



# Release Notes for Cisco 1000 Series Integrated Services Routers, Cisco IOS XE 17.13.x

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## About Cisco 1000 Series Integrated Services Routers

The Cisco 1000 Series Integrated Services Routers (also referred to as router in this document) are powerful fixed branch routers based on the Cisco IOS XE operating system. They are multi-core routers with separate core for data plane and control plane. There are two primary models with 8 LAN ports and 4 LAN ports. Features such as Smart Licensing, VDSL2 and ADSL2/2+, 802.11ac with Wave 2, 4G LTE-Advanced and 3G/4G LTE and LTEA Omnidirectional Dipole Antenna (LTE-ANTM-SMA-D) are supported on the router.



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**Note** Cisco IOS XE 17.13.1a is the first release for Cisco 1000 Series Integrated Services Routers in the Cisco IOS XE 17.13.x release series.

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**Note** Starting with Cisco IOS XE Amsterdam 17.3.2 release, with the introduction of Smart Licensing Using Policy, even if you configure a hostname for a product instance or device, only the Unique Device Identifier (UDI) is displayed. This change in the display can be observed in all licensing utilities and user interfaces where the hostname was displayed in earlier releases. It does not affect any licensing functionality. There is no workaround for this limitation.

The licensing utilities and user interfaces that are affected by this limitation include only the following:

- Cisco Smart Software Manager (CSSM),
  - Cisco Smart License Utility (CSLU), and
  - Smart Software Manager On-Prem (SSM On-Prem).
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We recommend that you review the field notices to determine whether your software or hardware platforms are affected. You can access the field notices from <https://www.cisco.com/c/en/us/support/web/tsd-products-field-notice-summary.html#%7Etab-product-categories>.

## New and Changed Hardware and Software Features

### New and Changed Software Features in Cisco IOS XE 17.13.1a

Table 1: New Software Features

Feature	Description
<a href="#">Application Performance Monitor</a>	The Application Performance Monitor feature introduces a simplified framework that enables you to configure intent-based performance monitors. With this framework, you can view real-time, end-to-end application performance filtered by client segments, network segments, and server segments.
<a href="#">Cisco SD-Routing Cloud OnRamp for Multicloud</a>	Cisco SD-Routing Cloud OnRamp for Multicloud extends enterprise WAN to public clouds. This multicloud solution helps to integrate public cloud infrastructure into the Cisco Catalyst SD-Routing devices. With these capabilities, the devices can access the applications hosted in the cloud.
<a href="#">Enhancements to BGP Maximum Prefix</a>	<ul style="list-style-type: none"> <li>Discard Extra Prefixes: This enhancement introduces the <a href="#">neighbor maximum prefix discard extra</a> command to drop all excess prefixes received from the neighbor when the configured value of the prefixes exceed the maximum limit.</li> <li>Logging enhancement: The logging system is enhanced to support a per neighbor logging time every 60 seconds.</li> </ul>
<a href="#">Initiating GARP for NAT Mapping</a>	This feature introduces support for configuring retry time intervals for GARP messages on the BD-VIF interface. You can configure this feature using the global <a href="#">ip arp nat-garp-retry</a> and <a href="#">ip nat inside source static</a> commands.
<a href="#">SD-Routing Configuration Group</a>	The SD-Routing Configuration Group feature provides a simple, reusable, and structured method to configure the SD-Routing device using Cisco Catalyst SD-WAN Manager.
<a href="#">Schedule Software Upgrade on SD-Routing Devices</a>	With this feature, you can schedule software image upgrade on Cisco SD-Routing devices. This allows you to avoid any downtime due to the software upgrade process.
<a href="#">Speed Test for SD-Routing Devices</a>	Cisco SD-WAN Manager allows you to measure the network speed and available bandwidth between a device and an iPerf3 server. The speed tests measure upload speed from the source device to the selected or specified iperf3 server, and measure download speed from the iperf3 server to the source device.
<a href="#">Strength Enforcement for IKE Security Association (SA)</a>	This feature ensures that the strength of the IKE (IKEv1 and IKEv2) SA encryption cipher is greater than or equal to the strength of its child IPsec SA encryption cipher. To enable this feature, use the <a href="#">crypto ipsec ike sa-strength-enforcement</a> command.

Feature	Description
<a href="#">Support for Security-Enhanced Linux</a>	SELinux (Security-Enhanced Linux) is a solution designed to incorporate a strong, flexible mandatory access control (MAC) architecture into Cisco IOS XE platforms.  From Cisco IOS XE 17.13.1a, SELinux is enabled by default in Enforcing mode for Cisco IOS XE platforms.
<a href="#">Support for Persistence of BGP Dynamic Neighbors</a>	From IOS XE 17.13.1a, the device maintains the neighbor information even after the session is terminated. To configure this, use the <a href="#">bgp listen persistent</a> command for all dynamic neighbors and <a href="#">bgp listen range peer-group persistent</a> command for specific neighbors.
<a href="#">Support for Packet Capture for SD-Routing</a>	This feature allows you to configure options to capture the bidirectional IPv6 traffic data to troubleshoot connectivity on the SD-Routing devices.
<a href="#">Support for Flexible NetFlow Application Visibility on SD-Routing Devices</a>	The Flexible NetFlow (FNF) feature provides statistics on packets flowing through the device and helps to identify the tunnel or service VPNs. Also, it provides visibility for all the traffic that passes through the VPN0 on Cisco SD-Routing devices by using the SD-Routing Application Intelligence Engine (SAIE).
<b>Cube Features</b>	
<a href="#">NAT Traversal using RTP Keepalive</a>	From Cisco IOS XE 17.13.1a onwards, using RTP keepalive packets, CUBE supports media transmission in the NAT environment.



**Note** From Cisco IOS XE Release 17.9.1a, guestshell is removed from the IOS XE software image. As a result, Zero Touch Provisioning (ZTP) python script is no longer supported on Cisco 1000 Series Integrated Services Routers. If you need to use guestshell, then download it from <https://developer.cisco.com/docs/iox/#!iox-resource-downloads/downloads>. For more information, see [Guestshell installation](#) procedure.

## Cisco ISR1000 ROMmon Compatibility Matrix

The following table lists the ROMmon releases supported in Cisco IOS XE 16.x.x releases and Cisco IOS XE 17.x.x releases.



**Note** To identify the manufacturing date, use the **show license udi** command. For example:

```
Router#show license udi
UDI: PID:C1131-8PLTEPWB,SN:FGLxxxxLCQ6
```

The xxxx in the command output represents the manufacturing date.

- If the manufacturing date is greater than or equal to 0x2535, the manufactured ROMmon version is 17.6(1r) or higher.
- If the manufacturing date is less than 0x2535, the ROMmon will be automatically upgraded to 17.5(1r) or above when the Cisco IOS XE 17.9.x release is installed.
- The minimal or recommended ROMmon version for devices using Cisco IOS XE 17.5 or later is 17.5(1r) or later.



**Note** To upgrade to Cisco IOS XE Dublin 17.12.x, follow these steps:

1. If you are on a device that is running software version between Cisco IOS XE 16.x to Cisco IOS XE 17.4.x, upgrade to any IOS XE image between Cisco IOS XE 17.5.x to Cisco IOS XE 17.10.x.
2. After performing step a, upgrade to Cisco IOS XE 17.12.x.
3. For devices that are running on software version Cisco IOS XE 17.5.x or later, you can upgrade to Cisco IOS XE 17.12.x directly.

**Table 2: Minimum and Recommended ROMmon Releases Supported on Cisco 1000 Series Integrated Services Routers**

Cisco IOS XE Release	Minimum ROMmon Release for IOS XE	Recommended ROMmon Release for IOS XE
16.6.x	16.6(1r)	16.6(1r)
16.7.x	16.6(1r)	16.6(1r)
16.8.x	16.8(1r)	16.8(1r)
16.9.x	16.9(1r)	16.9(1r)
16.10.x	16.9(1r)	16.9(1r)
16.11.x	16.9(1r)	16.9(1r)
16.12.x	16.9(1r)	16.12(1r)
17.2.x	16.9(1r)	16.12(1r)
17.3.x	16.12(2r)	16.12(2r)
17.4.x	16.12(2r)	16.12(2r)

Cisco IOS XE Release	Minimum ROMmon Release for IOS XE	Recommended ROMmon Release for IOS XE
17.5.x	17.5(1r)	17.5(1r)
17.6.x	17.5(1r)	17.5(1r)
17.7.x	17.5(1r)	17.5(1r)
17.8.x	17.5(1r)	17.5(1r)
17.9.x	17.5(1r)	17.5(1r)
17.10.x	17.5(1r)	17.5(1r)
17.11.x	17.5(1r)	17.5(1r)
17.12.x	17.5(1r)	17.5(1r)
17.13.x	17.5(1r)	17.5(1r)

## Resolved and Open Bugs in Cisco IOS XE 17.13.x

### Resolved Bugs in Cisco IOS XE 17.13.1a

*Table 3: Resolved Bugs in Cisco IOS XE 17.13.1a*

Bug ID	Description
<a href="#">CSCwh10813</a>	Add verbose log to indicate grant ra-auto unconfigures grant auto in PKI server.
<a href="#">CSCwf25735</a>	QoS with more than four remarks with set-cos does not work.
<a href="#">CSCwf44703</a>	NAT64 prefix is not originated into OMP.
<a href="#">CSCwf80400</a>	IOS XE router may experience unexpected reset while executing <b>show utd engine standard statistics</b> .
<a href="#">CSCwfl4607</a>	Crash observed exporting PKCS12 to terminal via SSH CLI.
<a href="#">CSCwf71116</a>	Static route keeps advertising via OMP even though there is no route.
<a href="#">CSCwf45486</a>	OMP to BGP redistribution leads to incorrect AS_Path installation on chosen Next-Hop.

### Open Bugs in Cisco IOS XE 17.13.1a

*Table 4: Open Bugs in Cisco IOS XE 17.13.1a*

Bug ID	Description
<a href="#">CSCwh94906</a>	WLC segmentation fault crash with Network Mobility Services Protocol (NMSP).

Bug ID	Description
<a href="#">CSCwi03502</a>	Creation of CLI to push at#enadis=0, followed by at#reboot to FN980, is required when configuring Multi-PDN.
<a href="#">CSCwh84068</a>	Device crash after changing NAT HSL configuration.
<a href="#">CSCwh77221</a>	SNMP unable to poll SDWAN tunnel data after a minute.
<a href="#">CSCwi15930</a>	Device failing to upgrade due to CDB issue.
<a href="#">CSCwh98286</a>	Device reloaded with critical process qfp_ucose_radium fault on fp_0_0 (rc=139).
<a href="#">CSCwi11807</a>	snmpbulkget breaks the OID appRouteStatisticsTable after minute not returning the correct order.
<a href="#">CSCwh76453</a>	Tracker for TLOC extension is down even though TLOC is up and there is ICMP reachability.
<a href="#">CSCwi14178</a>	Failed to connect to device : x.x.x.x Port: 830 user : vmanage-admin error : Connection failed.
<a href="#">CSCwi08171</a>	Router may crash due to Crypto IKMP process.
<a href="#">CSCwh01678</a>	Device platform FTM crash with SIG enabled.
<a href="#">CSCwi05395</a>	snmpbulkget cannot get loss, latency and jitter for probe class table and class interval table OIDs.
<a href="#">CSCwi06843</a>	Endpoint tracker triggers a CPU hog.
<a href="#">CSCwi23562</a>	When RADIUS down, and there is an IKE-AUTH request received, the box stops replying to DPD packets.
<a href="#">CSCwi00369</a>	Device lost security parameter after upgrade.
<a href="#">CSCwi06404</a>	PKI related crash after failing a CRL fetch.
<a href="#">CSCwi13563</a>	IP SLA probe for end-point-tracker does not work once endpoint tracker is changed until reload.
<a href="#">CSCwh65016</a>	Unexpected reboots on device due to QFP exception.
<a href="#">CSCwi15688</a>	Unexpected NAT translation occurs in a specific network.
<a href="#">CSCwh91136</a>	Traffic not encrypted and dropped over IPSEC SVTI tunnel.
<a href="#">CSCwi07148</a>	Interfaces configuration change to <b>negotiation auto</b> to <b>no negotiation auto</b> after a reboot.
<a href="#">CSCwi16015</a>	SSE tunnels do not come up with dialer interface. Relax check in IKE.
<a href="#">CSCwi19875</a>	Device is unable to process hidden characters in a file while trying to use bootstrap method.

Bug ID	Description
<a href="#">CSCwi35177</a>	Router crash caused by continuous interface flap, interface associated to many IPsec interfaces.
<a href="#">CSCwh52440</a>	IP SLA does not have checks for ICMP probes to be sent on source interface.
<a href="#">CSCwi31833</a>	UTD deployment failing if deployed from remote server hostname rather than the IP.
<a href="#">CSCwi30529</a>	Template push fails when AAA authorization is set to local.

## Related Information

- [Hardware Installation Guide](#)
- [Software Configuration Guide](#)
- [Smart Licensing using Policy](#)

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### Cisco Bug Search Tool

[Cisco Bug Search Tool](#) (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

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