



New and Changed Information for Segment Routing Features

This table summarizes the new and changed feature information for the *Segment Routing Configuration Guide for Cisco 8000 Series Routers*, and lists where they are documented.

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New and Changed Segment Routing Features

Segment Routing Features Added or Modified in IOS XR Release 7.3.x

Feature	Description	Introduced/Changed in Release	Where Documented
Data Plane Validation for SR-MPLS IPv6-based Controller Instantiated LSPs	You can now verify the network configuration and paths and policies set up, without interrupting or potentially disrupting live network traffic, for SR-MPLS (Segment Routing over Multiprotocol Label Switching) IPv6-based Label Switched-Paths (LSPs). With this feature, you can validate controller instantiated LSPs programmed directly into the forwarding hardware.	Release 7.3.6	Data Plane Validation Support for SR-MPLS IPv6-based LSPs
Disable Penultimate Hop Popping	You can now disable the penultimate hop popping (PHP) without adding an explicit-Null label.	Release 7.3.5	Configuring a Prefix-SID on the IS-IS Enabled Loopback Interface

Feature	Description	Introduced/Changed in Release	Where Documented
Overriding MPLS Imposition (IP2MPLS) via Service Layer API (SL-API)	In scenarios where sr-prefer is enabled, this feature allows you to specify SR prefixes through an Access Control List where their imposition forwarding entry (IP-to-MPLS) gives preference to SL-API, instead of the SR native LSP.	Release 7.3.5	Overriding MPLS Imposition (IP-to-MPLS) via Service Layer API (SL-API)
BGP Best Path Computation using SR Policy Paths	You can now disable the penultimate hop popping (PHP) without adding an explicit-Null label.	Release 7.3.4	BGP Best Path Computation using SR Policy Paths
BGP Proxy Prefix SID	This feature is a BGP extension to signal BGP prefix-SIDs. This feature allows you to attach BGP prefix SID attributes for remote prefixes learned over BGP labeled unicast (LU) sessions and propagate them as SR prefixes using BGP LU. This allows an LSP towards non-SR endpoints to use segment routing global block in the SR domain.	Release 7.3.2	Configure BGP Proxy Prefix SID
BFDv6-triggered TI-LFA	BFDv6-triggered TI-LFA allows you to obtain link, node, and SRLG protection using the Bidirectional Forwarding Detection (BFD) over IPv6 protocol.	Release 7.3.2	Behaviors and Limitations of TI-LFA

Feature	Description	Introduced/Changed in Release	Where Documented
Segment Routing Flexible Algorithm	This feature allows for user-defined algorithms where the IGP computes paths based on a combination of metric type and constraint. An operator can assign custom SR prefix-SIDs to realize forwarding beyond link-cost-based SPF. As a result, this feature provides a traffic-engineered path computed automatically by the IGP to any destination reachable by the IGP.	Release 7.3.1	Enabling Segment Routing Flexible Algorithm
Link Delay Measurement using TWAMP Light Encoding	The PM for link delay uses the IP/UDP packet format defined in RFC 5357 (TWAMP-Light) for probes. Two-Way Active Measurement Protocol (TWAMP) adds two-way or round-trip measurement capabilities. TWAMP employs time stamps applied at the echo destination (reflector) to enable greater accuracy.	Release 7.3.1	Configure Performance Measurement
SR OAM for SR Policy (Policy Name / Binding SID / Custom label stack)	This feature extends SR OAM ping and traceroute function for an SR policy (or binding SID)-LSP end-point combination. This addresses the limitations of the Nil-FEC LSP Ping and Traceroute function which cannot perform a ping operation to a segment list that is not associated with an installed SR policy. Also, it cannot validate egress device-specific SR policies.	Release 7.3.1	Segment Routing Ping and Traceroute

Feature	Description	Introduced/Changed in Release	Where Documented
Segment Routing Data Plane Monitoring	Unreported traffic drops in MPLS networks could be difficult to detect and isolate. They can be caused by user configuration, out-of-sync neighbors, or incorrect data-plane programming. Segment Routing Data Plane Monitoring (SR DPM) provides a scalable solution to address data-plane consistency verification and unreported traffic drops. SR DPM validates the actual data plane status of all FIB entries associated with SR IGP prefix SIDs.	Release 7.3.1	Segment Routing Data Plane Monitoring