Release Notes for StarOS™ Software, Release 2025.03.gh1

Contents

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This Release Notes identifies changes and issues that are related to the Legacy Gateway, Control, and User Plane Separation (CUPS) software release.

Qualified products and platforms

Table 1. Products and platforms qualified in this release

Component	Qualified?
Products	
CUPS	Yes
MME	No
ePDG	No
P-GW	Yes
SAEGW	Yes
SGSN	Yes
Platforms	
ASR 5500	No
VPC-DI	Yes
VPC-SI	Yes

Release lifecycle milestones

The following table provides EoL milestones for Cisco StarOS software:

Table 2. EoL milestone information for StarOS™ Software, Release 2025.03.gh1

Milestone	Date
First Customer Ship (FCS)	14-Aug-2025
End of Life (EoL)	14-Aug-2025
End of Software Maintenance (EoSM)	12-Feb-2027
End of Vulnerability and Security Support (EoVSS)	12-Feb-2027
Last Date of Support (LDoS)	29-Feb-2028

New software features

There is no new software features introduced in this release.

Changes in behavior

There is no behavior changes introduced in this release.

Resolved issues

This table lists the resolved issues in this specific software release.

Note: This software release may contain bug fixes first introduced in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool. To search for a documented Cisco product issue, type in the browser: <bug number> site:cisco.com.

Table 3. Resolved issues for StarOS™ Software, Release 2025.03.gh1

Bug ID	Description	Product Found
CSCwq30875	Session manager recovery status instability	cups-cp
CSCwq31050	sessmgr reload after ECS configuration modification	cups-cp
CSCwn78141	packet drops when GSU in CCA-I only provides CC-TIME with FUI terminate without volume quota	cups-up
CSCwo82799	CUPS UP UL/DL packets dropping	cups-up
CSCwq22148	Legacy-GW ATT : ASR5500 chassis hwctrl process shows warn state in show task resources	pdn-gw
CSCwq50254	Fatal Signal 11: failures observed due to sessmgr_dhcpv6app_api_release_address	pdn-gw
CSCwq60067	Disable rapid-commit-dhcpv6' command causing SRP Peer Checksum failure error during the image upgrade in Legacy	pdn-gw
CSCwq58463	Legacy-GW: Standby Sessmgr process restarts at while upgrading from 21.28.mh25 to 21.28.mh28	sae-gw

Open issues

This table lists the open issues in this specific software release.

Note: This software release may contain open bugs first identified in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool. To search for a documented Cisco product issue, type in the browser: <bug number> site:cisco.com.

Table 4. Open issues for StarOS™ Software, Release 2025.03.gh1

Bug ID	Description	Product Found
CSCwp28316	Sx peer failure with demux SF unplanned migration	cups-cp
CSCwp20248	CP is not sending Delete session request to UP in case of GTPU Path Failure	cups-cp
CSCwq56869	Periodic updates not being sent when 'diameter send-ccri session-start' is configured and when FUI with terminate is received in CCA-I	cups-cp
CSCwq56872	Generated URR's are not associated with PDR's when the Online Charging System (OCS) is in a Server Unreachable (SU) state.	cups-cp
CSCwo82799	CUPS UP UL/DL packets dropping	cups-up
CSCwq29508	After SGW relocation (S1-HO), traffic not sent.	cups-up
CSCwq36099	ePDG VPC-SI: dhmgr mem warn	epdg
CSCwq48299	Incorrect VLR Status Displayed on MME Post sgs vlr-failure/vlr-recover with Pooled VLRs.	mme
CSCwq55405	Updates to a Group of Ruledefs triggers an mtree data structure rebuild, the configuration under the GOR retains old hash causing packet mismatches	pdn-gw
CSCwq56385	Assertion failure at midplane/libsn_midplane.c in SPGW	sae-gw
CSCwp60108	session manager crash with an unknown signature time encoding data at smgr_gr_encode_uplane_call_info_uchckpt_cmd	sae-gw
CSCwq58304	Peer Checksum validation failure during upgrade test from Apr25 FCS build to July25 EFT2 build	upf

Known issues

This section describes the known issue that may occur during the upgrade of the StarOS image.

Install and Upgrade Notes

This Release Note does not contain general installation and upgrade instructions. Refer to the existing installation documentation for specific installation and upgrade considerations.

When upgrading the StarOS image from a previous version to the latest version, issues may arise if there is a problem with the Cisco SSH/SSL upgrade. To avoid such issues, ensure that the boot file for Service Function (SF) cards is properly synchronized.

To synchronize the boot file for all the Service Function (SF) VPC-DI non-management cards, use the following CLI command:

```
[local] host_name# system synchronize boot
```

This ensures that the changes in boot file are identically maintained across the SF cards.

Note: Execute the system synchronize boot command before reloading for version upgrade from any version earlier than 21.28.mh14 to version 21.28.mh14 or versions higher than 21.28.mh14.

Upgrade the confd version

This section explains upgrading third-party software. Upgrade the confd software to ensure system compatibility and performance.

Note: During July 2025.03.0 release, confd is upgraded to 8.1.16.2 version.

Prerequisites

- Ensure you have appropriate permissions to perform this upgrade.
- Back up all necessary data and configurations to avoid permanent loss during file deletion.

Perform these steps to upgrade the confd version on the system.

1. Enter the debug shell using debug shell command.
2. Navigate to the confd directory.
3. Run the command:cd /mnt/hd-raid/meta/confd/ to access the directory.
4. Remove existing files with the command; rm -rf *

All files and subdirectories are deleted, preparing the system for a fresh installation. To preserve data across the Method of Procedure, users with ConfD configured must contact their Cisco representative.

Compatibility

This section provides compatibility information about the StarOS package version, and the hardware and software requirements for the Legacy Gateway and CUPS software release.

Compatible StarOS package version

Table 5. Release package version information

StarOS packages	Version	Build number
StarOS package	2025.03.gh1	21.28.mh29.98715

Compatible software and hardware components

This table lists only the verified basic software and hardware versions. For more information on the verified software versions for the products qualified in this release contact the Cisco account representative.

Table 6. Compatibility software and hardware information, Release 2025.03.gh1

Product	Version
ADC P2P Plugin	2.74.h7.2683
RCM	20250723-132226Z **Note**: Use this link to download the RCM package associated with the software.
ESC	5.6.108
CVIM	4.4.3

Product	Version
Host OS	Ubuntu 22.04 / RHEL 8.4
RedHat OpenStack	RHOSP 16.2
E810C NIC Version	Driver version: ice 1.12.6 Firmware: 4.20 0x80018f67 0.387.18
CIMC	4.0 (4)
NED Package	ncs-6.1.11.2-nso-mob-fp-3.5.2 -ad74d4f-2024-10-18T1052/ncs-6.1.11.2 -nso-mob-fp-3.5.2-ad74d4f-2024-10- 18T1052.tar.gz
NSO	nso-mob-fp-3.5.2

Supported software packages

This section provides information about the release packages associated with StarOS Classic Gateway, Control, and User Plane Separation (CUPS) software.

Table 7. Software packages for Release 2025.03.gh1

Software package	Description
NSO	
nso-mob-fp-3.5.2-2025.03.gh1.zip	Contains the signed NSO software image, the signature file, a verification script, the x509 certificate, and a README file containing information on how to use the script to validate the certificate.
VPC companion package	
companion-vpc-2025.03.gh1.zip	Contains numerous files pertaining to this version of the VPC including SNMP MIBs, RADIUS dictionaries, ORBEM clients. These files pertain to both VPC-DI and VPC-SI, and for trusted and non-trusted build variants.
VPC-DI	
qvpc-di-2025.03.gh1.bin.zip	Contains the VPC-DI binary software image that is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-di_T-2025.03.gh1.bin.zip	Contains the trusted VPC-DI binary software image that is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-di-2025.03.gh1.iso.zip	Contains the VPC-DI ISO used for new deployments; a new virtual machine is manually created and configured to boot from a CD image.
qvpc-di_T-2025.03.gh1.iso.zip	Contains the trusted VPC-DI ISO used for new deployments, a new virtual machine is manually created and configured to boot from a CD image.

Software package	Description
qvpc-di-template-vmware-2025.03.gh1.zip	Contains the VPC-DI binary software image that is used to on-board the software directly into VMware.
qvpc-di-template-vmware_T-2025.03.gh1.zip	Contains the trusted VPC-DI binary software image that is used to on-board the software directly into VMware.
qvpc-di-template-libvirt-kvm-2025.03.gh1.zip	Contains the same VPC-DI ISO identified above and additional installation files for using it on KVM.
qvpc-di-template-libvirt-kvm_T-2025.03.gh1.zip	Contains the same trusted VPC-DI ISO identified above and additional installation files for using it on KVM.
qvpc-di-2025.03.gh1.qcow2.zip	Contains the VPC-DI binary software image in a format that can be loaded directly with KVM using an XML definition file, or with OpenStack.
VPC-SI	
intelligent_onboarding-2025.02.gh1.zip	Contains the VPC-SI onboarding signature package that is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-si-2025.03.gh1.bin.zip	Contains the VPC-SI binary software image that is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-si-2025.03.gh1.iso.zip	Contains the VPC-SI ISO used for new deployment. A new virtual machine is manually created and configured to boot from a CD image.
qvpc-si-template-vmware-2025.03.gh1.zip	Contains the VPC-SI binary software image that is used to on-board the software directly into VMware.
qvpc-si-template-libvirt-kvm-2025.03.gh1.zip	Contains the same VPC-SI ISO identified above and additional installation files for using it on KVM.
qvpc-si-2025.03.gh1.qcow2.zip	Contains the VPC-SI binary software image in a format that can be loaded directly with KVM using an XML definition file, or with OpenStack.

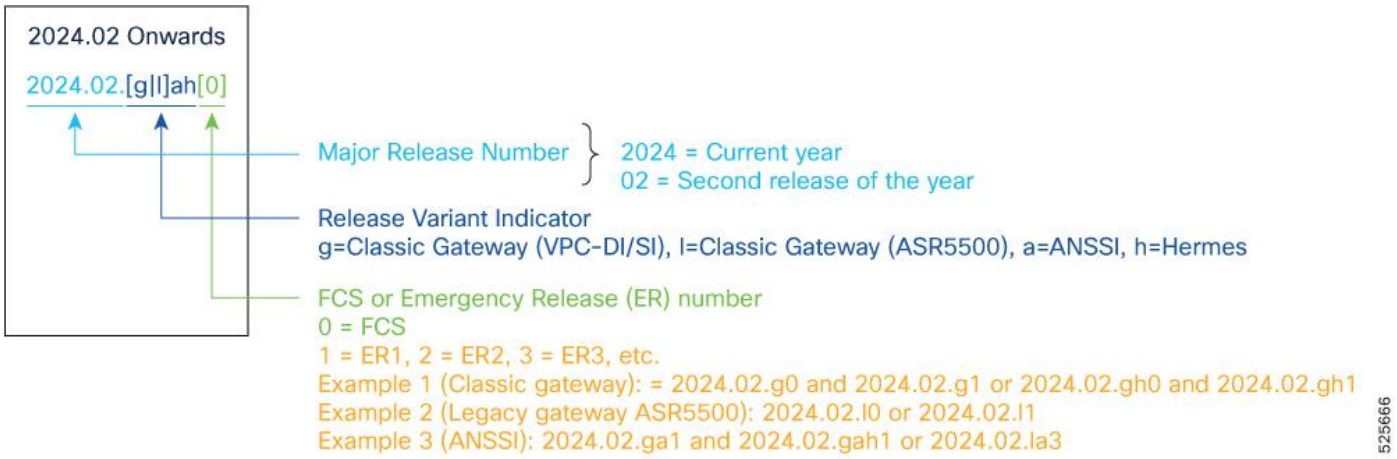
StarOS product version numbering system

The output of the show version command displays detailed information about the version of StarOS currently running on the ASR 5500 or Cisco Virtualized Packet Core platform.

Starting 2024.01.0 release (January 2024), Cisco is transitioning to a new release versioning scheme. The release version is based on the current year and product. Refer to the figure for more details.

Note: During the transition phase, some file names will reflect the new versioning whereas others will refer to the 21.28.x- based naming convention. With the next release, StarOS-related packages will be completely migrated to the new versioning scheme.

Figure 1. Version numbering for FCS, emergency, and maintenance releases



Note: For any clarification, contact your Cisco account representative.

Software integrity verification

To verify the integrity of the software image you have from Cisco, you can validate the SHA512 checksum information against the checksum identified by Cisco for the software. Image checksum information is available through Cisco.com Software Download details. Click Linux and then choose the Software Image Release Version.

To find the checksum, hover the mouse pointer over the software image you have downloaded. At the bottom you find the SHA512 checksum, if you do not see the whole checksum, you can expand it by pressing the "..." at the end.

To validate the information, calculate a SHA512 checksum using the information in the table and verify that it matches the one provided on the software download page. To calculate a SHA512 checksum on your local desktop see the table.

Table 8. Checksum calculations per operating system

Operating system	SHA512 checksum calculation command examples
Microsoft Windows	Open a command line window and type the following command: `> certutil.exe -hashfile <filename>.<extension> SHA512`
Apple MAC	Open a terminal window and type the following command: `$ shasum -a 512 filename.extension`

Linux	Open a terminal window and type the following command:
	`$ sha512sum filename.extension`
	OR
	`$ shasum -a 512 filename.extension`

Note: **filename** is the name of the file. **extension** is the file extension (for example, .zip or .tgz).

If the SHA512 checksum matches, you can be sure that no one has tampered with the software image or the image has not been corrupted during download.

If the SHA512 checksum does not match, we advise you to not attempt upgrading any systems with the corrupted software image. Download the software again and verify the SHA512 checksum again. If there is a constant mismatch, please open a case with the Cisco Technical Assistance Center.

Certificate validation

In 2024.01 and later releases, software images for StarOS, VPC-DI, and VPC-SI, and the companion software packages for StarOS and VPC are signed via x509 certificates. USP ISO images are signed with a GPG key. For more information and instructions on how to validate the certificates, refer to the README file available with the respective software packages.

Related resources

This table provides key resources and links to the support information and essential documentation for StarOS and CUPS products.

Table 9. Related resources and additional information

Resource	Link
Cisco ASR 5500 documentation	StarOS documentation
Cisco Ultra Packet Core documentation	CUPS documentation
Service request and additional information	Cisco Support

Legal information