

Policy Management

Release Notes

Release 12.2.2

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Introduction

The Oracle Communications Policy Management 12.2.2 release is a maintenance release for the 12.2.x code stream (see [Policy Management Release 12.2](#) documentation page).

These release notes identify the functions and features of Oracle Communications Policy Management release 12.2.0.0 which include:

- Feature descriptions
- Software and Documentation Pack
- Supported hardware baseline
- Firmware Components
- Policy Management compatibility and software upgrade paths
- Supported upgrade paths
- Resolved and known bugs

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

Release notes are included in the Documentation Pack and made available on the [Oracle Help Center](#) with every software release.

Enhancement Descriptions

This release lists the enhancements for this release.

Note: There are no enhancements for the 12.2.2 release.

Common Mode Enhancements

EVS Codec Support - ER 22135682

EVS (Enhanced Voice Service) is a codec that has been adopted by 3GPP. Oracle Communications Policy Management supports the EVS codec and computes the bandwidth based on the codec data offered in the SDP messages.

Network Function Agent - ER 20837199

This enhancement simplifies management of Policy Management VNFs by interfacing with Virtual Infrastructure Managers (VIM) to associate service configurations with the corresponding instantiated components using OpenStack direct interface or HEAT templates. This software maps the underlying infrastructure to the logical application components. This functionality is co-located with CMP.

Add audit log to CMP Savelog - ER 20319847

This enhancement allows the user to add the audit log to the CMP Savelog to assist in debugging issues.

Set Engineering Logging Level via CMP - ER 20325595

The operator can now easily modify the MPE and MRA logging level to capture additional information that can be useful for debugging issues. Prior to this feature, the debug level logging was changed by changing `logconfig.xml` file at each target MPE or MRA.

Enhancements to the Wireless Mode

Enhancements to 3GPP Support

Usage Monitoring Congestion Handling (Updated Time-Tariff Spec) - ER 19720700

This enhancement enables Oracle Communications Policy Management to send multiple service units for a subscriber in a single message towards PCEF, and also

receive usage reports for units granted in a single message thereby providing a mechanism to reduce number of message exchanges across nodes.

Time-Based Usage Management (TimeBasedUM) - ER 20224100

This enhancement enables Oracle Communications Policy Management to support the time-based usage management on Gx and Sd interfaces. Policy Management can provide time-based thresholds towards the PCEF using the CC-Time AVP with in Granted-Services-Unit AVP, thereby providing time-based monitoring control.

Application-Based Charging - ER 21322637

This enhancement enables Oracle Communications Policy Management to support application-based charging functionality on Gx and Sd interfaces. This functionality allows operators to differentiate offerings on a service plan based on services such as gaming or social networking.

Group Communication Service - ER 21322663

This enhancement allows operators to create policy conditions based on Group Communication Service (GCS) and applies default GCS ARP values to the corresponding Gx session.

Allow QCI Values from 1 to 254 - ER 21322637

OCPM now supports QCI values from 1 to 254. Previously, OCPM supported 3GPP-defined values 1 through 9.

Mission Critical and Non-Critical Push to Talk QCIs - ER 21322590

This enhancement provides QCI values assigned for mission critical services (65, 69, 70) such as police or firefighters, and QCI (66) for non-mission-critical Push to Talk.

Diameter Routing Message Priority (DRMP) - ER 22121678

This enhancement enables Oracle Communications Policy Management to recognize that an incoming Rx request is for priority service and pass this priority information towards PCEF by setting DRMP AVP in a RAR message, and a priority service on Rx is identified by looking at the "RESERVATION-PRIORITY" and "MPS-ID" AVPs.

ADC Rule Support for PCC Rule Level - ER 20271473

This enhancement enables Oracle Communications Policy Management to instruct the PCEF to detect an application by providing the charging-rule-install AVP with the corresponding parameters and provide the redirect instruction for a dynamic PCC rule to the PCEF enhanced with an ADC in the PCC rule level.

Enhancements to the Policy Engine

Virtualized Policy Tables - ER 19482300

This enhancement provides a mechanism to roll out policy table changes to a subset of MPEs without impacting the rest of the deployment.

Selectively Trigger Policy Evaluation on Termination (Disable STR Policy Processing) - ER 20632502

This enhancement enables Policy Management to be provisioned to evaluate policies based on the type of received termination message (for example, Rx:STR or Gx:CCR-

T). Previously, a single setting controlled whether policies were evaluated for all termination messages.

Policy Triggers for Specific Days (ToD setting for one specific day in a month) - ER 20271481

This enhancement enables Policy Management to be configured for higher flexibility in triggering ToD on a specific day or several days with the format of calendar days such as public holiday, special marketing activities with specific duration.

Policy Condition for PCEF Identity (Policy Judgment According to PCEF's Domain) - ER 20271484

This enhancement enables Policy Management to perform string matches based on the PCEF host name to determine roaming status. This feature requires that operators define the PCEF host name to include roaming information.

Policy Action to Set Gx Session Level Parameters on Rx Request - ER 20632554

This enhancement enables Policy Management to include policy action that sets the value of Gx session level parameters upon receiving an Rx request. This feature also allows operators to send configured Gx session values using policy action.

Policy Action to Configure Bearer Level ARP - ER 20271401

This enhancement allows Policy Management to configure bearer level ARP preemption capability and bearer level ARP preemption vulnerability as part of a policy action.

Policy Action to Specify Result Code (Result code 5143 cannot be returned if requested QoS conflicts with authorized QoS) - ER 20271416

This enhancement enables Policy Management to send operator-defined standard and experimental result codes. In addition, more advanced QoS parameters can be set via specific policy actions.

Policy Action to Specify Release Cause (UE SUBSCRIPTION REASON cannot be returned in Session Release Cause) - ER 20271438

This enhancement enables Policy Management to return the UE_SUBSCRIPTION_REASON within the Release-Cause AVP, when the session release is caused by removing subscription data.

System Enhancements

eMPS: Load Shedding Enhancements - ER 22121678

When creating load-shedding rules to determine which traffic to shed during various congestion levels, this enhancement enables you to inspect the included DRMP value (for Gx:RAR messages) and whether the Reservation-Priority and MPS-ID AVPs are present (for Gx: CCR messages) to determine whether to shed this traffic.

Send DPR to Disconnect Diameter Connection - ER 20271448

This enhancement enables an MPE device to be configured to send a Disconnect Peer Request (DPR) to gracefully disconnect a Diameter connection.

Policy Triggers for Specific Days (ToD setting for one specific day in a month) - ER 20271481

This enhancement enables Policy Management to be configured for higher flexibility in triggering ToD on a specific day or several days with the format of calendar days such as public holiday, special marketing activities with specific duration.

Specify Gx and Rx Result Code while No Binding Info - ER 20271501

This enhancement enables the operator to configure the error codes when there is no session binding information. Different result codes can be returned depending on received message type (Gx:CCR-U, Gx:CCR-T, Rx:AAR-I, Rx:AAR-U, Rx:STR). Default values are provided for some messages.

Platform Enhancements

Network Function Agent - ER 20837199

This enhancement simplifies management of Policy Management VNFs by interfacing with Virtual Infrastructure Managers (VIM) to associate service configurations with the corresponding instantiated components using OpenStack direct interface or HEAT templates. This software maps the underlying infrastructure to the logical application components. This functionality is co-located with CMP.

Policy Connection Director (PCD) - ER 22293420

PCD software module is an enhancement within the Policy Front End (PFE/MRA) that significantly reduces the hardware requirements for a georedundant solution by providing connection-level routing.

Netra X5-2 Support - Bug 22536159

Oracle Communications Policy Management operation has been verified on Oracle Netra X5-2 Server.

SigC Logical Network - ER 20271469

Policy Management now supports an the SIG-Clogical interface for signaling communication between MPE and Policy Front End (PFE /MRA). This interface is defined with a different IP address and VLAN identifier than the existing signaling interfaces.

Configure Quaternary (Fourth) Server in Sy Data Source - ER 22998274

Policy Management now supports configuring up to four servers in an Sy data source via CMP. Previously, only three servers were supported in an Sy data source.

Management Enhancements

Additional Rx counters - ER 20271492

Policy Management is updated with additional Rx counters (for example, AAA Initial send success, AAA Initial receive success and others) that can be used for statistical and reporting purposes.

Track Maximum KPI per Message Type - ER 19113866

This enhancement enables the Oracle Communications Policy Management to track the maximum TPS (with timestamp) for each message type for each interface type; for example, RAA, CCR-I, CCR-T. This information is included in the Savelog & Statistics File Generator. It is exportable via Operation Support System Interface (OSSI) but is not available via the CMP GUI.

SPR and Quota Enhancements**Policy Action to Limit Notification Frequency (Notification During the Configured Interval) - ER 20271430**

This enhancement enables the Oracle Communications Policy Management to be configured to send a notification only after a configured number of days has elapsed since the last notification and based on location information. Policy Management tracks the last SMS notification date and Cell ID information by updating the SPR database.

Notification Triggers for Aggregate Quota - ER 22258207

Policy conditions that use subscriber quota threshold can include dynamic quota constructs such as rollovers and top-ups as part of the calculation. This ensures that notification triggers are accurate.

Additional Quota Plan Reset Frequencies Options - ER 22114178

Quota plans now have additional options for reset frequency, such as resetting quota every two weeks. The new reset frequency option is applicable to pooled and subscriber quota plans. Previously, Policy Management allowed monthly, daily, and weekly options for resetting quota.

Mode-Specific Feature Descriptions**Smart Health Check - ER 19812668**

This enhancement enables an Operators to be perform a routine health check using the command line. This health check provides information on physical interface running status, hardware running status, software running status, and system resource utilization.

Location Based Busy Hour Policy Control - ER 19916525

Policy Management is enhanced for supporting detailed location information (RAI/SAI/CGI/TAI/ECGI/TAI_ECGI) in each location list. This feature increases the amount of location information per location list for the total location list.

Additional SCTP Counters - ER 19111993

This enhancement provides the Oracle Communicating Policy Management with additional SCTP association-level counters for example., the number of SCTP sending trunks and number of SCTP receiving trunks).

Value Zero of RR Bandwidth and RS Bandwidth Shall Mean They are not Present - ER 19119452

This enhancement enables operators to map the QoS parameters as specified in 3GPP 29.213 (v 10.11.0) for a scenario where the AF provided RR bandwidth and the RS bandwidth values are zero.

PM/NRM V2.0 - ER 19147571

Policy Management now supports Gx interface counters (connection/peer level), Rx counters, and SCTP counters in accordance to PM/NRM V2.0.

Mediation Support for User Data Repository - ER 19114364

The Mediation Function component now provides adaptation between a customer-specific provisioning system data specification and User Data Repository specific data schema.

Mediation Support for New BOSS spec - ER 20477465

The Mediation Function component now supports a Business Operation Support System (BOSS) specification.

3GPP Enhancement for Presence Reporting Area (PRA) Support - ER 20863941

Policy Management supports 3GPP Presence Reporting Area (PRA).

SMS Notification Statistics (success/failure result per policy based and subscriber based) - ER 20434683

Policy Management provides SMS notification statistics such as SMS sending times and SMS sending result per policy per subscriber.

Control User Quota in 15 Minute Intervals - ER 19097668

An MPE can reset the user quota and re-grant the quota (RAR) at a configured time (for example 05:16).

Deactivate Service with Lowest Priority GBR - ER 19097667

This enhancement enables the Oracle Communications Policy Management to deactivate the service with the lowest priority guaranteed bit rate (GBR) if the cumulative authorized quality of service (QoS) exceeds the subscribed guaranteed bandwidth.

Time Period Support 10 Minutes Interval - ER 19098512

CMP can be used to configure time period in 10-minute intervals

Support Translation for 29, 30, 31 of usrBillCycleDate as the Last Three Days of Month - ER 19101740

This enhancement expands monthly billing to include different values of billing days across BOSS and SDM. Mediation server translates BOSS provided values of 97, 98, 99

as 29, 30, and 31 respectively. MPE accepts 29th, 30th, and 31th of every month as the last three days when calculating the billing day per month.

Diameter Routing (Active/Standby or Load sharing) - ER 19112183

The Policy Front End (PFE/MRA) can now route Diameter messages towards configured multiple P-DRAs in active-standby or load-balancing mode. This feature is also applicable for a Policy Front End when it is connected directly to a PCEF.

Diameter Routing (RAR Re-routing) - ER 19112184

This enhancement enables a Policy Front End (PFE/MRA) to select another P-DRA node and route request messages when receiving certain types of error codes or when responses have timed out. This functionality is used for messages initiated from PFE/MRA.

Mediation Function - ER 19097764

This enhancement enables the mediation function component to support the provisioning interface and sync interface between SPR and customer BOSS system defined in the interfacing requirements document.

CMP/NetAct Integration - ER 9097755/19098729

This enhancement enables the Oracle Communications Policy Management to integrate with a core network-wide centralized management system (NetAct).

Interface - ER 19097655

Policy Management now supports a specific mode's versioned SMPP interface used for Policy Management communicating with SMSC subscriber notification via SMS.

Customized SNMP Forwarding - ER 19102185

This enhancement enables the CMP to function as an SNMP proxy to forward Oracle Communications User Data Repository alarm information associating with Policy Management's alarm info to a centralized management system.

UE Initiated IP-CAN Session Modification Procedures - ER 19097665

Policy Management now supports 3GPP UE initiated IP-CAN session modification procedures.

Request Usage Report Policy Action Cannot be Triggered by Time period - ER 19097529

This enhancement enables the Policy Manager to trigger request usage reports for a monitoring key by configuring a time period. This Time Period can be configured at the specific hour and a specific minute.

Security Related Enhancements - ER 19812771

This enhancement enables the CMP to perform account auto logout when no activity is performed during a configurable time period. CMP supports the restriction to allow passwords to be reused a configurable number of times. On exceeding the number of times configured, password reset would be required.

HP G9 Hardware support for Mediation Server - ER 21649552

The Mediation Function component has been verified on selected HP Gen9 rack-mount and C-class server hardware.

Cable Enhancements

11.5.2 Cable Feature Merge to 12.2 - ER 21510956

This enhancement provides tracelog forwarding & accommodation of IPv4 Re-use/CG-NAT for cable. These capabilities were originally introduced in release 11.5.2.

Oracle X5-2 Bare Metal Operation - ER 22186354

This enhancement verifies that operation on selected Oracle X5-2 non-Netra servers when operating in cable mode.

Configuration Templates for MPEs - 19646305

This enhancement enables the Oracle Communications Policy Management to support configuration templates for MPEs operating in cable mode.

Upgrade Director Support for Cable Software Releases - ER 19888873

This enhancement upgrades the Oracle Communications Policy Management systems supporting cable deployments to use Upgrade Director.

PCMM per MPE Summary and per CMTS Statistics through OSSI/XML - ER 20162894

This enhancement enables additional cable-specific statistics to be retrieved by the OSSI interface.

Subnet Discovery Enhancement - ER 20286860

This enhancement enables the CMP to push only new/updated CMTSs to associated MPEs.

Convert Generic HTTP Policy Notification - ER 21153115

This enhancement creates a new policy action that sends operator-defined notifications by HTTP. Oracle Communications Policy Management performs HTTP actions such as: Get, Post, Put, and Delete. This notification body can include HTTP URL, User, Session, quota, and state variables that are sent to external systems. The success (2XX) or failure (4XX or 5XX) status is logged per notification.

Unified Export/Import Feature Support for Cable Mode - ER 21348748

The enhancement enables the operator to export and import multiple types of objects to the same file. In previous releases, a separate export/import was required for each type object such as: policies, traffic profiles, retry profiles, and configuration templates.

IP V6 Support for OAM and Replication Networks - ER 22186376

This enhancement enables IPv6 addresses to be provisioned on these interfaces.

Provide the number of active gates per AMID per MPE through OSSI/XML -ER 20162817

This enhancement enables additional cable-specific statistics to be retrieved by the OSSI interface.

Error Report per AMID - ER 20286961

The Oracle Communications Policy Management provides, through the OSSI interface, an error report containing per AMID, the error type, and count of each type.

Export BOD Session Database - ER 20287350

This enhancement enables tThe Oracle Communications Policy Management to track the number of sessions created, number of sessions failed, number of concurrent active sessions and number of gate set/info/delete success/failed. BoD notification messages now include information about early termination. This includes the SUBIP, AMID, configured duration, and actual duration and reason.

Cable Policy VMware support on Multiple HW Platforms - ER 19358129

This enhancement enables Gen8 servers to provision IPv6 addresses on these interfaces.

KVM/Openstack Support - ER 19358367

This enhancement provides verified operation for selected Oracle X5-2 non-Netra servers operating in cable mode.

Behavior Modifications**Removal of Manual Statistics Mode (Statistics Mode Unification) - ER 22534128**

As of this release, the manual statistics mode is no longer available. The default and only available mode in this release is interval mode statistics. In prior releases, manual stats mode is the default.

Note: Upon upgrade, previously stored information will be lost.

Firewall Enabled by Default - ER 22536198

Firewall functionality is now enabled by default. Server firewall protects Policy Management against DDoS, flooding attacks, and unwanted connections. The settings are not altered upon upgrade.

Software and Documentation

Oracle Communications 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 chapter.

Software

All components are available for download from the software delivery website (<http://www.oracle.com/us/support/software/premier/my-oracle-support-068523.html>).

Note: These files are available in one or more of the following formats:

- *.iso: for bare metal deployments
 - *.ova: for VMware and OVM/OVS deployments
 - *.qcow2: for KVM/Openstack deployments
-

Software:

- Oracle Communications Policy Configuration Management Platform 12.2.0.0_25.2.0
- Oracle Communications Policy Management Agent 12.2.0.0_25.2.0
- Oracle Communications Policy Multimedia Policy Engine 12.2.0.0_25.2.0
- Oracle Communications Policy Front End 12.2.0.0_25.2.0
- Oracle Communications Policy Bandwidth On-Demand Application Manager 12.2.0.0_25.2.0
- Oracle Communications Mediation Server 12.2.0.0_25.2.0
- Oracle Communications Tekelec Platform Distribution (TPD) 7.0.3.0.0_86.46.0

Note: 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.

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.

- 12.2.2 Release Documentation
 - Release Notes
 - Licensing Information User Manual
- 12.2 Documentation
 - Platform Configuration User's Guide
 - Network Impact Report
 - Virtual Network Function Overview and Direction for Wireless
 - Concepts for Wireless
 - Virtual Network Function Overview and Direction for Cable
 - Configuration Management Platform Wireless User's Guide
 - Configuration Management Platform Cable User's Guide
 - Policy Wizard Reference
 - SNMP User's Guide
 - OSSI XML Interface Definitions Reference
 - Policy Front End User's Guide
 - Bandwidth on Demand User's Guide
 - Mediation Server User's Guide
 - Troubleshooting Reference
 - Analytics Data Stream Reference
 - Bare Metal Installation Guide
 - Cloud Installation Guide
 - 11.5.x / 12.1 to 12.2.x Upgrade Procedure, GEO-Redundant Enabled
 - 9.9.x/ 11.5.x / 12.1 to 12.2.x Upgrade Procedure, GEO-Redundant Disabled
 - 12.1.x to 12.2 Cloud Upgrade Procedure Georedundancy Enabled
 - 12.1.x to 12.2 Cloud Upgrade Procedure Non-CMP Georedundancy Disabled
 - Enhanced Priority for eMPS Based Wireless Priority Services
 - Generic Policy Notification Interface - Convert for Cable
 - Notification Triggers for Aggregate Quota
 - Specify Gx and Rx Result Codes While No Binding Info

- Disaster Recovery Guide
- Cloud Disaster Recovery Guide

Supported Hardware Baseline

The hardware identified in [Supported Hardware Baseline](#) comprises the hardware and server versions that have been verified with this release.

Supported Hardware Baseline

Table 4-1 *Supported Hardware Baseline*

Hardware	Description
HP Gen 6	C-Class servers configured as defined in the configuration workbook.
HP Gen 8/8+	C-Class servers configured as defined in the configuration workbook.
HP Gen 9	C-Class servers configured as defined in the configuration workbook.
DL360 RMS	Rackmount servers configured as defined in the configuration workbook.
DL380 RMS	Rackmount servers configured as defined in the configuration workbook.
X5-2 Sun non- Netra servers	Rackmount servers configured as defined in the configuration workbook.

The firmware components are software that is installed on the hardware. These components are listed in the Firmware Release Notice:http://docs.oracle.com/cd/E57832_01/index.htm.

Firmware Components

The firmware components are software that is installed on the hardware. These components are listed in the Firmware Release Notice: http://docs.oracle.com/cd/E57832_01/index.htm.

Firmware Component List

The firmware documents are available from Oracle Help Center (OHC): http://docs.oracle.com/cd/E57832_01/index.htm.

Table 5-1 shows the firmware components used in this release.

Table 5-1 Supported Firmware Components

Hardware	Release (see note)	Description
HP Firmware FUP	2.2.9 (minimum)*	FC
Oracle X5-2 Firmware	3.1.5 (minimum)	FC

FC

Fully Compatible

PC

Partially Compatible (Compatible but not fully functional [feature dependent])

NC

Not Compatible

N/A

Not Applicable

Note: There are no general restrictions on the use of newer firmware. Oracle provides guidance in the HP Solutions Firmware Upgrade Pack Release Notes on the maximum firmware version for a component. Only when there is a known compatibility issue with a newer firmware version is a maximum version specified. Oracle recommends that the latest firmware release always be used unless there is a known compatibility issue.

Policy Management Compatibility and Software Upgrade Paths

This chapter provides a Policy Management compatibility matrix and a table of upgrade paths to Policy Release 12.2.2.

UDR and Policy Management Compatibility Matrix

The firmware documents are available from Oracle Help Center (OHC): http://docs.oracle.com/cd/E57832_01/index.htm.

[UDR and Policy Management Compatibility Matrix](#) lists which releases of Policy Management are compatible with each release of UDR.

Table 6-1 UDR and Policy Management Compatibility Matrix

UDR Software Release	Compatible Policy Management Software Releases
10.0	10.5, 11.5, 12.1
10.2	11.5, 12.1
12.1	11.5, 12.1*, 12.2
12.2	12.1, 12.2

* 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.

Supported Upgrade Paths

This release has been tested for upgrades from specific prior releases. This chapter lists the exact paths for upgrade. Verify that your current installed release is listed on a valid upgrade paths.

Supported Upgrade Paths

This release has been tested for upgrades from specific prior releases. This chapter contains the exact paths for upgrade. Verify that your current installed release is listed on a valid upgrade path. The possible upgrade paths to Policy 12.2.2 are listed in [Table 7-1](#).

Table 7-1 Upgrade Paths

From	To
9.9.x	12.2.2
11.5.x	12.2.2
12.1.x	12.2.2
12.2.x	12.2.2

This maintenance release can upgrade a server from Release 12.2.1.x to 12.2.2 using the patch upgrade process. Performing a patch rather than an upgrade ensures that only the changed RPM files are updated on the target servers and reduces the time required to upgrade the server. If you are interested in using the patch, download the Oracle Communications Policy Management 12.2.0.0_25.2.0 MR upgrade distribution. See the patch procedures in either the *Configuration Management Platform Wireless User's Guide* or *Configuration Management Platform Cable User's Guide*.

Resolved and Known Bugs

This chapter lists the resolved and known bugs for Oracle Communications Policy Management 12.2.2.

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

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.

Resolved Bug Listing

[Table 8-1](#) lists bugs that are resolved in the following builds:

Note: Resolved bugs are sorted in ascending order by severity and then by bug number.

Table 8-1 Oracle Communications Policy Management Release 12.2.2 Resolved Bugs

Severity	Bug Number	SR Number	Title
1	26268554	3-14777086 031	Policy Server Major Alarm (Java Heap Usage above 4G) after upgrading to 12.2.1
1	26572409	3-14864220 0012	MRA only connects to the primary site IP in Diameter peer table
2	25652441	3-14383304 891	CMTS_Lost_Conn 71103 alarm is deleted automatically after 2 hours
2	25700489		PCMM Connection Loss - Alarm Enhancement
2	26268131		OM Statistics Task Hung (in running status for more than 36 hrs)
2	26268530	3-14618184 331	Session Cleanup Task not working
2	26271703		Custom Field in User Profile is not correctly stored on MPE after Sy sends 5030
2	26274384	3-14777086 031	Timeouts observed after upgrade to 12.2.1

Table 8-1 (Cont.) Oracle Communications Policy Management Release 12.2.2 Resolved Bugs

Severity	Bug Number	SR Number	Title
2	26392725		User object cache time is too long cause the User Contexts inherits from cache
3	26228865		Unexpected QP Proc Restart
3	26236645	3-12528546 701	Javascript Evaluate as Expression causes increased latency/busy
3	26263527	3-14853808 691	Session-Sync-Requested AVP has incorrect value
3	26271645	3-14643970 201	Errors while collecting savelog from the server
3	26271659		Upgrade failed as its disk usage on '/usr/TKLC/camiant' exceed 50%
3	26271683		Multiple components stats time bucket is broken in 12.2.x
3	26271714		SyContext for Unknown user on On-Demand Sy is not populated in the user object
3	26271734		PCEF latency stat shows Maximum Processing Time received 66546162
3	26271778	3-14809575 781	Multiple time entries in reports, though the collection period is set to 15 mins
3	26368802		Bouncy Castle library needs to be updated(Removed)
3	26369515		Dynamic Quota PNR processing is partially under UserID Lock while processing
3	26369724		Stale GateSets have not been deleted after CMTS reboot
3	26369741		Stale diameter session hasn't been deleted, GateReport reason=2
3	26374111		Session viewer still contains deleted sessions in ReportHandler(s)
3	26418431	3-15113530 831	Upgrade 11.5.2.0 to 12.2.1.0 causes loss of backplane replication interface
3	26434973	3-15288625 711	AVP "User-Location-Info-Time" Mandatory flag needs to be set to 'mustnot'
4	26300635	3-15113441 071	RJIL_Failed Login Attempts Not Captured in Audit Logs

Customer-Known Bugs

There are no customer- known bugs in this release.

Oracle References and Services

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

My Oracle Support

is your initial point of contact for all product support and training needs. A representative at () can assist you with registration.

Call the CAS 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:

1. Select 2 for New Service Request
2. Select 3 for Hardware, Networking and Solaris Operating System Support
3. Select one of the following options:
 - For Technical issues such as creating a new Service Request (SR), Select 1
 - For Non-technical issues such as registration or assistance with MOS, Select 2

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

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

Emergency Response

In the event of a critical service situation, emergency response is offered by the Customer Access Support (CAS) 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.

Customer Training

Oracle University offers expert training on Oracle Communications solutions for service providers and enterprises. Make sure your staff has the skills to configure, customize, administer, and operate your communications solutions, so that your business can realize all of the benefits that these rich solutions offer. Visit the Oracle University web site to view and register for Oracle Communications training: education.oracle.com/communication. To reach Oracle University:

- In the US, dial 800-529-0165.
- In Canada, dial 866-825-9790.
- In Germany, dial 0180 2000 526 (toll free) or +49 8914301200 (International).
- In Spain, dial +34 91 6267 792.
- In the United Kingdom, dial 0845 777 7 711 (toll free) or +44 11 89 726 500 (International).

For the appropriate country or region contact phone number for the rest of the world, please visit Oracle University's web site at <http://www.oracle.com/education/contacts>.

Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the site, . 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 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**.

Locate Product Release Software on the Oracle Software Delivery Cloud Site

software is available for download on 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.

