

**Oracle® Communications
Convergent Charging Controller**

Release Notes

Release 12.0.3

December 2019

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About the Release Notes

This document provides the release notes for the new and enhanced features introduced between Oracle Communications Convergent Charging Controller release 12.0.2 and Oracle Communications Convergent Charging Controller release 12.0.3.

New Features

Convergent Charging Controller 12.0.3 includes enhancements to the following components:

- 64 bit Capability Enhancement
- Advanced Control Services
 - Parameter Redirection Information
 - Charging Based on RG or SI
 - Sample DCA Redirection to URL Control Plan
- Voucher Management
 - Voucher History Improvements

64 bit Capability Enhancement

With this enhancement, Convergent Charging Controller can now reap the benefits of a 64-bit compliant product.

This feature makes the following elements in the product 64 bit so that a higher range of elements can fit in a product installation:

- 64-bit Subscriber ID
- 64-bit Wallet ID
- Balance limit increased to a 64-bit value
- 64-bit Voucher ID
- 64-bit Statistics value
- 64-bit SLEE Call ID

Advanced Control Services

This section describes the enhancements to Advanced Control Services.

Parameter Redirection Information

In the earlier versions, in case of call forwarding scenario, Redirection Information parameters were not captured from the incoming IDP.

With this release, Redirection Information parameter is now captured from IDP onto incoming data profile tags so that any business processing logic can be implemented based on those parameters.

Following are the redirection parameters accessed from IDP:

- Redirection indicator
- Original redirection reason
- Redirection counter
- Redirection reason

Charging Based on Rating Group/Service Identifier

In the earlier versions, the Service-Identifier and the Rating-Group AVPs that are present under Multiple-Services-Credit-Control AVP were not read and stored in productized profile tags.

With this release, both Service-Identifier and the Rating-Group AVPs are read and stored in pre-defined profile tags so that these AVPs can be accessed in control plan to use in the business logic.

Sample DCA Redirection to URL Control Plan

When the funds/quota gets exhausted, then instead of sending terminate, it is now possible for credit control server to redirect on FUI (Final Unit Indication) to a server URL that can be configured. An updated SessionRedirect CPL (Control Plan) is shipped as part of this release.

Redirection CPL is now enhanced to support redirection to URL in Initial and in subsequent reservations wherein different URL server can also be configured for Initial/Update scenario. Counter can be configured to limit the redirection attempts to redirection server. In case of insufficient balance, customer can redirect multiple times based on limit configured.

For more information, see *Diameter Control Agent Technical Guide*.

Voucher Management

This section describes the enhancements to Voucher Management.

Voucher History Improvements

Following enhancements are done in voucher management that are related to voucher recharge flow:

- EDR type 56 is generated for Voucher Recharge using PI.
- CCS_VOUCHER_STATE_CHANGE table is now populated with type 'V' for voucher recharge using SLPIT and Control Plan.

As part of above changes, now you can see Voucher Recharge state in **Voucher History** tab when you recharge through PI or SLPIT or Control Plan.

For more information, see the following guides:

- *Voucher Manager User's Guide*
- *Event Detail Record Reference Guide*

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.
drwxr-xr-x 2 <installuser:esg> 6 Nov 28 08:41 wallet
- 2 Change the group details as shown above using the command:
chown -R <InstallUser:esg> wallet
- 3 Restart the updateLoader in the SLC and VWS nodes.

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
3-21288653431	30447789	ACS	Large number of balances on subscriber causes the PI to error.
3-20887365611	30295946	ACS	Quota profile tag values not encoded correctly for Linux
3-20765492461	30221016	ACS	Send notification node does not retain link of last 5 exits
3-20654135721	30126997	ACS	diameterBeClient crashes
3-20125615771	29855530	ACS	Problem with nested AVPs mapping with the same avpCode
3-19991044731	29743879	ACS	ACS CdrFileMaxSize only support files until 1MB
3-19982540801	29707157	ACS	beGroveler Crashing with SIGSEGV on Shutdown
3-19962688891	29701633	ACS	ACS Fails to Copy Date Profile Tags to Integer Profile Tags
3-19778047491	29608016	ACS	PI interface fails for ACSCLI_ADD and ACSPFL_CHG combination
3-19561016861	29470077	ACS	"Named Event" node in CPE prompts error "Input parameter string has incorrect nu
3-19552023251	29450161	ACS	beEventStorageIF dumps core on release 12.0.2
3-19476126981	29450059	ACS	Text Message Branching node crashes for
3-19568300221	29447895	ACS	locApp dumps core on slee startup
3-19494077991	29407251	ACS	SCA not ACK'ing 200 OK right after 183 Session Progress
3-19395577171	29345559	ACS	slee_acs coredump during request to BRM
3-19203276021	29265571	ACS	Configure if SOAPAction field in message header will be populated by default
3-18845650481	29013854	ACS	ACS Numbers Screens Loads all Provisioned CLIs when Opened
3-18855469651	29006387	ACS	calledPartyBCD NOA mapped to ISUP but not used in normalisation
3-18610483431	28849853	ACS	MATH node truncation rounding is incorrect for negative numbers
3-18446686541	28744629	ACS	Periodic charge wrongly set next charge date (CHARGE_EXPIRY)

Service Request (SR) Number	Bug DB Number	Component	Title
3-19466835751 3-19329430861 3-18802765771	28964146	ACS	Serious loss of service with Protocol Error/Memory Allocation Error on SLC
3-20867587261 3-21427729921	30251805	ACS	Changes from Bug 27587334 Partially Merged
3-17696226991 3-19513629981	28190710	ACS	Call not ended by UATB in the last slice before the max call duration is reached
3-19879591501 3-19764213081	29611513	ACS	Patch 29486327 Causes THFN to Fail
3-18464241281 3-17332944101	27980210	BE	Unexpected failover from Primary to Secondary
3-14699663221 3-17916893311 3-19078291951 3-17124906141 3-15543703581	26589614	BE	NCC 5.0.3 - Stats: Value overflow from addition of 1
3-20512759361	30055044	BE	Be VWARS core dumped during Mfile creation
3-20202516641	29854706	BE	SLC is granting less quota per CCR-U until it reaches 0
3-15737022981	29836843	BE	Data session is disconnected, COSTS in EDR is empty
3-19078291951	29177803	BE	WARNING: Stats: Value overflow from addition of 1
3-18835519381	29008648	BE	Named Event math error when DSR in play
3-18125428021	28779820	BE	VWS - Overflow for current value error
3-17151733051	27957930	BE	Can not terminate periodic charge
3-21118966811	30356794	CCS	DUCR/ATC Charges No Longer Work
3-20888729131	30328339	CCS	Quota Balance Category Allows Expenditure Type Selection
3-20740864021	30179189	CCS	beVWARS Fails to Decode 64-bit Escher Subsequent Reservations
3-20520607971	30086519	CCS	Voucher Recharges from Periodic Charges Not Generating RTWNs
3-19414259481	29362715	CCS	Voucher Batch Screens Randomly Order Batches
3-15737022981	29133833	CCS	Reservation is removed before expiry time
3-18820334701	28987401	CCS	Data Session Extend Reservation Time failing when no funds
3-15737022981	28325859	CCS	Data session is not being charged
3-17394762111	27965781	CCS	DISPLAY_SPEND_RATIO EDR Tag Value Occasionally Incorrect
3-18208090711	28654364	CCSPI	CCSCD9 bad SOAP response for profile tags with commas

Service Request (SR) Number	Bug DB Number	Component	Title
3-19622547321	29489270	DAP	DAP Memory Leak Patch Compatibility Verificiation
3-19430075061	29447968	DAP	DAP screen issue - removes all data on update
3-18930134721	29325210	DAP	dapIF Interpreting a Success Response as Error
3-15531621311	27392955	DAP	dapIF - Pending queue for ASP
3--18855951201 3-18855523251	28993448	DAP	dapIF Memory Leak and Crashing
3-19509633281	29417904	DCA	OC3C AVP response value is hitting 32 bits integer limit
3-19588466091	29461512	DCD	diameterBeClient socket error: Value too large for defined data type
3-18819405091	28988554	DCD	Delivery of resolution for Bug 28907278 on Solaris
3-18705461611 3-18819405091	28907278	DCD	insufficientFundsDropCallResultCodes Does Not Perform Normal Post-BFT Processing
3-19483514061 3-19387194511	29396737	DCD	Size Boundry Diameter Responses Corrupts SLEE Memory
3-19685761981	29527999	LCP	locApp Crashes with Segmentation Fault
3-19964786151	29705831	NGW	NGW Fails to Start due to NoClassDefFoundError Exception
3-18767101321	28938665	NGW	NGW not logging any messages to syslog
3-20086934661	29790732	NP_SERVICE	SMF_USER_ROLE Missing Permissions on NP Tables
3-19568305611	29448358	NP_SERVICE	NP_SERVICE_PACK mta only accepts config values btw 255 - 4294967295
3-20156599691	29827578	OUI	12.0.2.0 OUI Shouldn't Create .hushlogin
3-20156599691	29827553	OUI	12.0.2.0 NGW State Should Match NCC or 3C
3-20156599691	29827415	OUI	12.0.2.0 acsStatsLocalSLEE Doesn't Start After Fresh Installation
3-20156599691	29827345	OUI	12.0.2.0 Error When Logging into E2BE DB
3-20156599691	29827315	OUI	12.0.2.0 Installs Bad http.conf Configuration
3-20156599691	29827305	OUI	12.0.2.0 OUI Does Not Correct NCC User Profile Files on the SMS
3-20114368081	29797168	OUI	NCC 12.0.2.0 Silently Fails to Install on Systems with Under 8G of RAM
3-20848980851	30254172	PI	VPNST1_CHG does not respect extension length of Network
3-20196117821	29868188	PI	PI Users Can No Longer be Assigned to All PI Ports
3-18371743851	28701907	PI	CCSVR1 PI command returning

Service Request (SR) Number	Bug DB Number	Component	Title
			REDEEMED_DATE in wrong time zone
3-17639769291	28136914	SDK	slee_acs dumps core using multiple announcement IDs in SDK node
3-20848248801	30235641	SIGTRAN	sigtran.config.simple Missing Crucial Configuration
3-18930134721 3-15615822381	26928483	SIP	SIP Doesn't Disconnect Call with ACS on State Machine Exception
3-19929956891	29684241	SLEE	Core dump on SLEE ACS in SLCs
3-18148376101 3-18962894901	28555082	SLEE	OC3C RPM packages blocking Linux upgrade and ksh update
3-18121397491 3-18104446101	28531354	SLEE	Any use of format text node results in slee_acs ERROR
3-20888259501	30331064	SMS	Unable to save periodic charge with Control Plan
3-18859704331	29709800	SMS	Holiday discounts not stored in mfile.
3-19919175711	29686066	SMS	postinstallRoot.sh should create a dedicated Apache config file
3-19605756931	29638406	SMS	cmnSU does not correctly inherit group permissions
3-19208716881	29340470	SMS	smsDbCleanup.sh is causing replication connection issues
3-19327964961	29306477	SMS	AVD Processing Hangs smsMaster
3-18927625271	29244767	SMS	DSR display issue on IN GUI
3-19008234581	29135455	SMS	Double timezone shift in Voucher Manager screens - Change Date
3-18592182253	28839336	SMS	Unable to Backtrace NCC/3C Core Files
3-18054502581	28493583	SMS	OC3C GUI Templates - issues with CCS Screens Access dependencies
3-17908940021	28361492	SMS	smsDbCleanup.sh Does Not Log to Syslog
3-17784738881	28271366	SMS	smsLogCleaner archiving files with timestamp in GMT TZ
3-17758138441	28229723	SMS	smsProcessCdr Writes Empty EDRs by Default
3-20751900841	30204703	USSD_GW	USSDGW - incorrect Calling Party NOA conversion
3-19964191611	29701369	USSD_GW	USSDGW Fails to Match Any Shortcodes in MFile
3-19178616021	29226914	USSD_GW	Incorrect USSD Balance Query Response with -ve buckets and past expiry date
3-19137801621	29218679	USSD_GW	Cannot constrain USSDGW multiple-ID menu values
3-19166130111	29217518	USSD_GW	Request for USSDGW to send Notify in no-response terminal
3-19138403961	29209286	USSD_GW	USSDGW menu timeout arbitrary limitation

Service Request (SR) Number	Bug DB Number	Component	Title
3-18818092651	28973928	USSD_GW	Interim Patch for Formal Delivery of ussdgw_reconnect_20181115
3-18727139251	28919232	USSD_GW	USSD and IVR date presentation to subscriber in system timezone
3-18649907181	28875844	USSD_GW	USSD_GW not passing response to ACS
3-18632886751	28856984	USSD_GW	USSD_GW reconnects mixes interactions between subscribers
3-20700254611	30160381	VPNPI	DB Error Returned When VPN Station Doesn't Exist
3-20700254611	30160076	VPNPI	VPN PI Permissions Error is Not Accurate
3-20700254611	30160034	VPNPI	VPNPI=QRY LISTTYPE Doesn't Accept STATION
3-21177018401	30373932	XMS	Messaging Manager Only Supports 12 Digit SCAs
3-19480418071	29531423	XMS	Network loops with home-routed MAP mtFwSM
3-19600109431	29468073	XMS	SMS failures affecting all subscribers // TCAP Abort (pabort-127)
3-18741148321	28932919	XMS	dataCodingMap Logic Never Applied to Incoming Messages
3-18162969611	28544427	XMS	MMX EDR node does not add profile fields to EDRs

About Convergent Charging Controller Documentation

Where to Start

Convergent Charging Controller product documentation is available on Oracle Help Center: http://docs.oracle.com/communications/F24937_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*.