



Release Notes for Cisco Catalyst IR1101, IR1800, IR8140 and IR8340 Routers, IOS XE 26.2.x



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Cisco Catalyst Rugged Series Routers, IOS XE 26.2.x

This release note provides information about the new features, resolved and open issues, supported software packages and information on how to obtain support and documentation for Cisco IOS XE releases.

New software features

This section provides a brief description of the new software features introduced in this release.

IOS XE 26.2.1

Table 1. New software features for Cisco Catalyst Rugged Series Routers, IOS XE 26.2.1

Product Impact	Feature	Description
Security	Resilient Infrastructure	As part of Cisco's Resilient Infrastructure program and Cisco's commitment to secure infrastructure, this release includes additional changes aimed towards continuing to make Cisco IOS XE more secure by default. Note that some of these changes may require operational changes if you are not following secure best practices. This release includes the following changes: • The RADIUS client appends the Message-Authenticator attribute (Attribute 80 HMAC-MD5) to all outgoing Access-Request packets to mitigate cryptographic forgery and Blast-RADIUS vulnerabilities (CVE-2024-3596). • The RADIUS client drops incoming Access-Accept, Access-Reject, and Access-Challenge packets if the Message-Authenticator is absent or invalid. Ensure AAA servers (example, Cisco ISE) are configured to return Attribute 80. • Outbound SSH connections enforce Trust-On-First-Use (TOFU). The device prompts to verify and store remote server host keys in the known-hosts database on first connection and validates against them on subsequent sessions. • Proxy ARP is disabled by default across all routed interfaces, SVIs, and sub interfaces to reduce Layer 2 broadcast domains and prevent ARP spoofing. Configure the ip proxy-arp command explicitly if required. • The embedded web server daemon is disabled by default on factory configurations to restrict unauthenticated management access. Web UI and RESTCONF require explicit enablement of the ip http secure-server command. • The IOS XE device rejects unauthenticated NTP Mode 6 and Mode 7 control queries (monlist) to prevent NTP reflection and amplification DDoS attacks. Standard time synchronization (Modes 3 and 4) is unaffected. • System logging timestamps automatically include the four-digit calendar year (service timestamps log datetime msec year) to standardize multi-year audit logs and SIEM compliance. • Integrates Linux auditd inside Cisco IOx Guest Shell. All commands, system calls, and privilege escalation events (sudo) executed inside the container are forwarded to the host syslog facility. • Warning messages are emitted on the console and logged to syslog whenever legacy insecure protocols (telnet, ftp, tftp, http) are enabled in the configuration.

Product Impact	Feature	Description
		Real-time tracking of active insecure services is published to the operational database (operDB) and YANG data models, allowing management controllers (such as Cisco Catalyst Center) to monitor security compliance.
Enhanced Security	Password Encryption Types for Wireless Profile Configuration	From this release, credentials entered as Type 0 in wireless profile configurations are automatically converted to and stored as Type 6 encrypted values. Type 7 credentials are deprecated and rejected. This behavior applies to WLAN profile passphrases and management credentials in Embedded Wireless Controller mode and to SSID profile secret keys in Workgroup Bridge mode. Supported device: IR1800
Greater Control	Segment Routing over MPLS on WAN Ports	From this release, you can configure Segment Routing over Multiprotocol Label Switching (SR-MPLS) on supported WAN ports. SR-MPLS encodes an ordered list of segments in the packet and integrates with MPLS services such as Layer 3 VPN and Ethernet VPN. It provides scalable path control, traffic-engineering capabilities, and protection against link and node failures without requiring per-flow state in the network. Supported devices: IR1101 and IR8340
Enhanced Security	SGT Inline Tagging on LAN Ports	From this release, you can configure Security Group Tag (SGT) Inline Tagging on supported IR8340 LAN ports. The router can impose and propagate SGT metadata in Ethernet frames, enabling Cisco TrustSec micro-segmentation without requiring Security Group Tag Exchange Protocol peering. This release supports SGT imposition and tag propagation on LAN ports; Cisco TrustSec enforcement on those ports is not supported. A Network Advantage license is required. Supported device: IR8340
Enhanced Security	IKEv2 and IPsec PFS Post Quantum Cryptography	This feature combines a traditional Diffie-Hellman key exchange with the NIST-standardized Module-Lattice-Based Key-Encapsulation Mechanism (ML-KEM) to establish keys for IKEv2/IPsec sessions. This hybrid approach helps protect recorded VPN traffic against future harvest-now, decrypt-later attacks. You can configure ML-KEM algorithms with IPsec Perfect Forward Secrecy. Supported devices: IR1101, IR1800, IR8340, IR8140
Greater Control	DHCP Option 82	From this release, DHCP servers on routers support DHCP Option 82 relay information. The DHCP server can use the Circuit ID and Remote ID inserted by a DHCP relay agent to select an address pool for a client. This support enables predictable, location-based IP address assignment without requiring administrators to track client MAC addresses. Supported devices: IR1101, IR1800, IR8340, IR8140
Greater Visibility	OT Application Recognition in NBAR	This feature enhances the NBAR engine to identify a foundational set of Operational Technology (OT) protocols including DNP3, IEC104, MMS, NTCIP, and OPC-UA. Supported devices: IR1101, IR1800, IR8340, IR8140

Product Impact	Feature	Description
Enhanced Security	Post Quantum Cryptography for SSHv2 Sessions	Starting with this release, you can configure ML-KEM-based hybrid key-exchange algorithms for SSHv2 client and server sessions. These algorithms combine ML-KEM with a classical elliptic-curve component to provide quantum-resistant key establishment for secure remote management. PQC algorithms must be explicitly enabled and are not supported when the device operates in FIPS mode. Supported devices: IR1101 , IR1800 , IR8140 , IR8340

New hardware features

This section provides a brief description of the new hardware features introduced in this release.

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Table 2. New hardware features for Cisco Catalyst Rugged Series Routers, IOS XE 26.2.1

Product Impact	Feature	Description
Enhanced Connectivity	P-5GS6-RC-GL PIM Support	The P-5GS6-RC-GL Pluggable Interface Module adds 5G Standalone (SA) Reduced Capability (RedCap) and 4G LTE connectivity. The module supports primary or secondary WAN deployments and provides a seamless migration path to 5G RedCap while maintaining existing operational workflows. The module automatically falls back to 4G LTE when 5G service is unavailable. Supported devices: IR1800

Change in behavior

ACL enforcement for raw-socket serial connections

Starting with Cisco IOS XE Release 26.2.1, an access control list (ACL) applied to an asynchronous serial-line configuration might not block **raw-socket** traffic.

This behavior occurs when:

The IR8340 router has an IRM-NIM-RS232 module installed.

The serial interface uses the **encapsulation raw-tcp** or **encapsulation raw-udp** command.

An ACL is applied by using the **access-class access-list-number {in | out}** command.

To control this traffic, apply an ACL to an upstream Layer 3 interface. Alternatively, use a zone-based firewall to permit or deny connections to the configured raw-socket TCP or UDP port.

Note: This behavior affects Cisco IR platforms running Cisco IOS XE that support raw-socket serial connections.

Resolved issues

You can also access the resolved caveats for this release through the [Cisco Bug Search Tool](#).

Note:

- This software release may contain bug fixes first introduced in other releases. To see additional information, click the bug ID to access the [Cisco Bug Search Tool](#).
- To search for a documented Cisco product issue, enter the bug ID in the [Cisco Bug Search Tool](#).

This table lists the resolved issues in this specific software release.

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Table 3. Resolved issues for Cisco Catalyst Rugged Series Routers, IOS XE 26.2.1

Bug ID	Description
CSCwt01182	IR8340: PTP from UTC to TAI on an IR8340 is not working
CSCws03232	IR8340: Access list failing to block when applied to raw-socket serial line config
CSCws49513	IR8140 wpan hardware key-info does not match mesh-security keys
CSCws66114	IR8340 is failing upgrade from 17.15.1a to 17.15.4 using install commands
CSCws68355	NVRAM Header Corruption on Power Cycle on IR8100, IR1101 and C6300 devices
CSCws92361	BBU shows in idle state with low SOC and it starts charging after resetting the BBU
CSCwt05807	Telemetry sends incorrect data when sensor's reading is negative
CSCwt31445	Unhelpful message when IOx app fail to match expected version with actual version
CSCwt69103	IR8340 does not send BPDU when using EtherChannel
CSCwu34243	%TDLDB-3-DBPERSIST_OPERATION_FAILURE on DB: /tmp/rp/tdldb/0/CTRL_MNG_CFG_DB and unable to save config or reload router
CSCwu37431	IR8140: WPAN incoming packet totals incorrectly calculated
CSCwo27598	SD-Routing: with no ignition-enable and no ignition-sense, throws config error
CSCwt31347	vManage app installation fails with "Failed to install appid ..." when app built on Windows
CSCws62413	IR8340 Unexpected Reload with LocalSoftADR and Kernel Panic with SMP NOPTI

Open issues

You can also access the open caveats for this release through the [Cisco Bug Search Tool](#).

This table lists the open issues in this specific software release.

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Table 4. Open issues for Cisco Catalyst Rugged Series Routers, IOS XE 26.2.1

Bug ID	Description
CSCwy57254	Fragmented Multicast traffic being dropped due to DHCP Snooping

Known issues

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There are no known issues in this release.

Compatibility

This section lists compatibility information for cellular module modem firmware and OEM/PRI versions, including the latest firmware available for each modem used by Cisco IoT routers. See the [Cisco Firmware Upgrade Guide for 4G LTE and 5G Cellular Modems](#) for upgrade instructions.

Cisco IOS XE updates do not automatically update modem firmware. You should manually check and update all modems to the latest firmware version, including any related PRI and/or OEM PRI components. Refer to the following table for the most up-to-date information.

Table 5. Cellular Module Modem Firmware

Cellular Module	Modem and Firmware version	Software download link
P-5GS6-GL	FN980 38.03.0202	https://software.cisco.com/download/home/286329300/type/
P-LTEAP18-GL IRMH-LTEAP18-GL	LM960 32.00.1x9	Generic: https://software.cisco.com/download/home/286324996/type North America: https://software.cisco.com/download/home/286324947/type
P-LTEA-EA IRMH-LTEA-EA	Generic and Europe: EM7455 02.39.00.00 Canada, North America ATT, North American Sprint: EM7455 02.32.11.00 North America Verizon: EM7455 02.33.03.00	Generic: https://software.cisco.com/download/home/286308426/type Europe: https://software.cisco.com/download/home/286308426/type Canada: https://software.cisco.com/download/home/286319713/type North America ATT: https://software.cisco.com/download/home/286311442/type North American Sprint: https://software.cisco.com/download/home/286311455/type North America Verizon: https://software.cisco.com/download/home/286311429/type
P-LTEA-LA IRMH-LTEA-LA	Generic: EM7430 02.38.00.00 Australia Telstra EM7430	Generic: https://software.cisco.com/download/home/286308413/type Australia Telstra: https://software.cisco.com/download/home/286311403/type Japan:

Cellular Module	Modem and Firmware version	Software download link
	02.33.03.00 Japan: EM7430 02.38.00.00	https://software.cisco.com/download/home/286311416/type
P-LTE-VZW	WP7601 02.37.0x.00	https://software.cisco.com/download/home/286322139/type
P-LTE-US	WP7603 02.37.0x.00	https://software.cisco.com/download/home/286322143/type
P-LTE-JN	WP7605 02.28.03	https://software.cisco.com/download/home/286322156/type
P-LTE-GB	WP7607 02.37.03.05	https://software.cisco.com/download/home/286322147/type
P-LTE-IN	WP7608 02.28.03	https://software.cisco.com/download/home/286322152/type
P-LTE-AU	WP7609 02.28.03	https://software.cisco.com/download/home/286323720/type
P-LTE-MNA	WP7610 02.37.03.05	https://software.cisco.com/download/home/286324942/type
P-LTEA7-NA	EM7411 01.14.24.00	https://software.cisco.com/download/home/286333933/type
P-LTEA7-EAL	EM7421 01.14.22.00	https://software.cisco.com/download/home/286333937/type
P-LTEA7-JP	EM7431 01.16.08.00	https://software.cisco.com/download/home/286333939/type
P-5GS6-R16SA-GL	EM9293 03.04.10.01	https://software.cisco.com/download/home/286334597/type
P-5GS6-RC-GL	EM8695 02.01.03.00	https://software.cisco.com/download/home/286344029/type

Cellular Module	Modem and Firmware version	Software download link
IRMH-5GS6-RC-GL	EM8695 02.01.03.00	https://software.cisco.com/download/home/286344029/type
P-LTE-450	Not applicable v1.3.0	Contact Intelliport for the software download link (info@intelliport.hu)

Supported software packages

This section provides information about the release packages associated with Cisco Catalyst Rugged Series Routers.

For the latest software downloads, see the [Software Download](#) page.

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Table 6. Software packages for Cisco Catalyst Rugged Series Routers, IOS XE 26.2.1

Router	Image type	Filename
IR1101	Universal	ir1101-universalk9.26.02.01.SPA.bin
IR1800	Universal	ir1800-universalk9.26.02.01.SPA.bin
	UTD Engine for Cisco IR1800	secapp-utd.26.02.01prd7.1.0.6_SV3.12.4.0_XE26.2.aarch64.tar
IR8100	Universal	ir8100-universalk9.26.02.01.SPA.bin
	UTD Engine for Cisco IR8100	secapp-utd.26.02.01prd7.1.0.6_SV3.12.4.0_XE26.2.aarch64.tar
IR8340	Universal	ir8340-universalk9.26.02.01.SPA.bin
	UTD Engine for Cisco IR8340	secapp-utd.26.02.01prd7.1.0.6_SV3.12.4.0_XE26.2.x86_64.tar

Port Naming Conventions

This section shows the names of the ports on Cisco Catalyst IR1101, IR1800, IR8140, and IR8340 routers.

Table 7. Cisco Catalyst IR1101 Rugged Series Router

Port	Naming Convention
Gigabit Ethernet combo port	GigabitEthernet0/0/0
Gigabit Ethernet SFP port on IRM-1100	GigabitEthernet0/0/5
Gigabit Ethernet on IRM-1100-4A2T mounted on the Expansion side	GigabitEthernet0/0/5
	GigabitEthernet0/0/6

Port	Naming Convention
Fast Ethernet ports	FastEthernet0/0/1 FastEthernet0/0/2 FastEthernet0/0/3 FastEthernet0/0/4
Cellular Interface on IR1101 Base	Cellular 0/1/0 Cellular 0/1/1
Cellular Interface on IRM-1100 mounted on the top (EM) side	Cellular 0/3/0 Cellular 0/3/1
Cellular Interface on IRM-1100 mounted on the bottom (CM) side	Cellular 0/4/0 Cellular 0/4/1
Asynchronous Serial Interface Base	async0/2/0
IRM-1100-4A2T is mounted on the top (EM) side	async 0/3/0 async 0/3/1 async 0/3/2 async 0/3/3
IRM-1100-4A2T is mounted on the bottom (CM) side	async 0/4/0 async 0/4/1 async 0/4/2 async 0/4/3
USB	usbflash0:
mSATA	msata:
IR1101 Base Unit Alarm input	alarm contact 0
GPIO on IRM-1100	alarm contact 1-4
LoRaWAN interface on IR1101 Base	LORAWAN0/1/0
LoRaWAN interface on the top (EM) side	LORAWAN0/3/0
Gigabit Ethernet interface for LTE 450MHz module on IR1101 Base	GigabitEthernet0/1/0 GigabitEthernet0/1/0.x for multiPDN operation

Table 8. Cisco Catalyst IR1800 Rugged Series Router

Port	Naming Convention
Gigabit Ethernet combo port	GigabitEthernet0/0/0
Gigabit Ethernet ports	GigabitEthernet0/1/0 GigabitEthernet0/1/1 GigabitEthernet0/1/2 GigabitEthernet0/1/3
Cellular Interface	Cellular 0/4/0 Cellular 0/4/1 Cellular 0/5/0 Cellular 0/5/1
Asynchronous Serial Interface	Async0/2/0 Async0/2/1 (when the base platform supports two asynchronous serial interfaces)
Wi-Fi Interface	WI0/1/4
USB	usbflash0:
mSATA	msata:
GPIO	alarm contact 1-4

Table 9. Cisco Catalyst IR8140 Heavy Duty Series Router

Port	Naming Convention
Gigabit Ethernet ports	GigabitEthernet0/0/0 GigabitEthernet0/0/1
Cellular Interface	Cellular 0/2/0 Cellular 0/2/1 Cellular 0/3/0 Cellular 0/3/1
SSD	VirtualPortGroup0
WPAN	Wpan 0/1/0 Wpan 0/2/0 Wpan 0/3/0
Digital I/O	alarm contact 1-2

Table 10. Cisco Catalyst IR8340 Rugged Series Router

Port	Naming Convention
Gigabit Ethernet WAN ports	GigabitEthernet0/0/0 GigabitEthernet0/0/1
Gigabit Ethernet LAN ports	GigabitEthernet0/1/0 GigabitEthernet0/1/1 GigabitEthernet0/1/2 GigabitEthernet0/1/3 GigabitEthernet0/1/4 GigabitEthernet0/1/5 GigabitEthernet0/1/6 GigabitEthernet0/1/7 GigabitEthernet0/1/8 GigabitEthernet0/1/9 GigabitEthernet0/1/10 GigabitEthernet0/1/11
Cellular Interface	Cellular 0/4/0 Cellular 0/4/1 Cellular 0/5/0 Cellular 0/5/1
NIM Interface (Asynchronous/Synchronous Serial Ports or E1/T1 ports)	0/2/0 0/2/1 0/3/0 0/3/1
mSATA SSD	msata:
GPIO	alarm contact 0-2
USB Port	usb0:
Console Port	Line console 0

Related resources

Table 11. Related resources

Document	Description
Cisco IOS XE	Provides information about products supported by Cisco IOS XE.
Cisco Catalyst IR1101 Rugged Series Router Cisco Catalyst IR1800 Rugged Series Router Cisco Catalyst IR8140 Heavy Duty Series Router Cisco Catalyst IR8340 Rugged Series Router	Provides data sheets for the specified routers.
Cisco Industrial Routers and Industrial Wireless Access Points Antenna Guide	Provides descriptions and installation instructions for wireless antennas supported on the Cisco Industrial Series Routers and Industrial Wireless Access Points.
Cisco SD-WAN	Provides information about SD-WAN releases and resources.
Cisco IoT Field Network Director	Provides information about Cisco IoT Field Network Director releases and resources.
Cisco Industrial Network Director	Provides information about Cisco Industrial Network Director releases and resources.
Smart Licensing Using Policy on the Cisco Catalyst IR1101, IR1800, IR8140, and IR8340 Routers or the Cisco Industrial IoT Licensing	Provides information about Smart Licensing Using Policy solutions and their deployment on IOS XE routers.
Cisco Support	You can submit a service request here.
Cisco TAC	Provides the most up-to-date troubleshooting information.
Cisco Feature Navigator	Use CFN to browse Cisco products and find relevant features and licenses. It allows you to compare platforms, determine common features between products, and identify unique product features. Cisco Feature Navigator also includes a MIB Locator tab.

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