Release Notes for the Ultra Cloud Core Session Management Function Version 2021.01.0

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Introduction

This Release Notes identifies changes and issues related to this software release.

Release Package Version Information

Software Packages	Version
ccg.2021.01.0.SPA.tgz	2021.01.0

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

Verified Compatibility

Products	Version
Ultra Cloud Core SMI	2020.01.1.26 2020.02.1.32
Ultra Cloud Core UPF	2021.01.0
NSO-CFP	1.1.0

Notes and Considerations for this Release

This SMF release includes all the fixes delivered until the i380 build released on 2021-01-13. This release does NOT include content from the i397 build released on 2021-01-29.

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-session-management-function/tsd-products-support-series-home.html

Installation and Upgrade Notes

This Release Notes 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

SMF 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

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

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
CSCvv39170	[SMF] SMF init N4 heartbeat not sent when service-ims VM is restarted till it comes back up
CSCvv53694	[SMF-SVI] db records are not zero post call model run -rel-2020.03.0
CSCvv58529	[SMF-SVI] Small no. of IP Leaks observed during BV run - rel-2020.03.0, rel-2020.02.0
CSCvw89417	[SMF] AMBR change Trigger is set during Fail Open at Quota Req followed by OoO handling in SMF
CSCvw89425	[SMF] Query URR should not go for newly installed Rules along with Session AMBR change
CSCvx00148	[SMF] Converted Offline Update URR is being sent in 2 consecutive N4 modification msg
CSCvx10622	[SMF-SVI] DSCP value is not sent in any of the messages sent to NRF
CSCvx11147	UDM Reg Failures and N1N2 Transfer Rsp Failure after CM reaches 1M call
CSCvx11682	[SMF-SVI] 5G/4G-Wifi HO failures for change in 5QI/ARP - bv
CSCvx12666	[SMF-SVI] amf_req_pdu_sess_rel	failures	proc_pdu_not_established observed during longevity run
CSCvx14435	[SMF-SVI] Protocol pod in CrashLoopBackOff during CM run- i54

Bug ID	Headline
CSCvx15668	N11 AMF HTTP failure post 2 restarts of rest-ep pod is observerd on SMF
CSCvx16906	N40 (chf-smf) intf down results in call drop from 800K

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
CSCvt62316	SMF-REGRESSION : SMF Rejecting PreDefined activation for 4G calls
CSCvt68031	PDR/FAR/QER not getting cleared if 4g to 5g HO got failed at idft leg
CSCvt95054	[SVI-SMF] Wifi-5G-EPSFB "PDU UnTrusted WiFi to 5G to EPS Fallback" stats support
CSCvt97943	[SVI SMF] small num of 404 not found errors on n2ho with partial fail for PDU session mod complete
CSCvu00921	[SMF-IOT] SMF is not handling AN-release procedure when received after Handover during EPSFB
CSCvu00941	[SMF-IVT] DL FARs are not removed in N4 during 5G to 4G HO for failed bearers in MBReq
CSCvu03321	[SMF-SVI] smf_service_counters, gauge counters not working as expected
CSCvu13936	PGW-C is using TEID as 000 in PFCP delete session request.
CSCvu15346	[SMF] : Configurable Timers for N1N2 Https/Error Code
CSCvu15973	ControlPlane inactivity timer support
CSCvu18199	[SMF-SVI]: service pod restart - lawful-intercept.git/src/li.(*Lictx).formLITapStruct
CSCvu19134	[SMF-IOT] SMF has to prioritise RA procedure over PDU session modification when there is a collision
CSCvu19374	[SMF-SVI] n4_heartbeat_res accepted stat shows 50 years as process time
CSCvu21673	[SMF-SVI] Service pod restarted at (*UpfServData).ProcessSessionModificationResponse on TP
CSCvu22562	SMF isn't sending policy create during 5G create over idle mode 5Gto4G Fallback.
CSCvu27275	[SMF-IOT] SMF/PGW expects P-CSCF profile configuration to send DNS server address for 4G calls
CSCvu30145	[SMF]: SMF sends UNK_RULE_ID for PCC rules installing audio.
CSCvu32876	[SMF] SMF should not include USER INACTIVITY timer for always-on DNN
CSCvu34436	[SMF]: SMF sends 2nd CBR with different Precedence when Dedicated bearer proc is aborted due to MBR.
CSCvu38791	[SMF-IVT] WIFI to NR HO - Modified QOS values from PCF during HO not taking effect
CSCvu41546	[SMF]: SMF update duplicate entry for ipv6 prefix in CDL
CSCvu43268	[SMF]: SMF Installing voice flow in 4g to 5g idle mode MRU

Resolved Bugs for this Release

Bug ID	Headline
CSCvu45463	[SMF]: SMF sends N1N2 PDU REL CMD and Notification status for 5g create over create.
CSCvu46533	[SMF-IOT] TFT issues in UpdateBearerRequest during multi party scenario
CSCvu47969	[SMF-SVI] Service Pods Restarted at (*UpfServData).CopyFromTmpModifyParams during Wi-Fi to 5G Ha
CSCvu49408	[SMF] Only NR Capable UE support on SMF + PGW-C node
CSCvu57487	[SMF] SMF not copying the seq no from Del Br Cmd to Del Br Request
CSCvu62593	[SMF-IOT] SMF Has to include PS_TO_CS_HAN FailureCode on N7 for (v)SRVCC
CSCvu63000	[SMF-IOT]Preferred Nodemgr is NOT selected by Protocol pod and retry to other Nodemgr NOT attempted
CSCvu74715	[SMF] SMF using non standard cause (\"Update Failure\") while returning status 500
CSCvu79719	[SMF] SMF to handle collision between PDU Mod Fail and idle to connected mode
CSCvu85263	[SMF-SVI] gtpc-ep restart at gtpparser.ProtoToEGtpcBearerCtxList
CSCvu87465	[SMF]During 4G to 5G Idle mode mobility, SMF is sending additional PDU_RES_SETUP_REQ msg to AMF
CSCvu93200	[SMF] : SMF retransmit N1 when N2 fails during PCF init Modification.
CSCvu94607	[SMF] : SMF sends optional Tunnel information during PCF init modification for non GBR flow
CSCvu95541	[SVI SMF] epsfb redirect: smf intermittently sends 500 Internal Server Error after PDU_RES_MOD_FAIL
CSCvv01451	[SVI SMF] protocol pod restart on processor.decodePFCPRsp when sending corrupted packets via netem
CSCvv02992	[SMF] : SMF sends N1N2 during EPSFB when mulitple DLDR and ERIR is sent from UPF.
CSCvv10072	[SMF]:SMF sends 500 error response for AN Release during EPSFB.
CSCvv18985	[SVI SMF] handful of epsfb-redirect cases fail overnight UnHndlTrans Proc: Priority: 10, Type: 13
CSCvv19344	[SVI SMF] GetQosModInfo API execution failed. Error: GetRuleIDFromName failed
CSCvv23083	[SMF:BEMS01130997]:SMF sends CBR with different seq num during XNHO and Dedicate brr creation EPSFB
CSCvv26615	[SMF]: Mon subs output gives junk characters
CSCvv29228	[SMF-IOT] - Stats for smf_pcscf_server metrics
CSCvv29543	[SMF-IOT] - Pcscf-selection load balancing is not working properly across PCSCF servers.
CSCvv33340	[SMF,BEMS01128274]:SMF crashes when RS with different interface ID message comes in 4g/5g IPV6 call.
CSCvv35476	[SMF-IOT] SMF assigning different IPAdd in PCO when UE moving frm Wifi to LTE/NR to WiFi HO and Vice
CSCvv36092	[SMF,BEMS01133178]:SMF triggers 5g PDU Release when N4 fails during 4g-5g Idle mode HO
CSCvv40237	[SMF]: SMF does not create Bearer after EPSFB during collision btw AN init Release & PDU_MOD_FAIL
CSCvv43316	[SMF-IOT] WIFI - > LTE Handovers procedure is getting stuck and It is going to continuous loop.
CSCvv47566	[SMF:BEMS01137721]: SMF sends malformed URI to PCF during attach.
CSCvv49923	[SMF] IPAM Release IP - Processed is stuck after nodemgr restart

Bug ID	Headline
CSCvv50159	[SMF:BEMS01133178]: SMF posts Self-Transaction "NIntSelfTxnPduRelease" for 4g release
CSCvv53430	[SMF]: SMF Crash seen in service logs during Dedicated bearer modification
CSCvv55139	[SMF]: SMF should not send invalid teid 0x0000 in case smf is retaining the bearer.
CSCvv55264	[SMF]: SMF does not initiate EPSFB Dedicated bearer when no response Charging Update
CSCvv56527	[SMF]: SMF does not sends PTI and pdu session ID during Establishment reject
CSCvv57128	sms-rest-ep restarted due to invalid E-RAB ID
CSCvv64157	[SMF-IOT] sms-restarted seeing at smf-service/policy.(*ModPolicyData).GetTempQm
CSCvv66464	[SMF] Protocol VM reboot results in sx-path-failure
CSCvv69748	[SMF-IVT] REST-EP crashes noticed on i137 build
CSCvv70723	[SMF] SMF - Unhandled transactions found in PDU-IM and Setup procedure
CSCvv72431	[SMF:BEMS01147255]:SMF not responding to RS during wifi HO in TMO
CSCvv81958	[SMF] SMF is not sending skipInd IE in N1N2 msg transfer for PDU release during NR to WIFI HO
CSCvv88876	[SMF]:Handling of UBR-MBR collision
CSCvv95091	[SMF- IOT] SMF need not send sm context status notify in a corner scenario
CSCvw06203	Issues with disc_pdusetup_n1n2_transfer_failure_rsp_code & disc_pdusetup_n1n2_transfer_rsp_failure
CSCvw12221	[SMF/PGWC] UBR/DBR-MBC/DBC Collision issue
CSCvw14699	service crash related to session key handling
CSCvw15339	EPS-FB Stats for Attempted, Success and Failure (Timeout)
CSCvw15522	[SMF-IOT] SMF is not sending the 404 response when receiced ReAuthRequest for unknown user
CSCvw22579	[SMF-IOT] SMF is sending policy delete to a PCF which did not respond for policy create
CSCvw22726	SMF is sending 2 N7 delete from both rest EP's in some cases, causing the N7 Delete KPI degradation
CSCvw23066	[SMF]: SMF sends ECGI to UPF in decimal format
CSCvw32852	[SMF-SVI] Pod kill scenario-Kill All Single Replica of multiple pods causes Sx Path Failure.
CSCvw46693	nasEncodePduSessionModifyReject(Cause-INVALID_PDU_SESSION_IDENTITY)
CSCvw48173	SMF : ERIR handling During EPSFB
CSCvw53145	[SMF] SMF is deleting the PDN when received DSR from EPDG during WIFI to LTE HO
CSCvw53719	[SMF-IVT] SMF expecting 3GPP-NSAPI 5 in Radius DM to clear session
CSCvw55634	[SMF-IOT] - Smf-Service Crash observed in INTER-RAT Collision scenarios.
CSCvw58690	BEMS01176434 - 4G to 5G Idle Mode HO SMF is not doing PDU_RES_SETUP after receiving DLDR
CSCvw59588	[SMF-IVT] Incorrect Acct-Terminate-Cause when call is cleaned up due to session/Idle t/o

Bug ID	Headline
CSCvw63337	SMF [CN PGW] not handling WIFI to LTE Handover abort correctly
CSCvw72993	[SMF-IOT] SMF is corrupting the request URLs on N10 interface towards SCP
CSCvw74493	[5G SA] SMF error - Charging Param not found, Skipping usage report for Urr Id
CSCvw82665	5G SA: SMF on .i329 sending NRF discovery without AMF instance ID
CSCvw90435	5G SA: SMF on .i329 sending load value of greater than 100 to NRF
CSCvw91634	[SMF-SVI] ~5-10% failures seen with 4G<->5G HO when run in scale
CSCvw98665	peer info sync miss between gtp pods causing CBR/DBR not going out of SMF

Operator Notes

Cloud Native Product Version Numbering System

The **show helm list** command displays detailed information about the version of the cloud native product currently deployed.

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 software packages that are available with this release.

Table 2 - Release Package Information

Software Packages	Description
ccg.<version>.SPA.tgz	The SMF offline release signature package. This package contains the SMF deployment software as well as the release signature, certificate, and verification information.

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.