



Introduction

This release notes contain information about the Cisco ASR 920 Series Aggregation Services Routers, provides new and changed information for these routers, hardware support, limitations and restrictions, and caveats.



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This release notes provides information for these variants of the Cisco ASR 920 Series Routers:

- ASR-920-12CZ-A
- ASR-920-12CZ-D
- ASR-920-4SZ-A
- ASR-920-4SZ-D
- ASR-920-10SZ-PD
- ASR-920-24SZ-IM
- ASR-920-24SZ-M
- ASR-920-24TZ-M
- ASR-920-20SZ-M
- ASR-920-12SZ-IM
- ASR-920-12SZ-A
- ASR-920-12SZ-D
- [Cisco ASR 920 Series Routers Overview, on page 2](#)

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Cisco ASR 920 Series Routers Overview

The Cisco ASR 920 Series Aggregation Services Routers provide a comprehensive and scalable set of Layer 2 and Layer 3 VPN services in a compact package. They are temperature-hardened, small form factor, with high throughput and low power consumption ideal for mobile backhaul, business services and residential voice, video, and data ("triple-play") applications.

Feature Navigator

Use the Cisco Feature Navigator to find information about feature, platform, and software image support. To access the Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on cisco.com is not required.

Determining the Software Version

Use the following commands to verify your software version:

- Consolidated Package— **show version**

Table 1: ROMMON Version

PIDs	ROMMON
ASR-920-12SZ-A , ASR-920-12SZ-D	15.6(29r)S
ASR-920-12SZ-IM	15.6(24r)S
ASR-920-12CZ-A, ASR-920-12CZ-D, ASR-920-4SZ-A, ASR-920-4SZ-D, ASR-920-10SZ-PD, ASR-920-24SZ-IM, ASR-920-24SZ-M, and ASR-920-24TZ-M	15.6(31r)S

Table 2: ROMMON Version for Cisco IOS XE Everest 16.6.8

PIDs	ROMMON
ASR-920-12SZ-IM	15.6(24r)S

PIDs	ROMMON
ASR-920-12CZ-A, ASR-920-12CZ-D, ASR-920-4SZ-A, ASR-920-4SZ-D, ASR-920-10SZ-PD,ASR-920-24SZ-IM, ASR-920-24SZ-M, and ASR-920-24TZ-M	15.6(32r)S

Feature Matrix

The feature matrix lists the features supported for each platform. For more information, see the [Cisco ASR 920 Series Aggregation Services Routers Feature Compatibility Matrix](#).

The cumulative [Feature Compatibility Release Matrix](#) is available on Content Hub.

Supported HoFPGA and ROMMON Versions

The tables below list the HoFPGA and ROMMON version of the software releases.

Table 3: HoFPGA and ROMMON Versions for the Cisco ASR-920-12CZ-A, ASR-920-12CZ-D, ASR-920-4SZ-A, ASR-920-4SZ-D, and ASR-920-10SZ-PD

Release	HoFPGA Version	ROMMON Version
Cisco IOS XE Gibraltar 16.12.4	0X00040043	15.6(32r)S
Cisco IOS XE Gibraltar 16.12.2a	0x00040043 (BFD/default template) 0x00020009 (Netflow template)	15.6(32r)S
Cisco IOS XE Gibraltar 16.12.1	0X00040043	15.6(32r)S

Table 4: HoFPGA and ROMMON Versions for the Cisco ASR-920-20SZ-M

Release	HoFPGA Version	ROMMON Version
Cisco IOS XE Gibraltar 16.12.4	0X0001000A	15.6(32r)S
Cisco IOS XE Gibraltar 16.12.2a	0x0001000A (BFD/default template) 0x0001000A (Netflow template)	15.6(32r)S
Cisco IOS XE Gibraltar 16.12.1	0X0001000A	15.6(32r)S

Table 5: HoFPGA and ROMMON Versions for the Cisco ASR-920-24SZ-IM, ASR-920-24SZ-M, and ASR-920-24TZ-M

Release	HoFPGA Version	ROMMON Version
Cisco IOS XE Gibraltar 16.12.4	0X00030015	15.6(32r)S
Cisco IOS XE Gibraltar 16.12.2a	0x00030014 (BFD/default template) 0x00030014 (Netflow template)	15.6(32r)S
Cisco IOS XE Gibraltar 16.12.1	0X00030014	15.6(32r)S

Table 6: HoFPGA and ROMMON Versions for the Cisco ASR-920-12SZ-IM

Release	HoFPGA Version	ROMMON Version
Cisco IOSXE Gibraltar 16.12.1	0X0003001B	15.6(24r)S
Csico IOS XE Gibraltar 16.12.2a	0x0003001B (BFD/default template) 0x00020008 (Netflow template)	15.6(24r)S
Cisco IOSXE Gibraltar 16.12.1	Cisco IOSXE Gibraltar 16.12.1	15.6(24r)S

Table 7: HoFPGA and ROMMON Versions for the Cisco ASR-920-12SZ-A and ASR-920-12SZ-D

Release	HoFPGA Version	ROMMON Version
Cisco IOS XE Gibraltar 16.12.4	0X00010040	15.6(24r)S
Csico IOS XE Gibraltar 16.12.2a	0x00010039 (BFD/default template) 0x10000007 (Netflow template)	15.6(24r)S
Cisco IOS XE Gibraltar 16.12.1	0x00010039 (BFD/default template) 0x10000007 (Netflow template)	15.6(29r)S

Table 8: IM FPGA Versions for the Cisco ASR-920-24SZ-IM

Release	Gigabit Ethernet Interface Module (Phase 1) FPGA	Gigabit Ethernet Interface Module (Phase2) FPGA	8 T1/E1	16 T1/E1	32 T1/E1
Cisco IOS XE Gibraltar 16.12.4	0.49	69.24	0.54	0.54	0.46

Table 9: IM FPGA Versions for the Cisco ASR-920-12SZ-IM

Release	Gigabit Ethernet Interface Module (Phase 1) FPGA	Gigabit Ethernet Interface Module (Phase2) FPGA	8 T1/E1	16 T1/E1	32 T1/E1
Cisco IOS XE Gibraltar 16.12.4	0.49	69.24	0.54	0.54	0.46

Software Licensing Overview

The router offers the following base licenses:

- Metro Services
- Metro IP Services
- Advanced Metro IP access
 - SDM Video Template

Table 10: Cisco ASR 920 Software Licenses Feature Set

Metro Services	Metro IP Services	Metro Aggregation Services
—	Includes all features in Metro Services	Includes all features in Metro IP Services
QoS, with deep buffers and hierarchical QoS (HQOS)	IP routing (RIP, OSPF, EIGRP, BGP, IS-IS)	MPLS (LDP and VPN)
Layer 2: 802.1d, 802.1q	PIM (SM, DM, SSM), SSM mapping	MPLS TE and FRR
Ethernet Virtual Circuit (EVC)	BFD	MPLS OAM
Ethernet OAM (802.1ag, 802.3ah)	Multi-VRF CE (VRF lite) with service awareness (ARP, ping, SNMP, syslog, trace-route, FTP, TFTP)	MPLS-TP
Multiple Spanning Tree (MST) and Resilient Ethernet Protocol (REP)	IEEE 1588-2008 Ordinary Slave Clock and Transparent Clock	Pseudowire emulation (EoMPLS, CESoPSN, and SAToP)
Synchronous Ethernet	—	VPLS and HVPLS
IPv4 and IPv6 host connectivity	—	Pseudowire redundancy
—	—	MR-APS and mLACP

The router offers the following additional feature licenses:

- ATM
- IEEE 1588-2008 Boundary Clock/Master Clock

- OC-x Port License

Limitations and Restrictions on the Cisco ASR 920 Series Routers

- The **default** *command-name* command is used to default the parameters under that interface. However, when speed is configured on the interface, the following error is displayed:

```
Speed is configured. Remove speed configuration before enabling auto-negotiation
```

- Adding or deleting the Trunk Ethernet flow points (TEFPs) with scaled bridge-domain, without delay causes the Cisco ASR 920 Series router to crash.
- Virtual services should be deactivated and uninstalled before performing replace operations.
- The Cisco ASR920 Series Routers no longer support the controller and nid-controller commands for the Cisco ME1200 switch.
- The following interface modules (IMs) do not require the activation command for IM boot up, provided no other IM is activated in subslot 0/1 before.

However, if an IM was activated in the system earlier, deactivate the previously-activated IM before inserting a new IM in system.

- 16-Port T1/E1 Interface Module
 - 32-Port T1/E1 Interface Module
 - 8-Port T1/E1 Interface Module
 - 4-port OC3/STM-1 (OC-3) or 1-port OC12/STM-4 (OC-12) Interface Module
 - 14-Port Serial Interface Module
 - 6-Port E and M Interface Module
 - 4-Port C37.94 Interface Module
- RS422 works on ports from 0 to 7 only.
 - The following restriction is applicable only to:
 - Cisco ASR-920-24SZ-IM, Cisco ASR-920-24SZ-M, and Cisco ASR-920-24TZ-M
 - Cisco ASR-920-20SZ-M
 - Traffic is dropped when packets of size 64 to 100 bytes are sent on 1G and 10G ports.
 - For 64-byte packets, traffic drop is seen at 70% and beyond of the line rate.
 - For 90-byte packets, traffic drop is seen at 90% and beyond of the line rate.
 - For 95-byte packets, traffic drop is seen at 95% and beyond of the line rate.
 - Traffic is dropped when:
 - Traffic is sent on a VRF interface.
 - Traffic is sent across layer 2 and layer 3.

However, traffic is not dropped when the packet size is greater than 100 bytes, even if the packets are sent bidirectionally at the line rate.

- MPLS VC label packet with time-to-live (TTL) value of 2 is dropped at egress MPLS PE device due to ASIC limitations. During PHP process, MPLS TTL value for the VC label is decremented by one with implicit-null. The VC label-related TTL value is set to 255 while imposing the VC label due to multiple VC switching scenarios.

Use the **no mpls ip propagate-ttl** command as the Short Pipe mode for the required label.

- Interface naming is from right to left. For more information, see the Cisco ASR 920 Software Configuration Guide .
- Packet size greater than 1460 is not supported over IPsec Tunnel.
- Minimal traffic drop might be seen for a moment when higher rate traffic is sent through the IPsec tunnels for the first time.
- IPsec is *only* supported for TCP and UDP and is not supported for SCTP.
- IPsec is supported *only* on the Cisco ASR-920-12SZ-A and Cisco ASR-920-12SZ-D routers.

Additional References

Product Information

- [Cisco ASR 920 Series Aggregation Services Router Data Sheets](#)

Hardware Installation Guides

- [Cisco ASR 920 Series Aggregation Services Router Hardware Guides](#)

Software Configuration Guides

- [Cisco ASR 920 Series Aggregation Services Router Configuration Guides](#)

Regulatory Compliance and Safety Information

- [Regulatory Compliance and Safety Information for the Cisco ASR 920 Series Aggregation Services Routers](#)

Field Notices and Bulletins

- Field Notices—We recommend that you view the field notices for this release to determine whether your software or hardware platforms are affected. You can find field notices at http://www.cisco.com/en/US/support/tsd_products_field_notice_summary.html.
- Bulletins—You can find bulletins at http://www.cisco.com/en/US/products/sw/iosswrel/ps5012/prod_literature.html.

MIB Support

To view supported MIB, go to <http://tools.cisco.com/ITDIT/MIBS/MainServlet>.

Accessibility Features in the Cisco ASR 920 Series Routers

For a list of accessibility features in Cisco ASR 920 Series Routers, see the [Voluntary Product Accessibility Template \(VPAT\)](#) on the Cisco website, or contact accessibility@cisco.com.

All product documents are accessible except for images, graphics, and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact accessibility@cisco.com.

End-of-Life and End-of-Sale Notices

For End-of-Life and End-of-Sale Notices for the Cisco ASR 920 Series Routers, see <http://www.cisco.com/c/en/us/products/routers/asr-920-series-aggregation-services-router/eos-eol-notice-listing.html>.