

Release Notes for Cisco ASR 1000 Series, Cisco IOS XE Amsterdam 17.2.x

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About Cisco ASR 1000 Series Aggregation Services Routers

The Cisco ASR 1000 Series Routers carry a modular yet integrated design, so network operators can increase their network capacity and services without a hardware upgrade. The routers are engineered for reliability and performance, with industry-leading advancements in silicon and security to help your business succeed in a digital world that's always on. The Cisco ASR 1000 Series is supported by the Cisco IOS XE Software, a modular operating system with modular packaging, feature velocity, and powerful resiliency. The series is well suited for enterprises experiencing explosive network traffic and network service providers needing to deliver high-performance services.



Note For more information on the features and specifications of Cisco ASR 1000 Series Routers, refer to the Cisco ASR 1000 Series Routers [datasheet](#).

For information on the End-of-Life and End-of-Sale Announcements for Cisco ASR 1000 Series routers, refer to the [ASR 1000 Series End-of-Life and End-of-Sale Notices](#).



Note Cisco IOS XE Amsterdam 17.2.1r is the first release for Cisco ASR 1000 Series Aggregation Services Routers in the Cisco IOS XE Amsterdam 17.2.x release series.

New and Enhanced Software Features for Cisco IOS XE Amsterdam 17.2.1r

New and Enhanced Features for Cisco IOS XE Amsterdam 17.2.1r



Note Cisco IOS XE Amsterdam 17.2.1r is the first release for Cisco ASR 1000 Series Aggregation Services Routers in the Cisco IOS XE Amsterdam 17.2.1 release series.



Note When you upgrade from one IOS XE release to another, you may see `%Invalid IPV6 address` error in the console log file. To rectify this error, enter global configuration mode, and re-enter the missing IPv6 alias commands and save the configuration. The commands will be persistent on subsequent reloads.

- eZPM Performance Improvement—The eZPM (easy performance monitor) introduces a performance improvement to the Application Performance profile for the following monitors:
 - application-client-server-stats
 - application-response-time
 - application-stats
 - media
 - url

The performance improvement is achieved by using the **mode optimised** command, which is enabled by default. If any other monitors are enabled, the performance improvement is automatically disabled.

- [6VPE over DMVPN with IPv6 Transport](#)—This feature supports multi-tenant IPv6 LAN prefixes. You can create these prefixes using an IPv6 DMVPN transport over the IPv4 overlay neighborhood.
- [MAG or customer-specific SLA Configuration](#)—This feature lets you configure MAG and customer-specific SLA to enable or disable IP SLA probes for PMIPv6 multipath management. To change the IP SLA probe parameters, use the **enable-sla** command.
- [Install and Deploy Cisco IOS XE and Cisco IOS XE SD-WAN Functionality on Edge Router](#)—This feature supports the use of a single `universalk9` image to deploy Cisco IOS XE SD-WAN and Cisco IOS XE functionality on all the supported devices. This `universalk9` image supports two modes - Autonomous mode (for IOS XE features) and controlled mode (for SD-WAN features).
- [Fail Close Revert Mode](#)—This feature lets group members remove the downloaded key server policy when there is no rekey or the group member is not able to re-register to the key server, and therefore return to the fail close mode.
- [Partial Configuration on CPE](#)—This feature supports use of Download RPC and Transfer Complete RPC to apply partial configuration on a CPE. It helps in the configuration of the CPE using download RPC method in CWMP instead of a manual configuration.
- [Enhanced VRF option for TCL socket](#)—In this release, the `-myvrf` keyword is added to the **fconfigure** command. This command specifies the options in a channel and enables you to associate a VRF table name with it.
- [Support for configuring GRE in tunnel encapsulation mode](#) —You can now configure a GRE tunnel in tunnel encapsulation mode in addition to the existing support for UDP tunnels.
- [QSF-P-40/100-SRBD support](#)
- [MACSec on Port Channel](#)—This feature lets you configure MACsec encryption support on port channels therefore increasing the security of the traffic.
- [Improving NAT 44 performance](#)—This enhancement introduces **ip nat settings high** command that allows high connection set up rate for non-ALG NAT traffic.
- [VPN-ID in NetFlow exported packet](#)—This feature helps in identification of VPN using the MPLS VPN-ID.
- [Ingress and Egress Accounting MIB](#)—This feature allows the user to access all VxLAN accounting information in a single SNMP request.

- [DHCP unicast support on IOS-XE](#)—This feature introduces support for unicast mode on DHCP. This helps with splitting the horizon therefore improving security of the network.
- [Block BGP Dynamic Neighbor Sessions](#)—This feature allows you to block a router from establishing BGP dynamic neighbor sessions with certain nodes in a BGP peer group - these nodes are identified with their IP addresses. The ability to shut down or prevent the creation of BGP dynamic neighbor sessions is useful when a peer needs maintenance.
- [Support for Spoke Nodes as P Nodes in MPLS over DMVPN Phase 3](#)—This feature helps you configure a spoke node as either a P node or PE node in an MPLS over DMVPN deployment. To configure the spoke node, MP-BGP redistributes the route or label information between the spoke node and a PE node behind it.
- [LISP Support for TCP Authentication Option](#)—This feature helps you configure TCP Authentication Option (TCP AO) to prevent spoofed TCP segments in the sessions between an ETR and an MS.
- [EBGP Route Propagation without Policies](#)— This feature helps you configure an EBGP router to not propagate routes to and from an EBGP neighbor, when at least one inbound and one outbound policy are not configured for the neighbor.
- [Debug commands for PIM and VRF](#) — This release introduces debug commands for VRF (debug condition vrf) and PIM (debug ip pim)details. The **debug condition vrf** command lets you limit the debug output to a specific virtual routing and forwarding (VRF) instance. The **debug ip pim** command displays PIM packets received and transmitted, as well as PIM related events.
- [CUBE: Fax detect for IP-IP flows on IOS XE platform](#) — This release introduces support for fax detection for SIP calls and transfer on Cisco IOS XE platforms.
- [gNMI Protocol](#)— This release introduces support for gNMI protocol on ASR 1000 routers.

New Hardware Supported for Cisco IOS XE Amsterdam 17.2.1r

- [ESP-100X and ESP-200X](#)—Cisco ASR 1000 ESP100-X and ESP-200X are QFP-based embedded services processors for the Cisco ASR1000 Series Routers. These ESP's are based on third-generation QFP ASIC. The ESP100-X contains one, third-generation QFP ASIC and the ESP200-X contains two, third-generation QFP ASIC.

Resolved and Open Bugs for Cisco IOS XE Amsterdam 17.2.1r

Resolved Bugs for Cisco IOS XE Amsterdam 17.2.1r

All resolved bugs for this release are available in the [Cisco Bug Search Tool](#) through the Resolved Bug Search.

Caveat ID Number	Description
CSCvg79330	enable platform ipsec control plane conditional debug might cause FP/QFP IPsec outbound SA leak
CSCvp72039	Ucode crash in infra with injected jumbo packet
CSCvq43550	C1111-4P doesn't restart authentication for "clear authen session" if "authen open" the port

Caveat ID Number	Description
CSCVq47444	CLI "config-exchange request" for any ikev2 profile has inconsistent behavior between IOS and confd
CSCVq71864	Crash after executing "show archive config differences"
CSCVq75610	freed rpi_parent is hit when deleting parent route by route update event
CSCVq81620	Router crashes with ZBF HA sync.
CSCVq85556	QoS configuration download failed when device reloading
CSCVq85913	FlexVPN with password encryption -- after primary key change password in profile is not working
CSCVq87063	getvpn suiteb:KS sends delete payload to gm's while scheduled rekey after primary KS dead/readdd
CSCVq90361	NHRP process crash on using same tunnel address on multiple spokes
CSCVq91046	ASR1k crash in NAT code when processing PPTP traffic
CSCVq93850	Passive FTP will fail when going over NAT and either client or server are off a SM-X-ES3
CSCVq98095	Gi0/0/0 interface stays up/up and LED green after cable removed
CSCVq98949	ASR1000-RP3: Punt Keepalive Failure (Punt LINK DOWN) or RP FREEZE
CSCVq98999	ISR4451-X / 16.09.01 / Crash when IPSEC SA installation fails
CSCVq99498	Crashes when trying to bring-up / bring-down IPsec crypto session for OSPFv3
CSCvr00983	Unrecoverable Error with PVDm in 0/4 and Thule+dreamliner in 1/0 on ISR4300
CSCvr01327	incorrect Total number of translations on show ip nat translations
CSCvr01454	Punt fragment crash when receive EoGRE packets which have many fragments
CSCvr05193	IOS PKI Intermittently SubCA fails to rollover
CSCvr05214	NAT translation table is removed before IKE SA deleted when idle timeout occur
CSCvr06666	ISR4K Router CPP ucode Crash due IPv4 Fragmented packets
CSCvr12395	vManage push "media-type rj45" when trying to configure duplex on ISR1k
CSCvr15127	ASR1K/ISR4K Calls fade to no-way audio due to media inactivity detection after 20 minutes
CSCvr17167	High memory utilization under "ezman" due to excessive parity error logging
CSCvr17169	qfp ucode crash with media monitor

Caveat ID Number	Description
CSCvr18570	When user cancel Call Forward All from the analog phone, user can't hear the confirmation tone
CSCvr24498	keyman_rp Memory Leak
CSCvr26524	Crash due to NBAR classification
CSCvr27554	ASR1000-RP2/ASR1000-RP3: OIR after clock set doesn't save the time in RTC
CSCvr27777	ASR1k - Egress byte count is inaccurate
CSCvr31188	GETVPN gikev2 Secondary KS doesn't push new policy after merging split condition
CSCvr33415	Router may crash unexpectedly with Segmentation fault(11), Process = DSMP
CSCvr39932	IPSEC install failed IPSEC_PAL_SA shows "unexpected number of parents"
CSCvr42776	FMAN crashed after firewall reconfiguration
CSCvr42823	Umbrella local domain bypass list is not programmed to DP, FMFP-3-OBJ_DWNLD_TO_DP_FAILED
CSCvr45917	ASR1K DSP MIB cdspTotalChannels not responding
CSCvr48349	ESP ucode crashed when running NAT with bpa (CGN)
CSCvr55746	Device becomes unresponsive when configuring l2vpn context
CSCvr57565	MGCP Calls with SRTP fail to connect with Cause Value=47 due to T.38 calls
CSCvr61217	GetVPN-ISR4461// Getvpn traffic is failing with Transport mode with all the versions.
CSCvr65986	ISR1K: dot1q-tunneling ports broadcast unknown unicast traffic to all other local switch ports
CSCvr76534	ISR4k : Crash seen at Process Exec
CSCvr87906	ISR4461: Large un-fragmented IPSEC packets cause router to crash
CSCvr89957	CFT crashed frequently
CSCvr89973	NIM interfaces go into shutdown after router bootup.
CSCvr93969	C9800:ISSU: wncd crash@ crypto_engine_pk_crypto during ISSU downgrade scenario
CSCvr96597	IOS-XE crash after doing a SCEP enrollment
CSCvr99034	ISR 4K router crash during updating the OpenDNS bypass whitelist
CSCvs00410	MKA session up but unable to pass data across link using AES-256-XPB cipher
CSCvs02000	%IOSXE-3-PLATFORM: R0/0: kernel: DMA: Out of SW-IOMMU space

Caveat ID Number	Description
CSCvs04194	Process = Exec crash seen on dmap longevity testbed with clear cry sa peer several times
CSCvs05043	ESP40 crash in CGN mode after apply "ip nat setting mode cgn" and "no shut" interface
CSCvs07609	Portchannel stats not working on ASR1002-HX
CSCvs08681	Crash triggered with IPv6, IPv4, PPPoE, PortChannel and NAT
CSCvs09052	ASR1K OTV: Incorrect MAC address count on EFP/BD QFP stats
CSCvs13960	IWAN High CPU and Memory
CSCvs18317	C1111X-8P Sku tagged to 4P software tag incorrectly
CSCvs29535	IWAN crash related to DCA channel
CSCvs46484	Standby RP2 crashes on ASR1009-X due to bulk sync in l2fib.
CSCvs60195	ASR1K ucode crash after too many locks in ZBF pair setup
CSCvs70052	ALG with NAT trigger a crash when a DNS writeback occurs
CSCvs86573	Connect message is never forwarded to the calling side
CSCvs96719	ASR1k: Unicast DHCPREQUEST dropped when received on a EoGRE tunnel configured with VRF

Open Bugs for Cisco IOS XE Amsterdam 17.2.1r

All open bugs for this release are available in the [Cisco Bug Search Tool](#) through the Open Bug Search.

Caveat ID Number	Description
CSCvh24730	PfRv3: Crash while Printing the Same TCA Message
CSCvp88044	Performance Monitor crash
CSCvt15551	Crash observed in QFP in ASR1001-X running 16.06.05 when GPM is running low
CSCvt33799	Virtual address not reachable: "mac:0000:0c07:xxxx download to DP failed" for HSRP / VRRP over BDI.
CSCvs30625	SRTP-RTP Crash on ASR with GCM Ciphers

Resolved and Open Bugs for Cisco IOS XE Amsterdam 17.2.2

Resolved Bugs for Cisco IOS XE Amsterdam 17.2.2

All resolved bugs for this release are available in the [Cisco Bug Search Tool](#) through the Resolved Bug Search.

Caveat ID Number	Description
CSCuz84374	SPA modules on ASR1002-X/ASR1001-X does not get recognized under show platform
CSCvh24730	PfRv3: Crash while Printing the Same TCA Message
CSCvp24405	Router crashes after adding macsec reply-protection command on an interface
CSCvp88044	Performance Monitor crash
CSCvq42698	Update "bandwidth remaining percent" doesn't take effective reliably on datapath
CSCvr09310	vManage should be able to work with cEdge banners in the same way as with vEdges
CSCvr42504	ping is not working on port-channel after router reload
CSCvr76593	Memory leak in CC-API_VCM and CCSIP_SPI_CONTROL
CSCvr85094	Enabling Telemetry can cause router to crash.
CSCvs30625	SRTP - RTP Crash on ASR with GCM Ciphers
CSCvs42075	crash with shared-line command
CSCvs59402	Random IPSEC drops on ESP200 with esp-gcm transform set
CSCvs63606	Ping fails on hundred gig primary interface with FRR configured though MPLS traffic is not impacted
CSCvs70206	CUBE DNS cache clear should be limited only to the matched connection id
CSCvs90555	Template push fails when enabling ipv4 addr family on BGP ipv4 neighbor
CSCvs92677	Crash when removing interface not running isis but has isis config
CSCvs96344	ASR 1000 : OIR after clock set doesn't save the time in RTC(recommit of CSCvr27554)
CSCvt01186	Interface does down when "l2vpn xconnect" command is removed
CSCvt02567	bgp crash @ bgp_db_ipstr2address when get bgp neighbor via bgp-oper yang
CSCvt12245	16.12.3 ZBFW-Mismatch in firewall stats between the device and vmanage
CSCvt15007	Unable to detach device from Integration Management
CSCvt16595	IOS XE SDWAN routers experience slow memory leak over time in 'ncsshd' process
CSCvt16988	Existing configuration on a cEdge could not be modified by a new template
CSCvt18190	Router crash when doing 'show bgp ipv6 unicast summary'
CSCvt19472	ASR 1000 crash at SSS manager sss_info_get_next_lem()
CSCvt19772	Stackwise Virtual FMAN-RP IPC channel stuck (paused)
CSCvt21373	unexpected reload in CPP ucode forced by nat 514 .

Caveat ID Number	Description
CSCvt33018	MACsec 128/256 XPN on 40g/100g, stop passing traffic for one of AN and interface link flap seen
CSCvt33799	Virtual address not reachable: "mac:0000:0c07:xxxx download to DP failed" for HSRP / VRRP over BDI.
CSCvt38466	SNMP TIMETICKS difference between sysUpTime vs ipslaEtherJAggStatsStartTimeId
CSCvt40021	Omp-tag is not being set via route-map configuration under bgp
CSCvt46635	Traffic is not getting optimized and it goes as PT connections on CSR router reload in 17.2.1
CSCvt54359	BGP config does not rollback if template push errors out
CSCvt57181	Leaf sends packets to a wrong BVI MAC of ASR GOLF routers
CSCvt58616	L2VPN Crash @ Process = XC Mgr
CSCvt58858	Incorrect CEF programming for local SVI
CSCvt60040	VPLS:MAC learning not happening on SSO
CSCvt60979	1731: ODN Policy for Global prefix still UP even after withdrawing global routes
CSCvt65588	FlexVPN IKEv2 Tunnel route removed after establishing new IKEv2 SA to another peer
CSCvt67752	Object (IPv6 ACL) stuck in forwarding data plane. No ipv6 traffic goes towards the upstream router
CSCvt73592	missing/corrupt IOS-XE PKSC10 format
CSCvt74694	Cert validation failures seen for traffic after template push with SSL
CSCvt76409	Crash due to "Crimson flush transactions Process"
CSCvt78405	Code review: Just fire assert when we reach limit of counter
CSCvt89337	Incorrect Source IP when resolving DNS
CSCvt89441	IOS-XE device crashed with CGD shared memory corruption freed by FMAN-FP
CSCvt90424	CRC increasing on down int Te0/0/20
CSCvt94577	Incorrect CEF entry for LISP action signal-fwd
CSCvt98034	BGP communities: changes to route-map which sets BGP communities discards existing communities
CSCvu00280	RP3/ESP100/X: Traffic loss of over 1s at FP switchover (plain ipv4)
CSCvu21761	RAR: PADG and PADC are not being consumed properly. PPPoE session statistics are not matching.

Caveat ID Number	Description
CSCvu22003	vManage FW dashboard doesn't show all matched applications
CSCvu22576	Keepalive CLI needs to be unhidden for GRE tunnel
CSCvu23567	RSP3: BGP crash seen on Stand by router when 100 BGP sessions are established.
CSCvu26678	Some qos config lost during upgrade to 17.02
CSCvu26741	Punt-Keepalive crash with lsmapi_lo_drv and container app traffic.
CSCvu27813	Complete Traffic drop seen on Head Node Post configuring Binding SID on PFP Policy
CSCvu34381	Packets are not dropped as expected in selfzone to zone vpn 0 firewall config
CSCvu52218	Router crashes frequently on NBAR
CSCvu54786	Crash on configuring a highest key identifier for OSPF authentication under an interface
CSCvu65669	Traffic drop from branch overlay ping to service side without zp vpn1 to vpn1 when FW & IPS enabled
CSCvu66723	Evaluation of CVE-2020-10188 - Cisco IOS XE Persistent Telnet
CSCvu70571	SDWAN router ASR1001-X crashes when object-group service configuration is added
CSCvu80644	LSP Checksum error when default-info originate is configured
CSCvu87786	CUBE Segmentation Fault @ sipSPIFreeOneSCB due to corrupt ccb
CSCvu89033	Template push error due to NAT-MIB process helper traceback/warm restart
CSCvu99616	Snort initiate reset and Failed to load - Real websites in Browser
CSCvv05893	CUBE router crashed due to memory corruption in subscription control block
CSCvv05895	ASR1001-X: Issue a cpld reset instead of reboot in kcrash
CSCvv13193	Memory leak 'Admin group' with some triggers in ISIS
CSCvv16164	RSVP TE is not working for broadcast interfaces due to CSCvu94532
CSCvv20380	Removing and Adding Bulk ACL leads to Tracebacks and Error-Objects

Open Bugs for Cisco IOS XE Amsterdam 17.2.2

All open bugs for this release are available in the [Cisco Bug Search Tool](#) through the Open Bug Search.

Caveat ID Number	Description
CSCvs87249	DHCP Server configuration inn Vmanage Template for a Cedge change order of the DNS servers
CSCvt51568	Unexpected Reload due to Sessmgr

Caveat ID Number	Description
CSCvt76844	ASR1002-X ESP crash in multikey_hash_ager_tw_timer_to()
CSCvt85954	IWAN routers ISR4K unexpected reload multiple times
CSCvu04160	Unexpected Reload in Device Classifier Code due to Segmentation Fault
CSCvu27910	Controller crashes when FNF is configured under physical interface
CSCvu41583	Controller crashes when FNF is configured under physical/port-channel interface
CSCvv03229	Crash in sre_dp_traverse_dfa_legacy as SIP invite messages crosses a GRE Tunnel
CSCvv11423	Remote EID space prefix not installed in CEF when overlapping prefix exists as Local EID
CSCvv47691	Reload: IOS-XE router crashing due to DN mismatch
CSCvv49841	ASR 1002-HX crashes due to stuck threads.
CSCvv65068	Crash after flexible netflow cache cleanup
CSCvv71238	Sup crashed with cpp-bqs fatal

ROMmon Release Requirements

For more information on ROMmon support for Route Processors (RPs), Embedded Services Processors (ESPs), Modular Interface Processors (MIPs), and Shared Port Adapter Interface Processors (SIPs) on Cisco ASR 1000 Series Aggregation Services Routers, see <https://www.cisco.com/c/en/us/td/docs/routers/asr1000/rommon/asr1000-rommon-upg-guide.html>

Related Documentation

- [Release Notes for Previous Versions of ASR 1000 Series Aggregation Services Routers](#)
- [Hardware Guides for Cisco ASR 1000 Series Aggregation Services Routers](#)
- [Configuration Guides for ASR 1000 Series Aggregation Services Routers](#)
- [Command Reference Guides for ASR 1000 Series Aggregation Services Routers](#)
- [Product Landing Page for ASR 1000 Series Aggregation Services Routers](#)
- [Datasheet for ASR 1000 Series Aggregation Services Routers](#)
- [Upgrading Field Programmable Hardware Devices for Cisco ASR 1000 Series Routers](#)
- [Cisco ASR 1000 Series Aggregation Services Routers ROMmon Upgrade Guide](#)
- [Field Notices](#)
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