

Oracle® Communications Convergent Charging Controller Release Notes



Release 12.0.5

June 2022

The Oracle logo, consisting of the word "ORACLE" in white, uppercase, sans-serif font, centered within a solid red square.

ORACLE

Copyright

Copyright © 2022, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

| | |
|--|---|
| About the Release Notes..... | 1 |
| New Features | 1 |
| Known Problems | 2 |
| Fixes in This Release | 2 |
| About Convergent Charging Controller Documentation | 4 |
| Third-Party Products and Licensing | 5 |

About the Release Notes

This document provides the release notes for the new and enhanced features introduced between Oracle Communications Convergent Charging Controller (CCC) release 12.0.4 and Oracle Communications Convergent Charging Controller (CCC) release 12.0.5.

New Features

Convergent Charging Controller 12.0.5 includes enhancements to the following components:

- Advanced Control Services
 - New Notifications Support in Notification Gateway
 - Extended Tracing Capabilities
- RESTClient Support
- Oracle Linux 8 and Oracle Database 19.13 Certification

New Notifications Support in Notification Gateway

With this release, CCC now supports more notifications from BRM. You can also send the notifications to subscribers in multiple forms such as SMS, Flash SMS, and USSD and so on. The following notifications from BRM are supported:

- BalanceExpiry
- ProductExpiry
- BillDue
- SubscriptionRenewalDue
- SubscriptionRenewal

XSL's for each of these notification types and a sample call plan for Balance Expiry notification are also provided along with this release.

For more information, see *Notification Gateway Technical Guide*.

Extended Tracing Capabilities

CCC now supports more flexible and extended subscriber tracing feature. This provides the capability to selectively trace a call flow for a list of subscriber ids and/or network sessions flowing through the CCC server.

Earlier, enabling the debug for a system impacted the system performance and generated debug logs for all flows thereby overloading the system in terms of latency and system usage.

With this release, tracing can be enabled per subscriber or even per subscriber session. CSPs can now analyse their configurations, network mapping, and expected results for specific flows.

For more information, see *Advanced Control Services Technical Guide*.

RESTClient Support

With this release, a new RESTClient interface is added to CCC. The RESTClient interface is used for sending REST requests from NCC to REST server endpoints. RESTClient accepts the requests in xml format and translates the xml request to JSON format. JSON request is then forwarded to the REST server. RESTClient encapsulates the response received from the REST server, transforms it to xml, and sends it back to the requesting process (DAP).

RESTClient supports requests to Balance Transfer and Apply Loan endpoints in the Oracle Communications Billing and Revenue Management (BRM) REST server. RESTClient also supports generic request types, which can be forwarded towards any REST server endpoints with required design time customizations.

For more information, see *REST Client Technical Guide*.

Oracle Linux 8 and Oracle Database 19.13 Certification

CCC is now certified to run on Oracle Linux 8 and Oracle Database 19.13.

Known Problems

List of Known Problems

- If you see the following error in the updateLoader log of SLC and VWS nodes after installation:
updateLoader() WARNING: Oracle unavailable after 5 seconds with error: ORA-12578:
TNS:wallet open failed
updateLoader() WARNING: Oracle unavailable after 65 seconds with error: ORA-12578:
TNS:wallet open failed

Perform the following task in the SMS, SLC, and VWS nodes:

1. Navigate to /IN folder in the SMS, SLC, and VWS nodes.
2. Change the group details using the command:
`chown -R <InstallUser:esg> wallet`
3. Restart the updateLoader in the SLC and VWS nodes.

- If you get the following error in **/IN/service_packages/PI/tmp/PImanager.log** while running voucher query:

```
UNKNOWN COMMAND CCSVR1=QRY
```

1. Log in as smf_oper (application user) in the SMS node and run the following:
`export LOGFILE=< file name>`
`export SMFPASSWORD=<Database password for smf user>`
2. Run the script from **/IN/service_packages/PI/db/install/create/SMF/scripts** path.
`./install_PlcCommands_OC3C.sh.`

Fixes in This Release

List of Fixes

The following table lists service request issues reported by external sources that have been fixed in this release. The issues are listed component-wise.

| Service Request (SR) Number | Bug DB Number | Component | Title |
|--------------------------------|---------------|-----------|--|
| 3-28711826851 | 33891969 | CCS | beVWARS Crashing When PC Bucket ID Exceeds Max 32bit Int |
| | 33735117 | COMMON | CVE-2021-44832: APACHE LOG4J UPDATE TO 2.3.2, 2.12.4, OR 2.17.1 |
| 3-28846976351 | 33932136 | PI | PI User Last Change Date Pulled from Incorrect Table |
| 3-28545429501 | 33864610 | DCD | CCDB FN reads call cost over DCD Interface considers a zero-cost as unsupported |
| 3-28558293101 | 33844799 | BE | SLEE call ID is greater than max int32 causes VWS sync errors |
| 3-28543570771 | 33838050 | PI | Request for porting fix for Bug 33571715 on 12.0.3.0 to NCC 12.0.4.0 Version |
| 3-28533236441 | 33835677 | DCA | DCA core dumping in response to EVENT_REQUEST when MSCC Indicator is set |
| 3-28526090141 | 33830915 | ACS | NCC 12.0.4 does not support multiple buckets when total value exceeds max int32 |
| 3-28504176011 | 33825943 | CCS | CCS EDR Viewer Calculates New Balances in 32-bit |
| 3-28478743791 3-28558293101 | 33819023 | ACS | Invalid Escher type conversion while extracting Map key CMID |
| 3-28409852841 | 33805614 | ACS | Call doesn't use units from the next balance on the cascade |
| 3-28250704571 | 33768286 | CCS | Issues with the import of control plans |
| 3-28270070271 | 33755247 | CCS | Custom Product Type Panels are empty |
| 3-28202342861 | 33747408 | ACS | PAPV node fails to send announcement to ussdgw in 12.0.4 |
| 3-28191009621 | 33739530 | ACS | Buckets are not expired on wallet expiry |
| 3-28216728301 3-28265664521 | 33734943 | PI | PI SOAP Response Encoding Broken |
| 3-27596564051 | 33723604 | BE | Unable to Test CP PCs with VWARS_sysdate.cfg |
| 3-28080154641 3-28558293101 | 33703702 | ACS | renewPCAtMidnightTZ No Longer Works |
| | 33691812 | COMMON | CVE-2021-45105: APACHE LOG4J UPDATE TO 2.17 OR LATER, OR 2.12.3 OR LATER |
| 3-28018273791 | 33681184 | ACS | Further Fun with Integer Sizes |
| | 33673064 | COMMON | ALERT: CVE-2021-45046: APACHE LOG4J UPDATE TO AT LEAST 2.16.0 |
| | 33660504 | COMMON | PROBABLE ALERT: CVE-2021-44228: APACHE LOG4J UPDATE TO AT LEAST 2.15.0 |
| 3-27722958971 3-28674626711 | 33580429 | ACS | beVWARS dumps core when fetching the reservation chunk from MFile in 12.0.4 |
| 3-27716091898 | 33578560 | ACS | DOZE FN does not reuse the dialog with timerIF |
| 3-27514762651 | 33573160 | ACS | OSD operation with same name for separate ACS customers causes "error: Operation |

| Service Request (SR) Number | Bug DB Number | Component | Title |
|---|---------------|-----------|--|
| 3-27575838601 3-28543570771 3-28544392111 | 33571715 | PI | Need PI FIFO Changes on 12.0.3.0 |
| 3-27648879701 | 33567628 | ACS | [12.0.4] DAP much stricter on XML templates; doesn't allow namespaces |
| 3-27658456371 | 33564243 | DAP | dapIF core dumps randomly in NCC 12.0.4 |
| 3-27575499201 | 33550099 | CCS | slee-ctrl status shows process not started |
| 3-27597718711 | 33549625 | DCD | diameterBeClient Process is crashing after SLEE start on NCC 12.0.4 |
| | 33329291 | COMMON | OJDBC CVE-2021-2351 |
| 3-27640302671 3-28478743791 3-26643108601 | 33231165 | CCS | ccsBeResync will never synchronise wallets with an active reservation. |
| 3-24648222511 3-24390027351 | 32095323 | ACS | Core dump by smsMaster |
| 3-22129052414 | 30897902 | BE | Diagnostics for Intermittent beVWARS Latency |
| 3-27959098221 | 33684193 | CCS | increase of END_CALL_REASON=2 with DURATION=0 |
| 3-26643108601 | 33586742 | CCS | Plugins Running when Executing ccsBeResync |
| 3-28138614401 | 33731555 | ACS | acsProfileCompiler Fails to Start with ORA-01012: not logged on |
| 3-27602969211 | 33541300 | BE | soloBE parameter not working as expected |
| 3-27084487191 | 33437003 | DCA | DCA to allow Termination Request of failed session |
| 3-29081898711 | 34014572 | SIGTRAN | CI/PI in Shipped SIGTRAN Files |
| 3-28138614417 | 33730924 | SMS | Screens Erroneously Reports Replication File Transfer Failure if Debug Enabled |
| 3-28848798371 | 33932670 | ACS | Many support tools don't match a username with more than 8 characters |
| 3-28849540711 | 33957657 | BE | Revoked named event request results in erroneous EDR record written by VWS. |
| 3-28097147771 | 34073657 | ACS | slee_acs SIGSEVs in NumOldestCallsToDump Logic |
| 3-28837410561 | 34073577 | CCS | Failure to flush PC subscription bucket after failed subscription |
| 3-23262355551 | 34041742 | SMS | NCC processes usage of remote databases lacks resilience |

About Convergent Charging Controller Documentation

Where to Start

Convergent Charging Controller product documentation is available on Oracle Help Center:

https://docs.oracle.com/communications/F53848_01/index.htm

The first guides to look at should be those that help with the installation and configuration of the Convergent Charging Controller software.

The next set of guides should be those pertaining to your usage of the Convergent Charging Controller software.

The guides have been generally classified according to their use.

Third-Party Products and Licensing

For all the Oracle Communications Convergent Charging Controller licensing information and all related third-party product acknowledgments, see *Oracle Communications Convergent Charging Controller Licensing Information User Manual*.