



Release Notes for StarOS™ Software Version 21.15.2 and Ultra Service Platform Version 6.9.2

First Published: September 21, 2019

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Introduction

This Release Notes identify changes and issues related to this software release. This emergency release is based on release 6.9.1 and StarOS 21.15.1. This Release Notes is applicable to the ASR5500, VPC-SI, VPC-DI and Ultra Service platforms.

Release Package Version Information

Table 1: Release Package Version Information

Software Packages	Version
StarOS packages	21.15.2 build 72978
Ultra Service Platform ISO	6_9_2-9555
usp-em-bundle*	6.9.0, Epoch 7325
usp-ugp-bundle*	21.15.2, Epoch 7410
usp-yang-bundle	1.0.0, Epoch 7290
usp-uas-bundle	6.9.0, Epoch 7467
usp-auto-it-bundle	5.8.0, Epoch 7502
usp-vnfm-bundle	4.5.0.112, Epoch 7387
Ultram Manager	2.7.2, Epoch 915
* These bundles are also distributed separately from the ISO.	

Descriptions for the various packages provided with this release are located in [Table 2](#).

Feature and Behavior Changes

Refer to the [Release Change Reference](#) for a complete list of feature and behavior changes associated with this software release.

Related Documentation

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

- StarOS: <https://www.cisco.com/c/en/us/support/wireless/asr-5000-series/products-installation-and-configuration-guides-list.html>
- Ultra Gateway Platform (including the Ultra M Solution): <https://www.cisco.com/c/en/us/support/wireless/ultra-gateway-platform/products-installation-and-configuration-guides-list.html>
- Ultra Automation Services: <https://www.cisco.com/c/en/us/support/wireless/ultra-automation-services/products-installation-and-configuration-guides-list.html>
- Virtual Packet Core (including VPC-SI and VPC-DI): <https://www.cisco.com/c/en/us/support/wireless/virtual-packet-core/products-installation-and-configuration-guides-list.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.

Ultra M Hyper-Converged Model Component Versions

Table 2 - Ultra M Hyper-Converged Model Component Version Information

HW	SW	6.3	6.4	6.5	6.6	6.7	6.8	6.9
	StarOS	69977	70597	70741	71244	71540	72257	72729
	ESC	4.2.0.74	4.3.0.121	4.3.0.121	4.4.0.88	4.4.0.88	4.5.0.112	4.5.0.112
	RH Kernel	7.5	7.5	7.5	7.5	7.5	7.5	7.5
	OSP	10	10	10 or 13 NOTE: OpenStack Platform 13 with RHEL 7.5 is validated only for standalone AutoVNF-based deployments	10 or 13 NOTE: OpenStack Platform 13 with RHEL 7.5 is validated only for standalone AutoVNF-based deployments	10 or 13 NOTE: OpenStack Platform 13 with RHEL 7.5 is validated only for standalone AutoVNF-based deployments	10 or 13 NOTE: OpenStack Platform 13 with RHEL 7.5 is validated only for standalone AutoVNF-based deployments	10 or 13 NOTE: OpenStack Platform 13 with RHEL 7.5 is validated only for standalone AutoVNF-based deployments

Installation and Upgrade Notes

HW	SW	6.3	6.4	6.5	6.6	6.7	6.8	6.9
				of the UGP VNF.	of the UGP VNF.	of the UGP VNF.	of the UGP VNF.	of the UGP VNF.
UCS C240 M4S SFF (NFVI)	BIOS	3.0(4a)	3.0(4a)	3.0(4a)	3.0(4a)	3.0(4a)	3.0(4a)	3.0(4a)
	CIMC (BMC)	3.0(4d)	3.0(4d)	3.0(4d)	3.0(4d)	3.0(4d)	3.0(4d)	3.0(4d)
	MLOM	4.1 (3f)	4.1 (3f)	4.1 (3f)	4.1 (3f)	4.1 (3f)	4.1 (3f)	4.1 (3f)
C2960XR-48TD-I (Management)	Boot Loader	15.2(3r)E1	15.2(3r)E1	15.2(3r)E1	15.2(3r)E1	15.2(3r)E1	15.2(3r)E1	15.2(3r)E1
	IOS	15.2.(2) E5	15.2.(2) E5	15.2.(2) E5	15.2.(2) E5	15.2.(2) E5	15.2.(2) E5	15.2.(2) E5
C3850-48T-S (Management)	Boot Loader	3.58	3.58	3.58	3.58	3.58	3.58	3.58
	IOS	03.06.06E	03.06.06E	03.06.06E	03.06.06E	03.06.06E	03.06.06E	03.06.06E
Nexus 93180-YC-EX (Leafs)	BIOS	7.59	7.59	7.59	7.59	7.59	7.59	7.59
	NX-OS	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)
Nexus 9236C (Spines)	BIOS	7.59	7.59	7.59	7.59	7.59	7.59	7.59
	NX-OS	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)	7.0(3)I7(3)

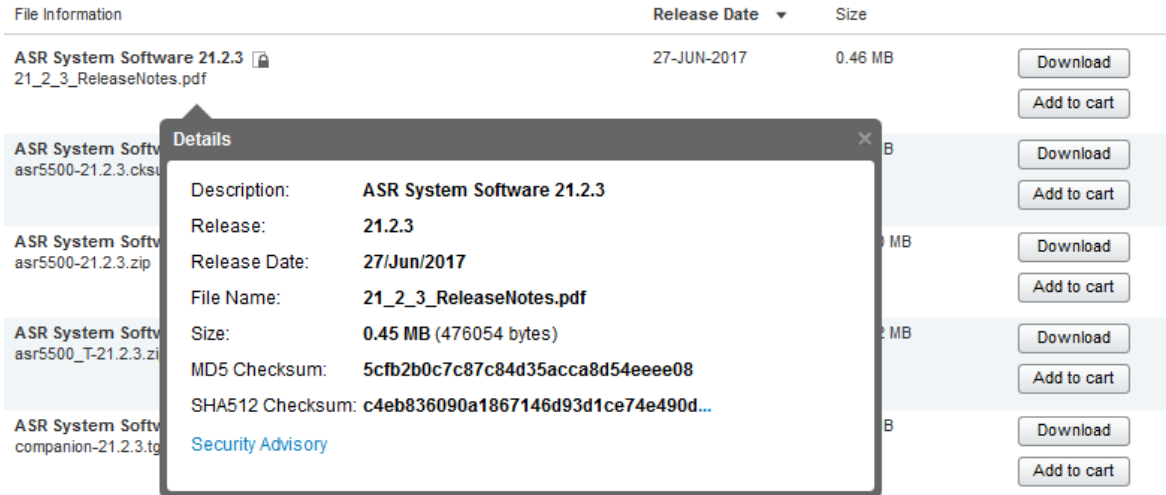
Firmware Updates

There are no firmware updates required for this release.

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 3](#) and verify that it matches either the one provided on the software download page.

To calculate a SHA512 checksum on your local desktop, see the following table.

Table 3 – Checksum Calculations per Operating System

Operating System	SHA512 checksum calculation command examples
Microsoft Windows	Open a command line window and type the following command <code>> certutil.exe -hashfile <filename>.<extension> SHA512</code>
Apple MAC	Open a terminal window and type the following command <code>\$ shasum -a 512 <filename>.<extension></code>
Linux	Open a terminal window and type the following command <code>\$ sha512sum <filename>.<extension></code> Or <code>\$ shasum -a 512 <filename>.<extension></code>
NOTES:	
<code><filename></code> is the name of the file.	
<code><extension></code> is the file extension (e.g. .zip or .tgz).	

Installation and Upgrade Notes

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

StarOS software images are signed via x509 certificates. USP ISO images are signed with a GPG key. Please view the .README file packaged with the software for information and instructions on how to validate the certificates.

NOTE: Image signing is not currently supported for VPC-SI and/or VPC-DI software packages.

Open Bugs in this Release

The following table lists known bugs that were found in, and remain open in this software release.

NOTE: This software release may contain open bugs first identified in other releases. Additional information for all open bugs for this release are available in the [Cisco Bug Search Tool](#).

Bug ID	Headline	Product Found*
CSCvo33959	[PLT-CUPS]:vpnmgr restart observed on CP when UP is reloaded during planned upgrade.	cups-cp
CSCvp59415	[BP-CUPS] sx_allocate_trans_rec()	cups-up
CSCvq17827	[CUPS] UP rejects SX_SESSION_ESTABLISHMENT_REQUEST after sessmgr crash	cups-up
CSCvq18230	"[BP-CUPS]: Call not preallocated to standby chassis, when more than 2 dedicated bearers are created"	cups-cp
CSCvq90677	[BP-CUPS]: Calls dropped on other UPs on bringing down a UP from UP group	cups-cp
CSCvr21675	[PLT-CUPS] VPP SegFault - fastpath_3tuple_ip4_node_fn() fastpath_6tuple_ip4_node_fn()	cups-up
CSCvk75614	[BP-CUPS] START TIME/END TIME IE is not getting populated except Sx deletion response message.	cups-up
CSCvm61038	[BP-CUPS] Call drop with "sx-no-response" in UP after ICSR Switchover	cups-cp
CSCvm61615	[BP-CUPS] Dynamic rule charging is not there when Rulebase changes(disable to enable egcdr).	cups-cp
CSCvn05051	[BP-CUPS]: series of sessmgr 11703 error logs while sending ftp traffic	cups-cp
CSCvn08050	[BP-CUPS] CLI "monitor peer bfd install-delay 60" install-delay command can't be removed	cups-cp
CSCvn14202	[BP-CUPS-VPP]Delay charging is having issues with Tear Down packets.	cups-up
CSCvn35496	Sessmgr assertion at function fastpath_stream_add_internal_inline()	cups-up
CSCvn35513	[BP-CUPS-VPP]: Sessmgr Assertion failure at ../../buildscache/vpp/41/	cups-up
CSCvn35569	[BP-CUPS]:Sessmgr Assertion failure at sess/smgr/sessmgr_uplane.c:8178	cups-up
CSCvn40163	[BP-CUPS-VPP]: Basic collapsed Sx call - input data packets dropped	cups-up
CSCvn43321	CUPS: CCR-U and CCR-T doesn't follow the diameter pending timeout configuration	cups-cp
CSCvn50204	[PLT -CUPS-VPP] License exceeded notification in UP when the state of license is good	cups-up
CSCvn52966	"[BP-CUPS]:Total TCP Pkts/bytes, FP Pkts/bytes in TCP analyser stats dont count discarded packets"	cups-up
CSCvn55676	[BP-CUPS]:Uplink Stream remain in Config state after Flow status change	pdn-gw

Open Bugs in this Release

Bug ID	Headline	Product Found*
CSCvn60293	flow-add-failed count is increased while make and break call is running	cups-up
CSCvn68360	[BP-CUPS]: HTTP flow is marked as error when L7 analyser is enabled	cups-up
CSCvn85404	[BP-CUPS] : Packet filter list at Uplane is getting corrupted resulting in incorrect rule match	cups-up
CSCvn93223	[CUPS]TRM stats are not shown on User Plane	cups-up
CSCvo01375	[CUPS] VPP restart observed with stack libvlib.so.0/unix_cli_file_welcome_timer()	cups-up
CSCvo07207	[BP-CUPS] sessctrl restart in UP	cups-up
CSCvo14095	[BP-CUPS] Sessctrl is in Over state when there is no activity on the UP	cups-up
CSCvo39232	[PLT-CUPS] memif packet drops observed with single call running HTTP traffic	cups-up
CSCvo45414	sx-invalid-response seen when dynamic rule installed after predefined rule and sesMgr kill	cups-cp
CSCvo87689	[BP-CUPS] Quota info not sent on SX when received in Gy CCA-I	cups-cp
CSCvp39466	[CUPS] row read failures observed on both UPs during CM run	cups-up
CSCvp47022	[BP-CUPS] : PACKET MEASUREMENT is not sent in radius URR and hence not shown in accounting-msg	cups-up
CSCvp84112	[BP-CUPS]: Issue with SGW handover for Pure P call with DSCP marking enabled and QOS changes	cups-up
CSCvp99905	"[BP-CUPS]: post PtoC SGW HO, on call clear SX MODIFY request is rejected for ipv4v6 call"	cups-cp
CSCvq00003	"[BP-CUPS-VPP]: Rulebase name not getting updated in sessions full o/p and in CDR, after RB change"	cups-cp
CSCvq13842	[CUPS-CP] sxdemux task does not recover after unplanned SF failure.	cups-cp
CSCvq18084	[BP-CUPS]- acsmgr error URR-SeqNum received(2) is smaller than existing(3)	cups-cp
CSCvq27786	[BP-CUPS] acsmgr_allocate_cups_sef_sx_params()	cups-cp
CSCvq35024	sessmgr error: Misc Error: Callline invalid or in invalid state for sending checkpoints	cups-up
CSCvq35037	[BP-CUPS]: acsmgr_fill_urr_count()	cups-cp
CSCvq35047	"[BP-CUPS]: [BP-CUPS]: SGW Sx Abort request failed:, error code 1"	cups-cp
CSCvq44831	[BP-CUPS]- sessmgr_collect_sgw_call_rcvry_info()	cups-cp
CSCvq53786	sxfail-opr-revert-info session disconnects seen on CP	cups-cp
CSCvq64442	Subscriber pkt drop stats not updated to sessmgr from VPP on call clear.	cups-up
CSCvq67869	ULI attribute is not correct in EDR when ECGI is sent in ULI after UP ICSR Switchover.	cups-up

Open Bugs in this Release

Bug ID	Headline	Product Found*
CSCvq71873	sessmgr_uplane_cleanup_pdr()	cups-up
CSCvq83703	sgwdrv_send_epsb_status_to_smgr()	cups-cp
CSCvq87098	[UPF-SVI] QOS not being applied evenly across all calls with static rulebase	cups-up
CSCvq88630	Error- urr Rule Chkpt not exist - urr_element deletion failed	cups-up
CSCvq88658	[BP-PLT-CUPS]- iftask_sigusr1_signal_handler()	cups-cp
CSCvq90988	[PLT-CUPS-VPP] Sig 6 abort at /usr/sbin64/vpp(sn_assert_signal_handler()+0x11b9)	cups-up
CSCvq91130	[BP-CUPS] npumgrs on SFs in warn state for cputime	cups-cp
CSCvq94578	[BP-CUPS]-Invalid/unhandled PDN event <SGWDRV_PDN_EVT_S1_ERROR_IND>	cups-cp
CSCvr04110	[GGSN]- sessmgr_pgw_find_sx_trans_info_node()	cups-cp
CSCvr08929	sessmgr restart seen on mme_app_fill_delete_sess_req	mme
CSCvr09016	[BP-CUPS]- acsmgr mgr_cups_api.c:13420 Charging Snapshot with key not found on any of the bearers	cups-cp
CSCvr19250	BP CUPS: SegFault sn_memblock_cache_block_flush()	cups-cp
CSCvr19841	BP CUPS: sessmgr_egtpu_send_error_indication()	cups-cp
CSCvr20193	BP CUPS: sessmgr 11091 ssmgr_sx_util.c: driver and sessmgr are out of sync - Internal Error. ebi 7	cups-cp
CSCvr21616	BP CUPS:PC: [f67ca71f/X] libc.so.6/___strncpy_sse2()	cups-cp
CSCvr21683	BP CUPS:free_acct()	cups-up
CSCvr21750	BP CUPS:sx_tun_fsm_handle_sess_estab_rsp_msg()	cups-cp
CSCvr21882	BP CUPS:PC: sgx_update_install_rule_def_list()	cups-cp
CSCvr27266	[BP CUPS] sgwdrv_epsb_fsm_st_connecting_evt_s1u_status()	cups-cp
CSCvr32557	"[BP-CUPS]: Call not coming up, when installing 64 rules on default bearer after reload"	cups-cp
CSCvr36756	[BP-CUPS] saegwdrv_ue_fsm_invalid_event_handler()	cups-cp
CSCvm01940	"[BP-CUPS-VPP] Packets are counted in charging, though packets are dropped in vpp."	cups-up
CSCvm05260	[BP-CUPS] Incorrect starttime and duration measurement when no data is sent post recalculate measure	cups-up
CSCvm39163	[BP-CUPS-VPP]IP flow readdressing is not working correctly when mid flow readdressing is applied.	cups-up
CSCvm47700	[BP-CUPS-VPP]: cli: show user-plane-service statistics analyzer name http has corrupted data	cups-up

Open Bugs in this Release

Bug ID	Headline	Product Found*
CSCvm73084	[BP-CUPS]: Pure-S call fails at the UP with unknown reason	cups-cp
CSCvo13831	[BP-CUPS] Second PDR not displayed for ADC rule in show active-charging session full	cups-cp
CSCvo21126	Sx Session Establishment Request encoding issues	cups-cp
CSCvo22723	[CUPS]DL Volume bytes does not match in show subs user-plane and Sx_session_delete_response in X2 HO	cups-up
CSCvo29502	[BP-CUPS]:Gz & Gy URR is not getting created for a predef rule installed on default bearer with VoGx	cups-up
CSCvo35511	[BP-CUPS] mon pro PFD compression flag needs to be enabled for respective IEs	cups-cp
CSCvo45567	[BP-CUPS] START TIME is zero in Sx Deletion response for Gz bearer level URR.	cups-up
CSCvo46856	[BP-CUPS]: SxModiReq/res counter remains 0 in sx-service statistics	cups-cp
CSCvo47244	[BP-CUPS] Discrepancy in dropped packet count statistics after Gy quota exhausted	cups-up
CSCvo68451	[CUPS]Multiple sessmgr restart observed on UP while performing CRP test case	cups-up
CSCvp35114	"[BP-CUPS] SX_Session_Est_Resp recived with SEID as 0, still call is accepted"	cups-cp
CSCvp46985	[PLT-CUPS-VPP]:Retransmissions are wrongly getting counted for data having OOO packets	cups-up
CSCvp81541	CUPS/SX Out Header Creation invalid format	cups-cp
CSCvq93693	MME config update not happening on reload chasis applying enb-goup config	mme
CSCvr05634	SMGR_PGW_SX_MODIFY_REQ due to last_scheduled_proc_type: SMGR_PGW_BEARER_CMD_NONE	cups-cp
CSCvr10741	"HD-RAID volume is not overwriting old files after reaching over 92% capacity full, and missing CDRs."	cups-cp
CSCvr16004	[BP-CUPS] : First dL pkt is getting forwarded when the flow action is discard in CA.	cups-up
CSCvr38046	[BP-CUPS]: Segmentation fault at egtpc_handle_modify_bearer_req_msg	cups-cp
CSCvr38044	[BP-CUPS]: The memory utilisation goes hight for sessmgr on task-kill on UP	cups-up
CSCvr38034	[BP-CUPS]: Assertion failure at egtpc_handle_user_sap_event	cups-cp
CSCvr37989	[BP-CUPS]: Assertion failure at sessmgr_app_svr_event_control_dispatch	cups-cp
CSCvr36766	[PLT-CUPS-VPP]: [sessmgr 10167 error]Sessmgr received Unknown MED PDU with protocol=-1 from BIA	cups-up
CSCvr27229	[BP-CUPS]: Assertion failure at acsmgr_allocate_far_id	cups-cp
CSCvr26907	[BP-CUPS]: Assertion failure at smgr_update_pdr_static_rule_match_stats	cups-up

* Information in the "Product Found" column identifies the product in which the bug was initially identified.

Resolved Bugs in this Release

The following table lists 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	Product Found*
CSCvn09785	sessmgr restart after modify ECS configuration	pdn-gw
CSCvp84132	"[BP-CUPS]: Error indication seen for icmp data, after PureP to collapsed hadnover"	cups-up
CSCvq06447	VPP Coredumps are not available at the configured coredump file location	cups-up
CSCvq14110	Fullcores are not getting generated on UP with redundancy enabled.	cups-up
CSCvq14589	[BP-CUPS]- Offending IE: FAR_ID SxMODRes Sxab during DBReq of default bearer	cups-up
CSCvq17217	[BP-CUPS] sx_handle_pfcpc_message()	cups-cp
CSCvq18047	[BP-CUPS] sgwdrv_fill_sess_info_from_egtpc_temp_pdn_ingress	cups-cp
CSCvq20744	sessmgr restart after applying CUSP config in function sn_usertcp_struct_alloc	pdn-gw
CSCvq25127	UP restarted due to vpp npumgr	cups-up
CSCvq34718	[BP-CUPS-VPP]: [sessmgr 11958 error] and [fapi 223801 error] on UP recovery	cups-up
CSCvq42617	"PureS icrs, Volume report sent with garbage value, when GR is done in idle state"	cups-up
CSCvq44868	[BP-CUPS]- acsmgr_fill_pdr_far()	cups-cp
CSCvq46099	recovery-invalid-crr-clp-uplane-record-info: 1636	cups-up
CSCvq52562	[BP-CUPS]ip4-smp-egress invalid vrf: huge error logs and pkts dropped at VPP in pureS calls	cups-up
CSCvq56115	Continuous sessmgr restart after enabling CUSP	pdn-gw
CSCvq86261	active_slave is not switching for bonded interface when interface is shut on leaf	usp-uas
CSCvr09150	[BP-CUPS] egtpc_unbind_user_sap()	cups-cp
CSCvk41508	SM fail due to Assertion failure at egtpc_handle_create_sess_rsp_msg	mme
CSCvk58720	Congestion action applied even after congestion is cleared	mme
CSCvk67837	MME is not taking any action when received eNBStatustransfer with multiple E-RABs	mme
CSCvm53127	unidirectional VLR association	mme
CSCvn96853	Imsimgr Restart at xdr_evlog_trap_mme_new_conn_info_t	mme
CSCvo35624	new unexpected diamproxy instance spawned	staros
CSCvo50355	[BP-CUPS-VPP] show subs output updated at random intervals for Pure-S call	cups-up

Resolved Bugs in this Release

Bug ID	Headline	Product Found*
CSCvo67671	sessmgr restart noted with VzW call-model when CUSP feature is exercised	pdn-gw
CSCvo88008	"MME, Collision Case - E-RAB Mod for NR addition & CBReq for VoLTE termination call attempt"	mme
CSCvo92870	[BP-CUPS] sessmgr restart with multi PDN X2 HO with SGW relocation	cups-cp
CSCvp09529	Cisco SGW restart observed in case of HLCOM related IEs in DDN ack from MME	sae-gw
CSCvp21372	Lawful-Intercept commands and their args are not segregated properly	staros
CSCvp22149	"MME, Inter-TAU or S1 HO - EGTP_CAUSE_MANDATORY_IE_INCORRECT from new MME"	mme
CSCvp31108	BGP Neighbor limit of 64 per context is not enforced.	pdn-gw
CSCvp32860	SM restarts due to Segmentation fault at egtpc_get_ebi_info_from_pdu during S1 HO in 21.11.Ax	mme
CSCvp32975	PCC provisioned dynamic rule not enforced when FAPA/TRM activated	pdn-gw
CSCvp36933	[BP-ICUPS] : 5G NAT IP segregation support on FP	pdn-gw
CSCvp37370	[BP-ICUPS]: After enabling VPP the ttl-excd KPI rate of change spiked.	pdn-gw
CSCvp55960	5G UE Radio capability change update not occurring	mme
CSCvp63862	PGW keeps on sending Gy CCR-T in a loop to OCS during LTE to WIFI Handover	pdn-gw
CSCvp69273	Voice call is dropped when MME cancels SRVCC after receiving Delete Bearer request for QCI1	mme
CSCvp83866	CCR-U after SRP switchover doesn't contain Destination-Host AVP even when session is bound to OCS	pdn-gw
CSCvp90019	Assertion failure at sess/sgsn/sgsn-app/dp/sn_dp_network.	sgsn
CSCvp90947	PGW QCI 5 Bearer Active higher then total Bearer Active	pdn-gw
CSCvp91000	SM fail due to Fatal Signal on s4_smn_handle_srns_new_sgsn_abort_mbr	sgsn
CSCvq08554	[BP-CUPS] Seg. fault at sessmgr_saegw_update_drv_with_sxa_info()	cups-cp
CSCvq11482	QVPC-DI-Disable Multi Segment mbuf	staros
CSCvq17346	[BP-CUPS] sx_tun_fsm_handle_sess_del_rsp_msg()	cups-cp
CSCvq19559	Wrong values on show port utilization table - StarOS VPC-DI	staros
CSCvq19976	[BP-CUPS] issue seen in sessmgr_uplane_drop_buff_pkts_far()	cups-up
CSCvq23483	MME: Sessmgr's memory over usage across multiple STAROS instances	mme
CSCvq26334	"Intercept bypassed, no x3 table entry on third ICSR SWO"	pdn-gw
CSCvq31832	IPv6 PMTU discovery does not work and MSS 9040 is chosen by BGP	staros
CSCvq32311	[BP-CUPS] SMC_SXA_PDN_FSM CBReq Modify-Failure for the state 5	cups-cp
CSCvq34195	zk missing info in /config/vnfs/ and /oper/vnfs/	usp-uas
CSCvq35607	[CUPS-CP] Framed-pool is not working with custom69	cups-cp
CSCvq39415	StarOS (21.9) adds "0" in "flow end-condition handoff" inside rulebase config	pdn-gw

Resolved Bugs in this Release

Bug ID	Headline	Product Found*
CSCvq40514	"[BP-CUPS] Post GR switchover, ACK are not shown for UL TCP traffic on default bearer for PureS call"	cups-up
CSCvq41923	[BP-CUPS] Stale sessions observed on UP	cups-up
CSCvq42650	MME sends a wrong IPv6 transport address in ERAB setup	mme
CSCvq43108	sessmgr 12343 error NPU flow installation failed on STDBY UP npumgr-flow 167001 error Add of flow	cups-up
CSCvq45759	USER LOCATION INFO MANDATORY_IE_MISSING for CHANGE_NOTIFICATION_RSP	sae-gw
CSCvq46467	[BP-CUPS]- egtpc_handle_user_sap_event()sgwdrv_check_if_paging_can_start_now_for_intf()	cups-cp
CSCvq48343	[BP-CUPS] huge number of error logs seen on active and standby	cups-up
CSCvq48584	[PLT-CUPS]: Segmentation fault at sessmgr_callline_set_dst_vpn	cups-up
CSCvq48606	EM: Increase the ncs.service boot time	usp-uas
CSCvq49216	CLI support for idle timeout value under pdn-instance on UP is currently not available	cups-up
CSCvq54199	[BP-CUPS]: [sessmgr 11950 error]Sessmgr-3 sending uplane instance checkpoint failed for callid:0x1	cups-up
CSCvq57863	CLI "tethering-detection bypass interface-id" does not bypass traffic after chassis reload	pdn-gw
CSCvq59459	failed to deactivate UAS NSD in multivnf setup due to instance name mismatch when _in nsd name	usp-uas
CSCvq59648	[PLT-CUPS] significant call drop with disconnect reason conflict-in-ip-addr-assignment	cups-up
CSCvq61583	BFD Session remain in UP state even if peer is down	staros
CSCvq63501	MME does not send MME Config Update after active SF card migration	mme
CSCvq64765	[BP-CUPS] HTTP EDR: one packet for HTTP flow is reported in flow-edr instead of HTTP EDR.	cups-up
CSCvq66529	sessmgr Assertion Failure in SmGenDownLinkDataInd	sgsn
CSCvq68118	"PureS UP GR, Total Volume seen as huge value in multiple Sx_SESSION_REPORT in Longevity"	cups-up
CSCvq71089	Sessmgr CapacityReached traps seen on iCUPS enabled nodes of Cisco PGW	pdn-gw
CSCvq71245	[BP-CUPS]- egtpc_handle_user_sap_event()sgwdrv_check_if_paging_can_start_now_for_intf()	cups-cp
CSCvq77475	[BP-CUPS]- egtpc_handle_user_sap_event()sgwdrv_pdn_fsm_st_handle_disconnecting_evt_delete_sess_cfm	cups-cp
CSCvq81538	MME sends incorrect old SGW-U IPV4 addr along with target SGW IPV6 addr during S10 roaming	mme
CSCvq88619	[BP-CUPS]-snx_sgw_driver_process_query.isra.133()	cups-cp
CSCvq94571	[BP-CUPS]-Invalid/unhandled PDN event <SGWDRV_PDN_EVT_ABORT_PROC_CMD>	cups-cp
CSCvq95227	SX_MODIFY_REQ failed for Trans: for Current Proc Type: SMGR_PGW_SX_MODIFY_REQ	cups-cp
CSCvq95238	"For a UE or Admin initiated Dedicaded bearer deletion, the PGW trans info is not valid"	cups-cp
CSCvq97012	[BP-CUPS]-sgwdrv_fill_sess_info_from_egtpc_temp_pdn_ingress()	cups-cp
CSCvr14731	[BP-CUPS] : calls are getting cleared after back to back switchover	cups-up

Resolved Bugs in this Release

Bug ID	Headline	Product Found*
CSCvr20473	BP CUPS: SegFault egtpc_handle_user_sap_event()	cups-cp
CSCvr20491	KT MME unexpectedly send PUR	mme
CSCve79121	CLI gtpu test echo does not get output occasionally during execution from shell	pdn-gw
CSCvh53314	MME Path Switch Response the E-RAB Release cause is set to Transport:Unspecified	mme
CSCvj51716	Task restart on modify bearer request	sgsn
CSCvj89699	sessmgr Assertion failure in pmm_ms_fsm_invalid_event_handler	sgsn
CSCvk05536	SM fail due to Assertion failure on egtpc_handle_update_bearer_rsp_evt	sgsn
CSCvk33338	BGP packets going out of the PGW are with incorrect QOS marks	staros
CSCvm62301	[VPP-ICUPS] Make VPP core file available at configured core file location	staros
CSCvm71645	Task restart while processing the ipsec packet	pdn-gw
CSCvm74886	bulkstat process restart at PC: [0480526e/X] mgmt_sctrl_add_sgsn_gmm_sm_stats()	sgsn
CSCvm92957	[BP-CUPS]sessmgr restarts-smc_sxb_sxab_add_estab_req_info_to_trans_info() license expire/call comes	cups-cp
CSCvm93457	Assertion failure in Function: egtpc_handle_create_sess_rsp_msg	sgsn
CSCvm98393	confdmgr-0: usp_get_card_slot_id: Failed to read card-id	usp-usf
CSCvn62920	LTE - Wifi - LTE HO fails when ULA does not include MIP6-Agent-Info	mme
CSCvn78512	Session manager restarted Fatal Signal6: Aborted	sgsn
CSCvn82817	[VPP] Automatic recovery of failed card/VM after VPP core complete	staros
CSCvo04661	sessmgr restart- Assertion failure	sgsn
CSCvo13661	cc overwrite apn remap is case sensitive	mme
CSCvo22843	Paging edrx h-sfn should be a 10 bits counter	mme
CSCvo27558	sessmgr Assertion failure in egtpc_handle_user_sap_event	mme
CSCvo33689	inter-rat-nnsf mme-codes parameter missing after reload	mme
CSCvo55588	Session Manager assert during S4 SRNS	sgsn
CSCvo57948	Very inbalanced sessmgr distribution after enabling "sgsn-mme subscriber-data-optimization"	mme
CSCvo60264	sessmgr: DATACORRUPTION-AVERTED: Attempt to strncat 3 bytes limited to 10 bytes	sgsn
CSCvo64397	Invalid Event NTWK-MODIFY-REQUEST from SM-APP in NTWK-REMOTE-HANDOFF-IN-PROGRESS-IN-INACTIVE state	sgsn
CSCvo66133	Sessmgr restart in Mon-key installation path	pdn-gw
CSCvo83261	sessmgr assertion: Rcvd Invalid Event NTWK-HANDOFF-CANCEL from SM-APP in NTWK-SUSPENDED state	sgsn
CSCvo94363	Headers needs to be updated for the new fields added as part of EDR Enhancement	sgsn
CSCvp10373	sessmgr restart on function acs_dns_parse	sae-gw

Resolved Bugs in this Release

Bug ID	Headline	Product Found*
CSCvp37507	[BP-CUPS]: DBResponse not seen after bearer-inactivity and update-bearer collision	cups-cp
CSCvp46347	update-sw RPC does not verify EM NCS HA state	usp-uas
CSCvp64876	Charging Rule Report for Inactive Rules doesn't contain all the deactivated rules	pdn-gw
CSCvp71457	Cisco SGW restart observed while receiveing invalid Create Bearer Req from PGW	pdn-gw
CSCvp76784	"MME does not take into account NOTE 5 of 3GPP 24.008, Table 10.5.5.32 Extended DRX parameters"	mme
CSCvp82254	ipv4 reassembly timeout - vpp restart in 21.13.4	staros
CSCvp89136	Cisco - Huawei 5G IOT - MME Compliance	mme
CSCvq02374	sn_diabase_conn_proxy_write() sessmgr crash	pdn-gw
CSCvq03193	starOS and esxi 6.7: networking broken on Rx jumbo frames	staros
CSCvq03879	Single-registration-indication flag not set in case of 4G->3G->4G PS-HO	mme
CSCvq22046	"During intra MME S1 HO, received E-RAB modification does not trigger Modify bearer request"	mme
CSCvq22882	Sessmgr restart while static IP address allocation	sae-gw
CSCvq23678	ASR5500 - Limit file size of tcam_cmds.txt	staros
CSCvq24110	MME not setting restrictDCNR bit in EPS network feature support IE after re-attach	mme
CSCvq28432	abnormal increment of diameter error 3002 messages over Gx Interface	sae-gw
CSCvq31798	TODR's not generated for data-record only config with the latest CUTO library integration	pdn-gw
CSCvq35918	Assertion failure at sess/smgr/sessmgr_hi_li.c	pdn-gw
CSCvq46430	MME not sending Feature-List-2 with NR as Secondary RAT in ULR when DCNR configured	mme
CSCvq46641	AFIO is leaking a file descriptor whenever it collects a register dump from a device	staros
CSCvq47833	Session statistics is missing in <show srp audit-statistics> o/p	cups-up
CSCvq48488	NPU flows to be deleted on call re-install	cups-up
CSCvq48514	[BP-CUPS] Modified value of APN AMBR is not applied after GR switchover	cups-up
CSCvq50143	[BP-CUPS] After Switchover D/L Packets sent for Dynamic rule are hitting staticrule	cups-up
CSCvq51810	UPLANE RECOVERY Error: UPLANE Recovery: Rulebase not found in recover uplane call info	cups-up
CSCvq52405	"[BP-CUPS] After GR, For Time/Volume Threshold, CDR generated for default brr is not having bytes info"	cups-up
CSCvq76538	Cisco SGW restart observed during Downlink Data notification	sgw
CSCvq82622	[UPF SVI] user-plane-service stats total dropped byte count is 0 even though packets are dropped	upf
CSCvq92035	[VPC-DI] Excessive packet receive latency on XL710 NICs under no/light load conditions.	staros
CSCvq98247	BFD sessions went into AdminDown state upon VM un-deployment from ESC	epdg

Operator Notes

Bug ID	Headline	Product Found*
CSCvr01030	Do not capture code sections in full cores	staros
CSCvr06501	Deactivate of PCRF NSD fails	usp-uas
CSCve02630	sessmgr assertion in s4_sn_dp_network_process_peer_setup_req_evt_in_srns_begun	sgsn
CSCvn01954	Not possible to request the buffering from sessmgr where the index is > 255	staros
CSCvp47158	Assertion failure at function egtpc_abort_active_proc_on_brec_v2	sgsn
* Information in the “Product Found” column identifies the product in which the bug was initially identified.		

Operator Notes

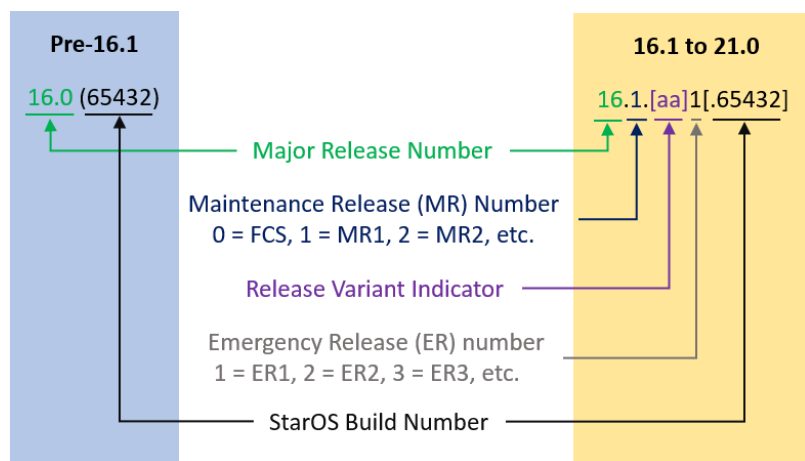
StarOS Version Numbering System

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.

Prior to release 16.1, the *Image Version* field displayed a branch of software including the build number, for example “16.0 (55435)”. Subsequent releases of software for the major release differed only in build number. Lab Quality/EFT releases versus deployment releases also differed only in build number.

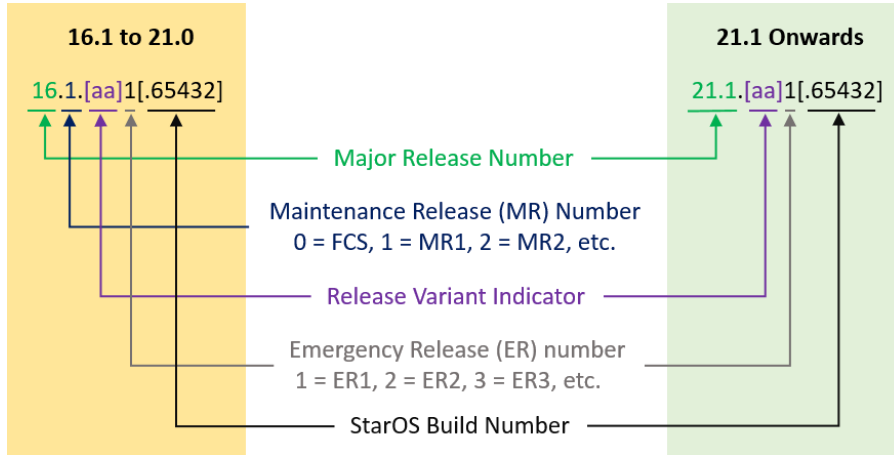
From release 16.1 onwards, the output of the **show version** command, as well as the terminology used to describe the Build Version Number fields, has changed. Additionally, **show version** will display slightly different information depending on whether or not a build is suitable for deployment.

The Version Build Number for releases between 16.1 and 21.0 include a major, maintenance, and emergency release number, for example “16.1.2”.



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

Operator Notes



In either scenario, 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 will facilitate identifying the changes between releases when using Bug Search Tool to research software releases.

Release Package Descriptions

[Table 4](#) lists provides descriptions for the packages that are available with this release.

Table 4 - Release Package Information

Package	Description
ASR 5500	
asr5500-<release>.bin	A zip file containing the signed ASR 5500 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.
asr5500_T-<release>.bin	A zip file containing the signed, trusted ASR 5500 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-DI	
qvpc-di-<release>.bin	The VPC-DI binary software image which is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-di_T-<release>.bin	The trusted VPC-DI binary software image which is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-di-<release>.iso	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-<release>.iso	The trusted VPC-DI ISO used for new deployments a new virtual machine is manually created and configured to boot from a CD image.
qvpc-di-template-vmware-<release>.tgz	The VPC-DI binary software image that is used to on-board the software directly into Vmware.
qvpc-di-template-vmware_T-<release>.tgz	The trusted VPC-DI binary software image that is used to on-board the software directly into Vmware.
qvpc-di-template-libvirt-kvm-<release>.tgz	This is an archive that includes the same VPC-DI ISO identified above, but additional installation files for using it on KVM.
qvpc-di-template-libvirt-kvm_T-<release>.tgz	This is an archive that includes the same trusted VPC-DI ISO identified above, but additional installation files for using it on KVM.
qvpc-di-<release>.qcow2.tgz	The VPC-DI binary software image in a format that can be loaded directly with KVM using an XML definition file, or with OpenStack.
qvpc-di_T-<release>.qcow2.tgz	The trusted 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	
qvpc-si-<release>.bin	The VPC-SI binary software image which is used to replace a previously deployed image on the flash disk in existing installations.
qvpc-si_T-<release>.bin	The trusted VPC-SI binary software image which is used to replace a previously deployed image on the flash disk in existing installations.

Operator Notes

Package	Description
qvpc-si-<release>.iso	The VPC-SI ISO used for new deployments a new virtual machine is manually created and configured to boot from a CD image.
qvpc-si_T-<release>.iso	The trusted VPC-SI ISO used for new deployments a new virtual machine is manually created and configured to boot from a CD image.
qvpc-si-template-vmware-<release>.ova	The VPC-SI binary software image that is used to on-board the software directly into Vmware.
qvpc-si-template-vmware_T-<release>.ova	The trusted VPC-SI binary software image that is used to on-board the software directly into Vmware.
qvpc-si-template-libvirt-kvm-<release>.tgz	This is an archive that includes the same VPC-SI ISO identified above, but additional installation files for using it on KVM.
qvpc-si-template-libvirt-kvm_T-<release>.tgz	This is an archive that includes the same trusted VPC-SI ISO identified above, but additional installation files for using it on KVM.
qvpc-si-<release>.qcow2.gz	The VPC-SI binary software image in a format that can be loaded directly with KVM using an XML definition file, or with OpenStack.
qvpc-si_T-<release>.qcow2.gz	The trusted VPC-SI binary software image in a format that can be loaded directly with KVM using an XML definition file, or with OpenStack.
StarOS Companion Package	
companion-<release>.tgz	An archive containing numerous files pertaining to this version of the StarOS including SNMP MIBs, RADIUS dictionaries, ORBEM clients. These files pertain to both trusted and non-trusted build variants.
Ultra Service Platform	
usp-<version>.iso	The USP software package containing component RPMs (bundles). Refer to Table 5 for descriptions of the specific bundles.
usp_T-<version>.iso	The USP software package containing component RPMs (bundles). This bundle contains trusted images. Refer to Table 5 for descriptions of the specific bundles.
usp_rpm_verify_utils-<version>.tar	This package contains information and utilities for verifying USP RPM integrity.

Table 5 - USP ISO Bundles

USP Bundle Name	Description
usp-em-bundle- <version>- 1.x86_64.rpm*	The Element Manager (EM) Bundle RPM containing images and metadata for the Ultra Element Manager (UEM) module.
usp-ugp-bundle- <version>- 1.x86_64.rpm*	The Ultra Gateway Platform (UGP) Bundle RPM containing images for Ultra Packet core (VPC-DI). There are trusted and non-trusted image variants of this bundle.
usp-yang-bundle- <version>- 1.x86_64.rpm	The Yang Bundle RPM containing YANG data models including the VNFD and VNFR.
usp-uas-bundle- <version>- 1.x86_64.rpm	The Ultra Automation Services Bundle RPM containing AutoVNF, Ultra Web Services (UWS), and other automation packages.
usp-auto-it-bundle- <version>- 1.x86_64.rpm	The bundle containing the AutoIT packages required to deploy the UAS.
usp-vnfm-bundle- <version>- 1.x86_64.rpm	The VNFM Bundle RPM containing an image and a boot-up script for ESC (Elastic Service Controller).
ultram-manager- <version>- 1.x86_64.rpm	This package contains the script and relevant files needed to deploy the Ultra M Manager Service.
* These bundles are also distributed separately from the ISO.	

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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