling, make the selections in the sequence shown below on the Support telephone menu:

- For Technical issues such as creating a new Service Request (SR), select **1**.
- For Non-technical issues such as registration or assistance with My Oracle Support, select **2**.
- For Hardware, Networking and Solaris Operating System Support, select **3**.

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

8.2 Emergency Response

In the event of a critical service situation, emergency response is offered by the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or by calling the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations

- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with Oracle.

8.3 Customer Training

Oracle University offers training for service providers and enterprises. Visit our web site to view, and register for, Oracle Communications training:

<http://education.oracle.com/communication>

To obtain contact phone numbers for countries or regions, visit the Oracle University Education web site:

www.oracle.com/education/contacts

8.4 Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the Oracle Help Center site, <http://docs.oracle.com/>. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at <http://www.adobe.com>.

1. Access the Oracle Help Center site at <http://docs.oracle.com/>.
2. Click **Industries**.
3. Under the Oracle Communications subheading, click the **Oracle Communications documentation** link.

The Communications Documentation page opens. Policy Management is listed in the Network Session Delivery and Control Infrastructure section.

4. Click **Policy Management** and then the release number.

A list of the documentation set for the release displays.

5. To download a document, click  (download icon) and then click **PDF**.

8.5 Locate Product Release Software on the Oracle Software Delivery Cloud Site

Oracle Communications software is available for electronic download at the Oracle Software Delivery Cloud site, <https://edelivery.oracle.com>. Only authorized customers with a valid password may download software from the site.

For directions on downloading the software and other information about using this site, click **FAQ** in the top right corner.