



Release Notes for *Cisco Policy Suite* for Release 5.5.3

First Published: February 24, 2014

Last Updated: May 28, 2014

Release: 5.5.3

OL-30251-03

Contents

This document describes the new features, feature versions and limitations for the Cisco Policy Suite software. Use this document in combination with documents listed in the [“Related Documentation” section on page 8](#).

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Introduction

The Cisco Policy Suite is a comprehensive policy, charging, and subscriber data management solution that allows service providers to control and monetize their networks and to profit from personalized services. The Cisco Policy Suite has the following components:

- Policy Server (PS)
- Charging Server (CS)
- Application Gateway (AGW)



- Unified Subscriber Manager (USuM)
- Subscriber Analytics

The Cisco Policy Suite provides an intelligent control plane solution, including southbound interfaces to various policy control enforcement functions (PCEFs) in the network, and northbound interfaces to OSS/BSS and subscriber applications, IMSs, and web applications. The Cisco Policy Suite modules are enabled individually or deployed as an integrated end-to-end policy, charging, and service creation solution.

Competitive Benefits

The new Cisco Policy Suite solution provides these benefits over competitive solutions.

- Cisco Policy Suite architecture allows simultaneous sessions and transactions per second (TPS) capacity to be independently scaled. This allows Cisco Policy Suite to be efficiently sized for both high simultaneous sessions with low TPS or low sessions with high TPS, resulting in lower total cost of ownership when compared to traditional PCRF models. As soon as sessions are bound to a given processing node, the ability to handle traffic spikes is reduced.
- Cisco Policy Suite virtual architecture supports flexible and cost-effective carrier grade strategies. Virtual instances are spread across multiple blade serves for full hardware and software redundancy within a Cisco Policy Suite cluster.
- The flexible nature of the Cisco Policy Suite lets a service provider go beyond standard policy definition to add new, customized functionality. It provides a comprehensive open policy software development kit (SDK) using industry-standard languages and frameworks. Customized or vendor scripting is not needed, which allows service providers to create plug-ins within the existing policy server and automatically exposes the new services to the policy engine.

New and Changed Information

This section describes the new and changed features for the Cisco Policy Suite Release 5.5.3.

New Software Features in Release 5.5.3

Geo-Redundancy

The Geo-Redundancy architecture supports two CPS active-standby clusters deployed in an active-active configuration across multiple GGSNs/PCEFs or across two geographically distant sites. Each site contains the active for the local PCEF and the other site contains the standby for the remote PCEF.

For example, Site1 and Site2 sites are mated-pair PCRF:

- Site1 and Site2 two sites, each having own PCRF.
- This solution will have two CPS at each site, CPS-Site1-Active and CPS-Site2-Standby at Site1 and CPS-Site2-Active and CPS-Site1-Standby at Site2.
- For PCEF at Site1, there are two CPS, one is active at Site1 i.e. CPS-Site1-Active and other at Site2, i.e. CPS-Site2-Standby. These are geographically redundant. Same is the case for PCEF at Site2.
- Upon failure of active CPS, standby CPS would seamlessly serve the subscribers sessions.
- The standby CPS is not configured as passive.

Each PCEF is configured in active-passive mode with active CPS cluster as primary and standby CPS cluster as secondary. As such, the PCEF automatically switches over to the standby CPS cluster if the primary CPS cluster fails. The failure detection is supported in the PCEF.

Installation Notes

This section describes the installation notes in Release 5.5.3.



Note

Currently, direct upgrading of CPS from version 5.3.5 to 5.5.3 is not supported. Customer first needs to upgrade CPS to 5.5 and then can upgrade the system to 5.5.3.



Note

Customer must download the latest software package available from the link <http://software.cisco.com/download/type.html?mdfid=284883882&catid=null>.

Feature Versions

The following table mentions the component version for CPS 5.5.3 Release:

Component	Version
Audit	1.1.3
Balance	3.1.3
Control Center	3.1.3
Congestion Reference Data	1.0.1
Customer Reference Data	2.1.3
Core	5.5.3
DHCP	1.3.1
Diameter2	3.1.3
ISG Prepaid	1.5.1
LDAP	1.2.1
Notifications	5.5.2
Policy Intel	1.3.2
POP-3 Authentication	1.1.1
Radius	3.0.3
SCE	2.0.7
SPR	2.0.5
Unified API	2.0.4
Scheduled Events	1.0.3
Web Services	1.2.5

Applying Hotfix

This hot fix can only be installed with 5.5.3 CCO releases. To check the release, the service provider needs to verify the installed features by running `/opt/broadhop/qns-1/bin/features.sh` and confirming that the `policy.feature=5.5.3.release` has a “.release” extension and not a “.r#####”.

If a deployment has a non-released version (.r#####) then the service provider must contact their Cisco technical representative to have a patch created that works with their version.

This hotfix must be installed to ensure that the Policy Builder works properly with the newer versions of Firefox (v29+) and Chrome (v33+).

-
- Step 1** Download `Hotfix_Patch1_5.5.3.tar.gz` from <http://software.cisco.com/download/release.html?i=!y&mdfid=284883882&softwareid=284980034&release=5.5.3&os=> along with your CPS 5.5.3 software or get the hotfix from your Cisco technical representative and extract it in `/var/broadhop/repositories` directory as a root user.
- Step 2** After extraction, find directory `Hotfix_Patch1_5.5.3` in `/var/broadhop/repositories` directory.
- Step 3** Add entry of extracted directory into `/etc/broadhop/repositories` file.
- Entry Name:

```
file:///var/broadhop/repositories/Hotfix_Patch1_5.5.3
```



Note

- Do not delete old entries from `/etc/broadhop/repositories` file.
- `QNS_5.5.3.release` entry in `/var/broadhop/repositories` needs to be left uncommented while applying the patch (updating qns).

- Step 4** Go to `/opt/broadhop/installer/` directory in `perclient01` and run the commands:
- ```
cd /opt/broadhop/installer/
run su qns -c "./update_qns.sh"
```

- Step 5** Run `restartall.sh` from `perclient01` to apply the patch.

## Removing MySQL JDBC Connectors from Standard Load Line-up

- 
- Step 1** Add the following file to your local machine and make the changes to your `qns.conf` file.
- ```
-DmysqlDriver=file:///var/broadhop/jdbc/jdbc_5_1_6.jar
```
- Step 2** Copy the above mentioned file to all CPS boxes in the same location. Synchronize all the boxes and then restart CPS.

Units Collection Missing from Collectd Db - CSCum24824

When using Monitoring tab in Control Center, the following error is displayed:

Error Message The Control Center Monitoring facility is currently unavailable.

Explanation Monitoring Startup error: The collection (units) is not found in database (collectd) at Primary host/port. The collectd is not properly installed in CPS 5.5.3.

Recommended Action

-
- Step 1** Copy units.bson to /etc/collectd.d/units_dump/collectd/.
- Step 2** Copy exec.conf to /etc/collectd.d/.
- Step 3** Copy load_units.sh to /etc/collectd.d/.
- Step 4** Run the following command:
- ```
chmod 777 /etc/collectd.d/load_units.sh
```
- Step 5** Copy units.metadata.json to /etc/collectd.d/units\_dump/collectd/.
- Step 6** Run /etc/collectd.d/load\_units.sh.
- Step 7** Restart collectd services.
- ```
service collectd restart.
```
- Step 8** Restart CPS
- ```
service qns restart
```



**Note** To get the necessary files to resolve the above error, contact your local Cisco technical representative.

## Limitations and Restrictions

The Cisco Policy Suite has the following limitations and restrictions:

- After database role change for multiple sessionMgrs, CPS is unable to stabilize the calls and timeouts happen constantly for some time till role change happens completely. But if role change impacts all sessionsMgrs at the same time then continuous time outs are seen.
- On receiving Accounting Stop message, the Radius call is not disconnected and the session is also present in mongo database.

## Caveats

The following sections lists Open Caveats and Resolved Caveats for Cisco Policy Suite. For your convenience in locating caveats in Cisco's Bug Toolkit, the caveat titles listed in this section are drawn directly from the Bug Toolkit database. These caveat titles are not intended to be read as complete sentences because the title field length is limited. In the caveat titles, some truncation of wording or punctuation might be necessary to provide the most complete and concise description.



**Note** If you are a registered cisco.com user, view Bug Toolkit on cisco.com at the following website:

<https://tools.cisco.com/bugsearch>

To become a registered cisco.com user, go to the following website:

[https://tools.cisco.com/RPF/register/register.do?exit\\_url=](https://tools.cisco.com/RPF/register/register.do?exit_url=)

## Open Caveats

Table 1 lists the open caveats in the CPS 5.5.3 release.

**Table 1** Open Caveats

| CDET ID                    | Status | Headline                                                           |
|----------------------------|--------|--------------------------------------------------------------------|
| <a href="#">CSCul78922</a> | N      | qns.conf should use pcrfclient02 as the secondary collectD         |
| <a href="#">CSCun10324</a> | A      | QNS: stage update to release-train-5.5_20140211_050411 is failing. |

A - Assigned

N - New

## Resolved/Verified Caveats

Table 2 lists the resolved/verified caveats in the CPS 5.5.3 release.

**Table 2** Resolved/Verified Caveats

| CDET ID                    | Status | Headline                                                                 |
|----------------------------|--------|--------------------------------------------------------------------------|
| <a href="#">CSCuj68754</a> | C      | Track build related changes in SVN commit                                |
| <a href="#">CSCul70068</a> | R      | remove com.mysql.jdbc from com.broadhop.common.service                   |
| <a href="#">CSCum77257</a> | R      | Units collection missing from Collectd Db                                |
| <a href="#">CSCug61373</a> | R      | Reservation spanning multi quotas doesn't apply partial charge correctly |
| <a href="#">CSCuh24667</a> | R      | [QNS-1012] Need firewall open for All-In-Ones- 1812, 1813, 1814 and 1815 |
| <a href="#">CSCui35539</a> | R      | service-qns-1.log flooded                                                |
| <a href="#">CSCui55946</a> | R      | Diameter adaptor hung over time and does not communicate to the PCRF     |
| <a href="#">CSCui68486</a> | R      | Generate consolidated logs on PCRFCLIENT02 incase PCRFCLIENT01 fails     |
| <a href="#">CSCuj10649</a> | R      | Intelligent Error Messaging                                              |
| <a href="#">CSCuj17502</a> | R      | Circuit Id and Remote Id fields are not getting printed in log file      |
| <a href="#">CSCuj33391</a> | R      | [ASR9K] BalanceRateConfiguration not working                             |
| <a href="#">CSCuj66185</a> | R      | QNS fails to respond to last prepaid re-authorization request from ISG   |
| <a href="#">CSCuj91866</a> | R      | set_config.sh file discrepancies                                         |
| <a href="#">CSCul03106</a> | R      | Day 2 monitoring should support HA                                       |
| <a href="#">CSCul03130</a> | R      | Control Center not able to open subscriber due to monitoring key value   |
| <a href="#">CSCul13749</a> | R      | Change Healthcheck URL                                                   |
| <a href="#">CSCul16817</a> | R      | QPS: SCE without SCE Device session can cause bad charges                |
| <a href="#">CSCul36422</a> | R      | No Monitoring key sent in RAR after a credit API is sent to QPS          |

**Table 2** *Resolved/Verified Caveats*

| <b>CDET ID</b> | <b>Status</b> | <b>Headline</b>                                                          |
|----------------|---------------|--------------------------------------------------------------------------|
| CSCu139024     | R             | portal httpd logs rolling over on time not volume                        |
| CSCu144449     | R             | Recurring quotas need to have option to use Rollover expiration date     |
| CSCu146341     | R             | Change port of portal_admin_proxy in haproxy.cfg                         |
| CSCu163117     | R             | QNS[Sys-Test]:mongo metadata not updated in config servers on shutdown   |
| CSCu166545     | R             | Obsolete xmi data causing exceptions after upgrade from 5.5.0 to 6.0     |
| CSCu169935     | R             | Zabbix installation for 5.5.1 appears to be Incomplete/Non-Functional    |
| CSCu172724     | R             | Unknown-Error message-Buffer Limit Exceeded -QPS-5.5.2.r054830           |
| CSCu174060     | R             | Optus Trap issues for RAN_Cong_data_utility                              |
| CSCu176176     | R             | SMS-C requires EnquireLinkTimer to be configured to 40 seconds           |
| CSCu178997     | R             | Rollover Period Dates-Units values in Unified API response XML.          |
| CSCu183576     | R             | QNS:Exception in forwarding a major alarm to corporate_nms_ip            |
| CSCu186232     | R             | QNS: Support for notifications in import script for migration.           |
| CSCu188292     | R             | Additional sysconfig directories on template VMs break installation      |
| CSCu193032     | R             | SSP deployment script issues                                             |
| CSCu196901     | R             | QPS uses wrong timezone when configuring balance                         |
| CSCu199579     | R             | logback.xml file in all_in_one_mobile is not working properly.           |
| CSCum00193     | R             | Multiple RAR messages being sent by the QPS                              |
| CSCum06477     | R             | Latest Build setup missing notification feature at lb01                  |
| CSCum15744     | R             | SearchSubsAction - ActionHelper is not up to date with GetSubAction.     |
| CSCum16668     | R             | Sess disc when recurring bucket associated w/ rollover bucket refreshes  |
| CSCum18212     | R             | secondary selection of username from avp issue- STC migration 5.1 to 5.3 |
| CSCum18229     | R             | Add EndDate to CreateSubscriberAction                                    |
| CSCum23667     | R             | RAN-CONG: retrieve the cell id based on SAC or Cell ID from CGI AVP      |
| CSCum27188     | R             | Account Balance Thresholds Trigger on Remaining not working.             |
| CSCum36787     | R             | Discrepancies found between files in SVN and Template Environment        |
| CSCum43607     | R             | Reserve amt reduction for Trigger On Remaining threshold does not work.  |
| CSCum48296     | R             | SPR Import-Export Script MSBM handling bug.                              |
| CSCum58132     | R             | QPS PCRFB does not announce 8164 (Starent) as a supported vendor in CEA  |
| CSCug14370     | V             | QNS:Rule act deact Scheduling not working from control centre            |
| CSCuj22362     | V             | QNS:RAR-RAA is going in infinite loop if RevalidationTime is configured. |
| CSCuj31865     | V             | Custrefdata should be installed by default in both AIO and Full env      |
| CSCuj71679     | V             | QNS[Sys-Test]:Rebuild Replica Set should support specific set creation   |
| CSCuj82776     | V             | QNS[sys-test]: Stopall.sh script not working                             |
| CSCuj96867     | V             | QNS[Sys-Test]:Need support of trap for GR internal system failure        |
| CSCu16790      | V             | InterfaceDown SNMP traps/clears are not being sent                       |
| CSCu120951     | V             | PCRFBProxyExternalCurrentSessions SNMP values are incorrect              |

**Table 2 Resolved/Verified Caveats**

| CDET ID    | Status | Headline                                                                 |
|------------|--------|--------------------------------------------------------------------------|
| CSCul36484 | V      | Firewalls on sessionmgrs are blocking QPS access                         |
| CSCul37163 | V      | QPS: Stage_update script not working as expected                         |
| CSCul51061 | V      | Stage update set back to default settings of features list and qns.conf  |
| CSCul53095 | V      | QNS[6.0]Without licence able to make 200000 session                      |
| CSCul55852 | V      | QNS[Sys-Test]:Traps shud generate from either of one only lb01 or lbs01  |
| CSCul55979 | V      | logback SocketAppender causes adverse impact on PCRF functionality       |
| CSCul57310 | V      | QPS: RAN congestion flat file import tool issues                         |
| CSCul60434 | V      | QNS[Sys-Test]:Site1 chassis down- lots of Time outs seen                 |
| CSCul67772 | V      | QNS[Sys-Test] 6.0:Sync_Time script should include only QPS hosts/VMs     |
| CSCul68179 | V      | QNS[Sys-Test]:Trap for Site1 chassiss outage shud generate on site2 snmp |
| CSCul69936 | V      | build_set.sh broken and not able to create/start replica set of 27717    |
| CSCul77920 | V      | If radius is not installed, diagnostics should not show error about it.  |
| CSCul82570 | V      | QPS: F5 integration session rejected for missing RAT type                |
| CSCul86546 | V      | QNS[Sys-Test] 6.0:Error processing policy request: deviceManagerId       |
| CSCul87667 | V      | Some scripts in /opt/broadhop/installer do not have execute permissions  |
| CSCul89185 | V      | QNS[Sys-Test]:Trap severity for perflclient01 and arbiter VM is wrong    |
| CSCum03189 | V      | 6.0 Sanity - Subscriber Delete throws Exception.                         |
| CSCum11776 | V      | qps_management_console feature is not working in 6.0 release             |
| CSCum16651 | V      | QPS sending DIAMETER_CREDIT_LIMIT_REACHED instead of success             |
| CSCum23991 | V      | Using Service Scheduler- Service gets activated incorrectly.             |
| CSCum37907 | V      | PMIPv6 call flows not enforcing max concurrent sessions service option.  |
| CSCum46050 | R      | QNS[Sys-Test]:Complete Site1+Site2 Arbiter Recovery semaphore issue.     |
| CSCum49651 | V      | QNS[Sys-Test]:Config migration script logging need update.               |
| CSCum89078 | V      | Incorrect realm derivation on QPS when the username contains '/'         |

C - Closed  
R - Resolved  
V - Verified

## Related Documentation

This section contains information about the documentation available for Cisco Policy Suite.

## Release-Specific Documents

Refer to the following documents for better understanding of the Cisco Policy Suite.

- *Cisco Policy Suite 5.5.3 Installation Guide*



- *Cisco Policy Suite 5.5.3 Wi-Fi / BNG Configuration Guide*
- *Cisco Policy Suite 5.5.3 Mobile Configuration Guide*
- *Cisco Policy Suite 5.5.3 Alarming and SNMP Guide*
- *Cisco Policy Suite 5.5.3 Operations Guide*
- *Cisco Policy Suite 5.5.3 Backup and Restore Guide*
- *Cisco Policy Suite 5.5.3 Troubleshooting Guide*

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: <http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

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