Release Notes for the Ultra Cloud Core User Plane Function Version 2020.02.7

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Introduction

This Release Notes identifies changes and issues related to this software release. This release is the next major release for this product after 2020.02.6.

This UPF release corresponds to the 5G product release 2020.02.7.

Release Package Version Information

Software Packages	Version
qvpc-si-21.15.53.bin.SPA.tar.gz	21.15.53
qvpc-si_T-21.15.53.bin.SPA.tar.gz	21.15.53

Descriptions for the various packages provided with this release are available in the Release Package Descriptions section.

Related Documentation

For a complete list of documentation available for this release, go to:

https://www.cisco.com/c/en/us/support/wireless/ultra-cloud-core-user-plane-function/tsd-products-support-series-home.html

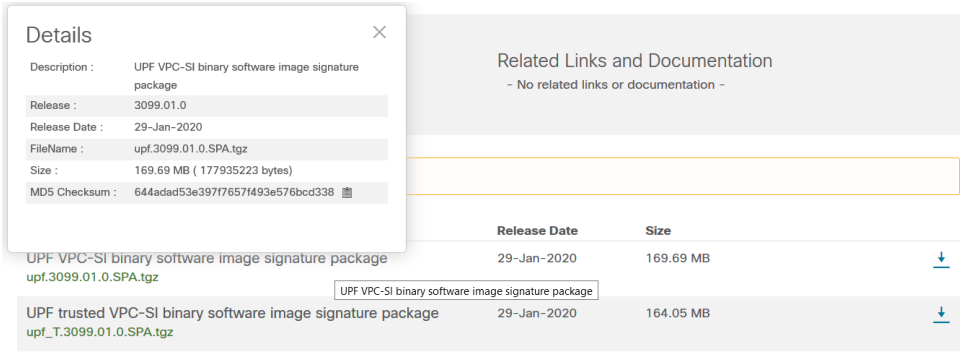
Installation and Upgrade Notes

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

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.** 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 Table 1 and verify that it matches either the one provided on the software download page.

To calculate a SHA512 checksum on your local desktop please see the table below.

Table 1 – 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>

NOTES: *<filename>* is the name of the file. *<extension>* is the file extension (e.g. .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

UPF software images are signed via x509 certificates. Please view the .README file packaged with the software for information and instructions on how to validate the certificates.

Open Bugs for this Release

None for this release.

Resolved Bugs for this Release

The following table lists the known bugs that are resolved in this specific software release.

NOTE: This software release may contain bug fixes first introduced in other releases. Additional information for all resolved bugs for this release are available in the Cisco Bug Search Tool.

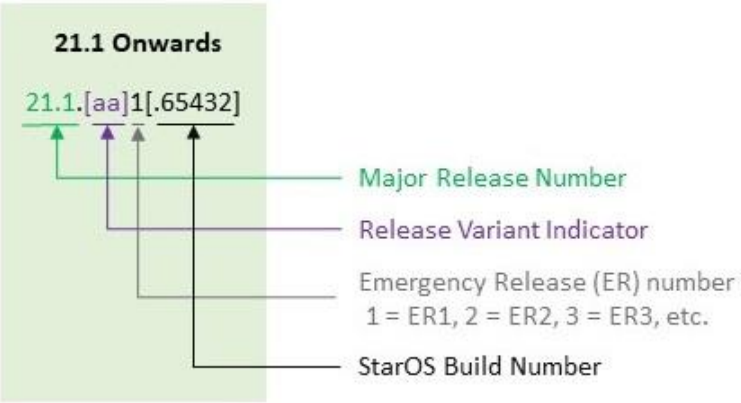
Bug ID	Headline
CSCvw86981	UPF forwarding DL to incorrect old GTP-EP during 4G -> 5G active -> 5G-idle -> DL pkt

Operator Notes

StarOS Version Numbering System

The output of the **show version** command displays detailed information about the version of StarOS currently running on the ASR 5x00 or Cisco Virtualized Packet Core platform.

The Version Build Number for releases 21.1 and later include a major and emergency release number, for example, “21.1.1”.

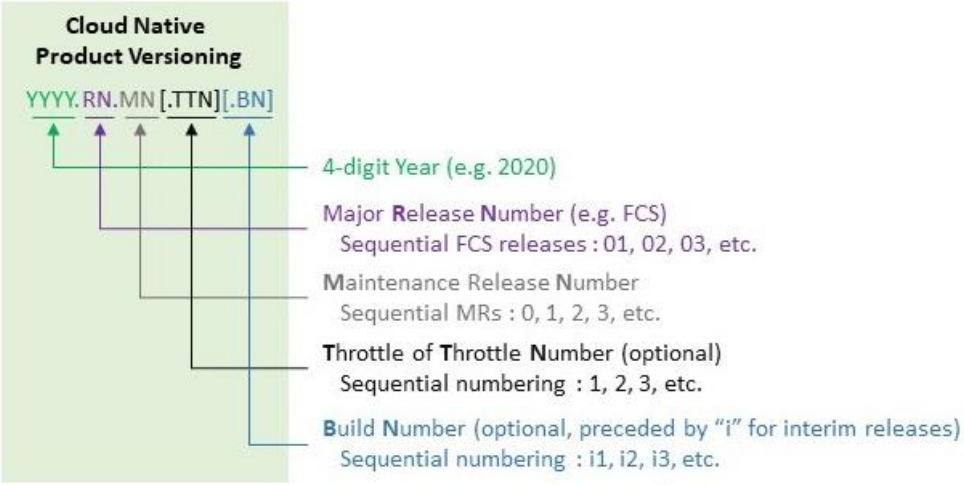


The appropriate version number field increments after a version has been released. The new version numbering format is a contiguous sequential number that represents incremental changes between releases. This format facilitates identifying the changes between releases when using Bug Search Tool to research software releases.

NOTE: The 5G UPF software is based on StarOS and implements the version numbering system described in this section. However, as a 5G network function (NF), it is posted to Cisco.com under the Cloud Native Product Numbering System as described in Cloud Native Product Version Numbering System.

Cloud Native Product Version Numbering System

Though the packages that comprise the UPF use the StarOS version numbering system as described in the previous section, the UPF product leverages the cloud native version numbering system described below.



The appropriate version number field increments after a version has been released. The new version numbering format is a contiguous sequential number that represents incremental changes between releases. This format facilitates identifying the changes between releases when using Bug Search Tool to research software releases.

Release Package Descriptions

Table 2 lists provides descriptions for the packages that are available with this release.

Table 2 - Release Package Information

Software Packages	Description
upf.<version>.SPA.tgz	The UPF release signature package. This package contains the VPC-SI deployment software for the UPF as well as the release signature, certificate, and verification information. Files within this package are nested under a top-level folder pertaining to the corresponding StarOS build.
upf_T.<version>.SPA.tgz	The trusted UPF release signature package. This package contains the VPC-SI deployment software for the UPF as well as the release, signature, certificate, and verification information. Files within this package are nested under a top-level folder pertaining to the corresponding StarOS build.

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, refer to https://www.cisco.com/c/en/us/support/index.html.

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