



Release Notes for Cisco 8000 Series Routers, IOS XR Release 7.9.2

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Cisco 8100, 8200, and 8800 Series Routers



Note Cisco IOS XR Release 7.9.2 is an Extended Maintenance Release of [Cisco IOS XR Release 7.9.1](#) for Cisco 8000 Series routers. For more details on the Cisco IOS XR release model and associated support, see [Guidelines for Cisco IOS XR Software](#).

What's New in Cisco IOS XR Release 7.9.2

Cisco IOS XR Release 7.9.2 is an extended maintenance release for Cisco 8000 Series routers. There are no new software features or hardware introduced in this release.

For more details on the Cisco IOS XR release model and associated support, see [Guidelines for Cisco IOS XR Software](#).

Behavior Changes

- In Cisco IOS XR Release 7.5.2, SR-ODN configurations with Flexible Algorithm constraints can be configured using either of the following commands:
 - **segment-routing traffic-eng on-demand color** *color dynamic sid-algorithm algorithm-number*
 - **segment-routing traffic-eng on-demand color** *color constraints segments sid-algorithm algorithm-number*

Starting with Cisco IOS XR Release 7.9.1, the **dynamic sid-algorithm** *algorithm-number* command has been deprecated. Only the **constraints segments sid-algorithm** *algorithm-number* command is supported. Configurations stored in NVRAM using the **dynamic sid-algorithm** *algorithm-number* command will be rejected at boot-up.

As a result, SR-ODN configurations with Flexible Algorithm constraints using the **dynamic sid-algorithm** *algorithm-number* command must be re-configured using the **constraints segments sid-algorithm** *algorithm-number* command.

Release 7.9.2 Packages

The Cisco IOS XR software is composed of a base image (ISO) that provides the XR infrastructure. The ISO image is made up of a set of packages (also called RPMs). These packages are of three types:

- A mandatory package that is included in the ISO, which can be upgraded/downgraded.
- An optional package that is included in the ISO, which can be removed/added OR upgraded/downgraded.
- An optional package that is not included in the ISO, which can be added/removed OR upgraded/downgraded after adding to base image.

Visit the [Cisco Software Download](#) page to download the Cisco IOS XR software images.

To determine the Cisco IOS XR Software packages installed on your router, log in to the router and enter the **show install active** command:

RP/0/RP0/CPU0#show install active

Software Hash: 869efde95571b6c1b7e4a6f4c906e86a98501944489ed42cadeca7c7e476b573

Package	Version
xr-8000-af-ea	7.9.2v1.0.0-1
xr-8000-aib	7.9.2v1.0.0-1
xr-8000-bfd	7.9.2v1.0.0-1
xr-8000-buffhdr-ea	7.9.2v1.0.0-1
xr-8000-bundles	7.9.2v1.0.0-1
xr-8000-card-support	7.9.2v1.0.0-1
xr-8000-cdp-ea	7.9.2v1.0.0-1
xr-8000-cem-driver	7.9.2v1.0.0-1
xr-8000-cfm	7.9.2v1.0.0-1
xr-8000-common-otn	7.9.2v1.0.0-1
xr-8000-core	7.9.2v1.0.0-1
xr-8000-cpa	7.9.2v1.0.0-1
xr-8000-cpa-devobj-misc	7.9.2v1.0.0-1
xr-8000-cpa-npu	7.9.2v1.0.0-1
xr-8000-cpa-sb-data	7.9.2v1.0.0-1
xr-8000-dot1x	7.9.2v1.0.0-1
xr-8000-dsm	7.9.2v1.0.0-1
xr-8000-encap-id	7.9.2v1.0.0-1
xr-8000-ether-ea	7.9.2v1.0.0-1
xr-8000-fabric	7.9.2v1.0.0-1
xr-8000-feat-mgr	7.9.2v1.0.0-1
xr-8000-fib-ea	7.9.2v1.0.0-1
xr-8000-forwarder	7.9.2v1.0.0-1
xr-8000-fpd	7.9.2v1.0.0-1
xr-8000-fwd-tools	7.9.2v1.0.0-1
xr-8000-fwplib	7.9.2v1.0.0-1
xr-8000-gil-ea	7.9.2v1.0.0-1
xr-8000-host-core	7.9.2v1.0.0-1
xr-8000-l2fib	7.9.2v1.0.0-1
xr-8000-l2mcast	7.9.2v1.0.0-1
xr-8000-leabaofa	7.9.2v1.0.0-1
xr-8000-libofaasync	7.9.2v1.0.0-1
xr-8000-lpts-ea	7.9.2v1.0.0-1
xr-8000-mcast	7.9.2v1.0.0-1
xr-8000-netflow	7.9.2v1.0.0-1
xr-8000-npu	7.9.2v1.0.0-1
xr-8000-oam	7.9.2v1.0.0-1
xr-8000-optics	7.9.2v1.0.0-1
xr-8000-os-wr9	7.9.2v1.0.0-1
xr-8000-os-wr9-extra	7.9.2v1.0.0-1
xr-8000-pbr	7.9.2v1.0.0-1
xr-8000-pd-port-mode	7.9.2v1.0.0-1
xr-8000-pfilter	7.9.2v1.0.0-1
xr-8000-pidb	7.9.2v1.0.0-1
xr-8000-pktio	7.9.2v1.0.0-1
xr-8000-ple-sdk	7.9.2v1.0.0-1
xr-8000-port-mapper	7.9.2v1.0.0-1
xr-8000-port-mode	7.9.2v1.0.0-1
xr-8000-ppinfo	7.9.2v1.0.0-1
xr-8000-pwhe-ea	7.9.2v1.0.0-1
xr-8000-qos-ea	7.9.2v1.0.0-1
xr-8000-span	7.9.2v1.0.0-1
xr-8000-spio	7.9.2v1.0.0-1
xr-8000-spp-ea	7.9.2v1.0.0-1
xr-8000-timing	7.9.2v1.0.0-1
xr-8000-tunnel-ip	7.9.2v1.0.0-1
xr-8000-utapp-blaze	7.9.2v1.0.0-1
xr-8000-vether	7.9.2v1.0.0-1
xr-8000-ztp-ea	7.9.2v1.0.0-1
xr-aaa	7.9.2v1.0.0-1

xr-acl	7.9.2v1.0.0-1
xr-apphosting	7.9.2v1.0.0-1
xr-appmgr	7.9.2v1.0.0-1
xr-bcdl	7.9.2v1.0.0-1
xr-bfd	7.9.2v1.0.0-1
xr-bgp	7.9.2v1.0.0-1
xr-bgputil	7.9.2v1.0.0-1
xr-bng-stubs	7.9.2v1.0.0-1
xr-bundles	7.9.2v1.0.0-1
xr-cal-pi	7.9.2v1.0.0-1
xr-cdp	7.9.2v1.0.0-1
xr-cds	7.9.2v1.0.0-1
xr-cfgmgr	7.9.2v1.0.0-1
xr-cfm	7.9.2v1.0.0-1
xr-cofo	7.9.2v1.0.0-1
xr-core	7.9.2v1.0.0-1
xr-core-calv	7.9.2v1.0.0-1
xr-cpa-common	7.9.2v1.0.0-1
xr-cpa-common-optics	7.9.2v1.0.0-1
xr-cpa-common-psu	7.9.2v1.0.0-1
xr-cpa-driver-devobj-gnss	7.9.2v1.0.0-1
xr-cpa-driver-devobj-misc	7.9.2v1.0.0-1
xr-cpa-driver-devobj-npu	7.9.2v1.0.0-1
xr-cpa-driver-devobj-phy	7.9.2v1.0.0-1
xr-cpa-driver-devobj-sensors	7.9.2v1.0.0-1
xr-cpa-driver-devobj-storage	7.9.2v1.0.0-1
xr-cpa-driver-devobj-test	7.9.2v1.0.0-1
xr-cpa-driver-devobj-timing	7.9.2v1.0.0-1
xr-cpa-driver-fpgalib-access	7.9.2v1.0.0-1
xr-cpa-driver-fpgalib-common	7.9.2v1.0.0-1
xr-cpa-driver-fpgalib-infra	7.9.2v1.0.0-1
xr-cpa-driver-fpgalib-kmod	7.9.2v1.0.0-1
xr-cpa-driver-fpgalib-misc	7.9.2v1.0.0-1
xr-cpa-driver-fpgalib-optics	7.9.2v1.0.0-1
xr-cpa-driver-optics	7.9.2v1.0.0-1
xr-cpa-ethsw	7.9.2v1.0.0-1
xr-cpa-idprom	7.9.2v1.0.0-1
xr-cpa-tamlib	7.9.2v1.0.0-1
xr-ctc	7.9.2v1.0.0-1
xr-debug	7.9.2v1.0.0-1
xr-dhcp	7.9.2v1.0.0-1
xr-diags	7.9.2v1.0.0-1
xr-diskboot	7.9.2v1.0.0-1
xr-drivers	7.9.2v1.0.0-1
xr-eem	7.9.2v1.0.0-1
xr-elmi-stubs	7.9.2v1.0.0-1
xr-ema	7.9.2v1.0.0-1
xr-enhancedmanageability	7.9.2v1.0.0-1
xr-erp	7.9.2v1.0.0-1
xr-featurecapability	7.9.2v1.0.0-1
xr-fib	7.9.2v1.0.0-1
xr-filesysinv	7.9.2v1.0.0-1
xr-foundation-8000	7.9.2v1.0.0-1
xr-fpd	7.9.2v1.0.0-1
xr-gil	7.9.2v1.0.0-1
xr-ha-infra	7.9.2v1.0.0-1
xr-healthcheck	7.9.2v1.0.0-1
xr-host-core	7.9.2v1.0.0-1
xr-httpclient	7.9.2v1.0.0-1
xr-icpe-eth	7.9.2v1.0.0-1
xr-icpe-opt	7.9.2v1.0.0-1
xr-identifier	7.9.2v1.0.0-1
xr-infra-sla	7.9.2v1.0.0-1
xr-install	7.9.2v1.0.0-1

xr-ip-apps	7.9.2v1.0.0-1
xr-ip-core	7.9.2v1.0.0-1
xr-ip-infra-vrf	7.9.2v1.0.0-1
xr-ip-mibs	7.9.2v1.0.0-1
xr-ip-static	7.9.2v1.0.0-1
xr-ipc	7.9.2v1.0.0-1
xr-ipsla	7.9.2v1.0.0-1
xr-is-is	7.9.2v1.0.0-1
xr-k9sec	7.9.2v1.0.0-1
xr-l2snooptransport	7.9.2v1.0.0-1
xr-l2vpn	7.9.2v1.0.0-1
xr-ldp	7.9.2v1.0.0-1
xr-licensing	7.9.2v1.0.0-1
xr-link-oam	7.9.2v1.0.0-1
xr-linuxnetworking	7.9.2v1.0.0-1
xr-linuxsecurity	7.9.2v1.0.0-1
xr-lldp	7.9.2v1.0.0-1
xr-lpts	7.9.2v1.0.0-1
xr-manageabilityxml	7.9.2v1.0.0-1
xr-mandatory	7.9.2v1.0.0-1
xr-mcast	7.9.2v1.0.0-1
xr-mcastl2snoop	7.9.2v1.0.0-1
xr-mda	7.9.2v1.0.0-1
xr-mps	7.9.2v1.0.0-1
xr-mps-oam	7.9.2v1.0.0-1
xr-mps-oam-client	7.9.2v1.0.0-1
xr-mps-static	7.9.2v1.0.0-1
xr-netflow	7.9.2v1.0.0-1
xr-networkboot	7.9.2v1.0.0-1
xr-nosi	7.9.2v1.0.0-1
xr-ntp	7.9.2v1.0.0-1
xr-ofa	7.9.2v1.0.0-1
xr-optics	7.9.2v1.0.0-1
xr-orrspf	7.9.2v1.0.0-1
xr-os-wr9-apps	7.9.2v1.0.0-1
xr-os-wr9-core	7.9.2v1.0.0-1
xr-os-wr9-hardware	7.9.2v1.0.0-1
xr-ospf	7.9.2v1.0.0-1
xr-p4rt	7.9.2v1.0.0-1
xr-perf-meas	7.9.2v1.0.0-1
xr-perfmgmt	7.9.2v1.0.0-1
xr-pfi	7.9.2v1.0.0-1
xr-pird-stubs	7.9.2v1.0.0-1
xr-pkt-trace	7.9.2v1.0.0-1
xr-platforms-ras	7.9.2v1.0.0-1
xr-pm-alarm	7.9.2v1.0.0-1
xr-procmgr	7.9.2v1.0.0-1
xr-python	7.9.2v1.0.0-1
xr-qos	7.9.2v1.0.0-1
xr-rid-mgr	7.9.2v1.0.0-1
xr-routing	7.9.2v1.0.0-1
xr-rpl	7.9.2v1.0.0-1
xr-rsvp-te	7.9.2v1.0.0-1
xr-security	7.9.2v1.0.0-1
xr-security-tams	7.9.2v1.0.0-1
xr-secy-driver	7.9.2v1.0.0-1
xr-servicelayer	7.9.2v1.0.0-1
xr-snmp	7.9.2v1.0.0-1
xr-snmp-hw	7.9.2v1.0.0-1
xr-span	7.9.2v1.0.0-1
xr-spi-core	7.9.2v1.0.0-1
xr-spi-hw	7.9.2v1.0.0-1
xr-spp	7.9.2v1.0.0-1
xr-sr	7.9.2v1.0.0-1

```

xr-stats 7.9.2v1.0.0-1
xr-stp 7.9.2v1.0.0-1
xr-stubs 7.9.2v1.0.0-1
xr-sysdb 7.9.2v1.0.0-1
xr-syslog 7.9.2v1.0.0-1
xr-telemetry 7.9.2v1.0.0-1
xr-telnet 7.9.2v1.0.0-1
xr-timing 7.9.2v1.0.0-1
xr-tmpdir-cleanup 7.9.2v1.0.0-1
xr-track 7.9.2v1.0.0-1
xr-transport 7.9.2v1.0.0-1
xr-tty 7.9.2v1.0.0-1
xr-tunnel-ip 7.9.2v1.0.0-1
xr-tunnel-nve 7.9.2v1.0.0-1
xr-upgradematrix 7.9.2v1.0.0-1
xr-utils 7.9.2v1.0.0-1
xr-vether 7.9.2v1.0.0-1
xr-vpnmib 7.9.2v1.0.0-1
xr-xmlinfra 7.9.2v1.0.0-1
xr-xrlicurl 7.9.2v1.0.0-1
xr-ztp 7.9.2v1.0.0-1

```

To know about all the RPMs installed including XR, OS and other components use the **show install active all** command.

The software modularity approach provides a flexible model that allows you to install a subset of IOS XR packages on devices based on your individual requirements. All critical components are modularized as packages so that you can select the features that you want to run on your router.



Note The above show command output displays mandatory packages that are installed on the router. To view the optional and bug fix RPM packages, first install the package and use the **show install active summary** command.

Caveats

These caveats are applicable for Cisco 8000 Series Router:

Table 1: Cisco 8000 Series Router Specific Bugs

Bug ID	Headline
CSCwe48642	BGP VPNv4 prefix with ATTR_SET is not installed in VRF routing table
CSCvw49101	Issues with replace pattern when interface is configured under dhcp ipv4
CSCwf01476	Cisco 8201 - HBM temperature sensor issue

Determine Software Version

Log in to the router and enter the **show version** command:

```
RP/0/RP0/CPU0# show version
Cisco IOS XR Software, Version 7.9.2 LNT
Copyright (c) 2013-2023 by Cisco Systems, Inc.
```

Build Information:

```
Built By      : sajshah
Built On     : Thu Jun 29 09:18:55 UTC 2023
Build Host   : iox-ucs-075
Workspace    : /auto/ioxdepot6/GISO/giso_build_lindt/giso_release_create/sapitta_2023-06-29_16-16-59_UTC
Version      : 7.9.2
Label       : 7.9.2-renumber_2
```

```
cisco 8000 (Intel(R) Xeon(R) CPU D-1530 @ 2.40GHz)
cisco 8202-32FH-M (Intel(R) Xeon(R) CPU D-1530 @ 2.40GHz) processor with 32GB of memory
R17-Yukon-SF-PE4 uptime is 3 hours, 44 minutes
Cisco 8200 2RU 32x400G QSFP56-DD w/IOS XR HBM MACsec
```

Determine Firmware Support

Log in to the router and enter **show fpd package** command:

Cisco 8100 Series Router

```
RP/0/RP0/CPU0# show fpd package
```

```
=====
Field Programmable Device Package
=====
```

Card Type	FPD Description	Req Reload	SW Ver	Min Req SW Ver	Min Req Board Ver
8101-32H	Bios	YES	1.07	1.07	0.0
	BiosGolden	YES	1.07	0.13	0.0
	IoFpga	YES	1.04	1.04	0.0
	IoFpgaGolden	YES	1.04	1.04	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.88	1.88	0.0
	x86FpgaGolden	YES	1.88	1.06	0.0
	x86TamFw	YES	6.13	6.13	0.0
	x86TamFwGolden	YES	6.13	6.05	0.0
	8101-32H-O	Bios	YES	0.219	0.219
BiosGolden		YES	0.219	0.219	0.0
IoFpga		YES	1.04	1.04	0.0
IoFpgaGolden		YES	1.04	1.04	0.0
SsdIntelS3520		YES	1.21	1.21	0.0
SsdIntelS4510		YES	11.32	11.32	0.0
SsdMicron5100		YES	7.01	7.01	0.0
SsdMicron5300		YES	0.01	0.01	0.0
x86Fpga		YES	1.88	1.88	0.0
x86FpgaGolden		YES	1.88	1.06	0.0
x86TamFw		YES	6.13	6.13	0.0
x86TamFwGolden		YES	6.13	6.05	0.0
PSU2KW-HVPI		PO-PrimMCU	NO	1.09	1.09
	PO-SecMCU	NO	1.10	1.10	0.0
PSU650W-ACPE	EM-PrimMCU	NO	1.25	1.25	0.0

	EM-SecMCU	NO	1.49	1.49	0.0
	LI-SecMCU	NO	2.55	2.55	0.0
PSU650W-ACPI	EM-PrimMCU	NO	1.25	1.25	0.0
	EM-SecMCU	NO	1.49	1.49	0.0
	LI-SecMCU	NO	2.54	2.54	0.0
PSU930W-DCPE	LI-SecMCU	NO	2.03	2.03	0.0
PSU930W-DCPI	LI-SecMCU	NO	3.03	3.03	0.0

Cisco 8200 Series Router

RP/0/RP0/CPU0# show fpd package

```

=====
                                Field Programmable Device Package
=====
Card Type          FPD Description          Req   SW   Min Req  Min Req
=====          =====          =====  =====  =====  =====
8202                Bios                    YES    1.24   1.24     0.0
                  BiosGolden              YES    1.24   1.15     0.0
                  IoFpga                  YES    1.03   1.03     0.0
                  IoFpgaGolden            YES    1.03   0.33     0.0
                  MiFpga                  YES    1.00   1.00     0.0
                  MiFpgaGolden            YES    1.00   0.02     0.0
                  SsdIntelS3520           YES    1.21   1.21     0.0
                  SsdIntelS4510           YES    11.32  11.32    0.0
                  SsdMicron5100           YES    7.01   7.01     0.0
                  SsdMicron5300           YES    0.01   0.01     0.0
                  x86Fpga                 YES    1.06   1.06     0.0
                  x86FpgaGolden           YES    1.06   0.48     0.0
                  x86TamFw                YES    5.13   5.13     0.0
                  x86TamFwGolden          YES    5.13   5.05     0.0
-----
8202-O              Bios                    YES    1.208  1.208    0.0
                  BiosGolden              YES    1.208  1.207    0.0
                  IoFpga                  YES    1.03   1.03     0.0
                  IoFpgaGolden            YES    1.03   0.33     0.0
                  MiFpga                  YES    1.00   1.00     0.0
                  MiFpgaGolden            YES    1.00   0.02     0.0
                  SsdIntelS3520           YES    1.21   1.21     0.0
                  SsdIntelS4510           YES    11.32  11.32    0.0
                  SsdMicron5100           YES    7.01   7.01     0.0
                  SsdMicron5300           YES    0.01   0.01     0.0
                  x86Fpga                 YES    1.06   1.06     0.0
                  x86FpgaGolden           YES    1.06   0.48     0.0
                  x86TamFw                YES    5.13   5.13     0.0
                  x86TamFwGolden          YES    5.13   5.05     0.0
-----
PSU2KW-ACPE        PO-PrimMCU              NO     1.03   1.03     0.0
                  PO-SecMCU               NO     1.06   1.06     0.0
-----
PSU2KW-ACPI        PO-PrimMCU              NO     1.03   1.03     0.0
                  PO-SecMCU               NO     1.08   1.08     0.0
-----
PSU2KW-DCPE        PO-PrimMCU              NO     1.07   1.07     0.0
-----
PSU2KW-DCPI        PO-PrimMCU              NO     1.07   1.07     0.0
-----
PSU2KW-HVPI        PO-PrimMCU              NO     1.09   1.09     0.0
                  PO-SecMCU               NO     1.10   1.10     0.0

```


Cisco 8800 Series Router

RP/0/RP0/CPU0#show fpd package

```

=====
                                Field Programmable Device Package
=====
Card Type          FPD Description          Req   SW   Min Req   Min Req
=====          =====          Reload Ver   SW Ver   Board Ver
=====          =====          =====
88-LC0-34H14FH    Bios                     YES   1.07   1.07     0.0
                  BiosGolden               YES   1.07   0.13     0.0
                  EthSwitch                 YES   1.04   1.04     0.0
                  EthSwitchGolden          YES   1.04   0.07     0.0
                  IoFpga                    YES   1.09   1.09     0.1
                  IoFpgaGolden              YES   1.09   1.01     0.1
                  SsdIntelS3520             YES   1.21   1.21     0.0
                  SsdIntelS4510             YES   11.32  11.32    0.0
                  SsdMicron5100             YES   7.01   7.01     0.0
                  SsdMicron5300             YES   0.01   0.01     0.0
                  x86Fpga                   YES   0.91   0.91     0.1
                  x86FpgaGolden             YES   0.91   0.78     0.1
                  x86TamFw                  YES   6.13   6.13     0.1
                  x86TamFwGolden           YES   6.13   6.10     0.1
-----
88-LC0-34H14FH-O  Bios                     YES   0.219 0.219    0.0
                  BiosGolden               YES   0.219 0.219    0.0
                  EthSwitch                 YES   1.04   1.04     0.0
                  EthSwitchGolden          YES   1.04   0.07     0.0
                  IoFpga                    YES   1.09   1.09     0.1
                  IoFpgaGolden              YES   1.09   1.01     0.1
                  SsdIntelS3520             YES   1.21   1.21     0.0
                  SsdIntelS4510             YES   11.32  11.32    0.0
                  SsdMicron5100             YES   7.01   7.01     0.0
                  SsdMicron5300             YES   0.01   0.01     0.0
                  x86Fpga                   YES   0.91   0.91     0.1
                  x86FpgaGolden             YES   0.91   0.78     0.1
                  x86TamFw                  YES   6.13   6.13     0.1
                  x86TamFwGolden           YES   6.13   6.10     0.1
-----
88-LC0-36FH       Bios                     YES   1.07   1.07     0.0
                  BiosGolden               YES   1.07   0.13     0.0
                  EthSwitch                 YES   1.04   1.04     0.0
                  EthSwitchGolden          YES   1.04   0.07     0.0
                  IoFpga                    YES   1.13   1.13     0.1
                  IoFpgaGolden              YES   1.13   1.00     0.1
                  SsdIntelS3520             YES   1.21   1.21     0.0
                  SsdIntelS4510             YES   11.32  11.32    0.0
                  SsdMicron5100             YES   7.01   7.01     0.0
                  SsdMicron5300             YES   0.01   0.01     0.0
                  x86Fpga                   YES   1.36   1.36     0.1
                  x86FpgaGolden             YES   1.36   1.04     0.1
                  x86TamFw                  YES   6.13   6.13     0.1
                  x86TamFwGolden           YES   6.13   6.05     0.1
-----
88-LC0-36FH-M     Bios                     YES   1.07   1.07     0.0
                  BiosGolden               YES   1.07   0.13     0.0
                  EthSwitch                 YES   1.04   1.04     0.0
                  EthSwitchGolden          YES   1.04   0.07     0.0
                  IoFpga                    YES   1.13   1.13     0.1
                  IoFpgaGolden              YES   1.13   1.00     0.1
                  SsdIntelS3520             YES   1.21   1.21     0.0
                  SsdIntelS4510             YES   11.32  11.32    0.0
                  SsdMicron5100             YES   7.01   7.01     0.0

```

	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1

88-LC0-36FH-MO	Bios	YES	0.219	0.219	0.0
	BiosGolden	YES	0.219	0.219	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.13	1.13	0.1
	IoFpgaGolden	YES	1.13	1.00	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1

88-LC0-36FH-O	Bios	YES	0.219	0.219	0.0
	BiosGolden	YES	0.219	0.219	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.13	1.13	0.1
	IoFpgaGolden	YES	1.13	1.00	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1

8800-LC-36FH	Bios	YES	1.24	1.24	0.0
	BiosGolden	YES	1.24	1.15	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-LC-36FH-O	Bios	YES	1.208	1.208	0.0
	BiosGolden	YES	1.208	1.207	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0

	x86TamFwGolden	YES	5.13	5.05	0.0

8800-LC-48H	Bios	YES	1.24	1.24	0.0
	BiosGolden	YES	1.24	1.15	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-LC-48H-O	Bios	YES	1.208	1.208	0.0
	BiosGolden	YES	1.208	1.207	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP	Bios	YES	1.24	1.24	0.0
	BiosGolden	YES	1.24	1.15	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.02	1.02	0.0
	TimingFpgaGolden	YES	1.02	0.11	0.0
	x86Fpga	YES	1.32	1.32	0.0
	x86FpgaGolden	YES	1.32	0.24	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP-E	Bios	YES	1.24	1.24	0.0
	BiosGolden	YES	1.24	1.15	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.02	1.02	0.0
	TimingFpgaGolden	YES	1.02	0.11	0.0
	x86Fpga	YES	1.32	1.32	0.0
	x86FpgaGolden	YES	1.32	0.24	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP-O	Bios	YES	1.208	1.208	0.0
	BiosGolden	YES	1.208	1.207	0.0

	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.02	1.02	0.0
	TimingFpgaGolden	YES	1.02	0.11	0.0
	x86Fpga	YES	1.32	1.32	0.0
	x86FpgaGolden	YES	1.32	0.24	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP2	Bios	YES	1.06	1.06	0.3
	BiosGolden	YES	1.06	1.06	0.3
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.00	1.00	0.0
	TimingFpgaGolden	YES	1.00	1.00	0.0
	x86Fpga	YES	1.00	1.00	0.3
	x86FpgaGolden	YES	1.00	1.00	0.3
	x86TamFw	YES	7.13	7.13	0.3
	x86TamFwGolden	YES	7.13	7.13	0.3

8800-RP2-O	Bios	YES	0.02	0.02	0.0
	BiosGolden	YES	0.02	0.02	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.00	1.00	0.0
	TimingFpgaGolden	YES	1.00	1.00	0.0
	x86Fpga	YES	0.73	0.73	0.0
	x86FpgaGolden	YES	0.73	0.73	0.0
	x86TamFw	YES	7.09	7.09	0.0
	x86TamFwGolden	YES	7.09	7.09	0.0

8804-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8804-FC0	IoFpga	YES	1.00	1.00	0.0
	IoFpgaGolden	YES	1.00	0.16	0.0

8808-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8808-FAN-V1	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8808-FC	IoFpga	YES	1.02	1.02	0.0
	IoFpgaGolden	YES	1.02	0.05	0.0

8808-FC0	IoFpga	YES	1.00	1.00	0.0
	IoFpgaGolden	YES	1.00	0.16	0.0

8808-FC1	IoFpga	YES	0.14	0.14	0.0
	IoFpgaGolden	YES	0.14	0.14	0.0

8812-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0
8812-FC	IoFpga	YES	1.02	1.02	0.0
	IoFpgaGolden	YES	1.02	0.05	0.0
	Retimer	YES	3.00	3.00	0.0
8818-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0
8818-FAN-V1	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0
8818-FC	IoFpga	YES	1.02	1.02	0.0
	IoFpgaGolden	YES	1.02	0.05	0.0
	Retimer	YES	3.00	3.00	0.0
8818-FC0	IoFpga	YES	1.00	1.00	0.0
	IoFpgaGolden	YES	1.00	0.16	0.0
	Retimer	YES	3.00	3.00	0.0
PSU-4.8KW-DC100	PO-PrimMCU	NO	3.05	3.05	0.0
	PO-SecMCU	NO	3.05	3.05	0.0
PSU6.3KW-20A-HV	DT-LogicMCU	NO	1.00	1.00	0.0
	DT-PrimMCU	NO	1.00	1.00	0.0
	DT-SecMCU	NO	1.00	1.00	0.0
PSU6.3KW-HV	AB-LogicMCU	NO	3.08	3.08	0.0
	AB-PrimMCU	NO	3.08	3.08	0.0
	AB-SecMCU	NO	3.06	3.06	0.0
	DT-LogicMCU	NO	4.11	4.11	0.0
	DT-PrimMCU	NO	4.01	4.01	0.0
	DT-SecMCU	NO	4.00	4.00	0.0
PWR-4.4KW-DC-V3	DT-LogicMCU	NO	3.02	3.02	0.0
	DT-Prim1MCU	NO	3.01	3.01	0.0
	DT-Prim2MCU	NO	3.01	3.01	0.0
	DT-Sec1MCU	NO	3.01	3.01	0.0
	DT-Sec2MCU	NO	3.01	3.01	0.0

Important Notes

- The warning message that the smart licensing evaluation period has expired is displayed in the console every hour. There is, however, no functionality impact on the device. The issue is seen on routers that don't have the Flexible Consumption licensing model enabled. To stop the repetitive messaging, register the device with the smart licensing server and enable the Flexible Consumption model. Later load a new registration token.

To register the device with the smart licensing server, see the [Registering and Activating Your Router](#).

- When you execute the **show tech-support** command, a temporary directory is created and the related data is stored in this directory. This directory is deleted after the command is completed. For example,

```
Router#run ls -ltr
drwxrwxrwx. 3 root root show-tech-fabric-link-incl-loca-010cpu0_2.tgz
```

In case, you terminate the **show tech-support** command manually, we recommend you to delete the corresponding show tech directory if not needed.

Production Software Maintenance Updates (SMUs)

A production SMU is a SMU that is formally requested, developed, tested, and released. Production SMUs are intended for use in a live network environment and are formally supported by the Cisco TAC and the relevant development teams. Software bugs identified through software recommendations or Bug Search Tools are not a basis for production SMU requests.

For information on production SMU types, refer the [Production SMU Types](#) section of the *IOS XR Software Maintenance Updates (SMUs)* guide.

Supported Transceiver Modules

To determine the transceivers that Cisco hardware device supports, refer to the [Transceiver Module Group \(TMG\) Compatibility Matrix](#) tool.

Cisco IOS XR Error messages

To view, search, compare, and download Cisco IOS XR Error Messages, refer to the [Cisco IOS XR Error messages](#) tool.

Cisco IOS XR MIBs

To determine the MIBs supported by platform and release, refer to the [Cisco IOS XR MIBs](#) tool.

Related Documentation

The most current Cisco 8000 router documentation is located at the following URL:

<https://www.cisco.com/c/en/us/td/docs/iosxr/8000-series-routers.html>



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