



New and Changed Feature Information

This section lists all the new and changed features for the *Telemetry Configuration Guide for Cisco 8000 Series Routers*.

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New and Changed Telemetry Features

Feature	Description	Changed in Release	Where Documented
Enhancements to Hardware Timestamp	Telemetry messages carry a timestamp per interface to indicate the time when data is collected from the hardware. With this feature, the support for hardware timestamp is extended to MPLS Traffic Engineering (MPLS TE) counters, Segment Routing for Traffic Engineering (SR-TE) interface counters, protocol statistics, and bundle protocol counters.	Release 7.3.4	Hardware Timestamp
Stream QoS Statistics Telemetry Data	You can use the Cisco-IOS-XR-qos-ma-oper.yang data model to stream telemetry data on aggregated QoS bundle statistics from the route processor (RP). The bundle statistics are now stored in the RP, where data is persistent, and its retrieval is unaffected by bundle member or line card failure. In earlier releases, line cards stored data on QoS statistics, and any bundle member or line card failure caused data loss.	Release 7.3.3	Stream QoS Statistics Telemetry Data

Feature	Description	Changed in Release	Where Documented
Enhanced Syslog Notifications for Unresolved Line Card Forwarding Paths	This feature notifies you of Line Card and Route Processor paths not resolving in the Forwarding Information Base. Both Model-Driven Telemetry (MDT) and Event Driven Telemetry (EDT) notifications are supported. This feature provides for improved diagnostics.	Release 7.3.3	Enhanced Syslog Notifications for Unresolved Line Card Forwarding Paths
Push Cached Generic Counters Data for Telemetry	<p>This feature streams telemetry data for generic counters using the data producer to push data from the source using the telemetry push library. This push mechanism ensures that any change to the cache streams the latest data to the collector as an event-driven telemetry notification.</p> <p>This feature introduces support for the following sensor path:</p> <p>Cisco-IOS-XR-infra-statsd-oper:infrastatistics/interfaces/interface/cache/generic-counters</p>	Release 7.3.3	Target-Defined Mode for Cached Generic Counters Data
Stream Telemetry Data about PBR Decapsulation Statistics	<p>This feature streams telemetry data about header decapsulation statistics for traffic that uses the Policy-Based Routing (PBR) functionality to bypass a routing table lookup for egress. You use the</p> <p>Cisco-IOS-XR-infra-policymgr-oper.yang data model to capture the decapsulation data for Generic Routing Encapsulation (GRE) and Generic UDP Encapsulation (GUE) tunneling protocols. Decapsulation data helps you understand if all encapsulated packets are decapsulated and alerts you to issues if there is a mismatch in the number of packets.</p>	Release 7.3.2	Stream Telemetry Data about PBR Decapsulation Statistics

Feature	Description	Changed in Release	Where Documented
AI-driven telemetry (ADT)	<p>This feature leverages machine learning to detect and retrieve important network-state changes on the router. Relevant data is filtered and exported to the network management system for analysis or troubleshooting purposes.</p> <p>ADT significantly simplifies the configuration of streaming telemetry, and you are no longer required to manually choose sensor paths or tune the cadence at which counters have to be collected.</p>	Release 7.3.1	Build Intelligence on the Router Using AI-Driven Telemetry
Stream Digital Optical Monitoring (DOM) Data	<p>This feature streams fiber optic transceiver parameters such as optical input or output levels, temperature, laser bias current, supply voltage, receiver power, bias threshold in real-time. This helps network operators to easily locate a fiber link failure, thereby simplifying the maintenance process, and improving overall system reliability.</p>	Release 7.3.1	Sensor Path
Hardware timestamp	<p>Whenever periodic statistics are streamed, the collector reads the data from its internal cache, instead of fetching the data from the hardware.</p> <p>When the data is read from the cache, the rate at which data is processed shows spikes because the timestamp from the collector is off by several seconds. With hardware timestamping, the inconsistencies that are observed when reading data from the cache file is removed.</p>	Release 7.3.1	Hardware Timestamp

