

Feature History

The following table lists the new and modified features supported in the CEM Generic Configuration Guide in Cisco IOS XE 17 releases, on Cisco NCS 4201 and Cisco NCS 4202 routers.

Feature	Description
Cisco IOS XE Amsterdam 17.4.1	
STS1E Framed SAToP Support on IMA3G	Support on clock recovery on STS-1e controller for framed SAToP on the following modes: • T3 • CT3 • VT-15

The following table lists the new and modified features supported in the CEM Generic Configuration Guide in Cisco IOS XE 17 releases, on Cisco NCS 4206 and Cisco NCS 4216 routers.

Feature	Description
Cisco IOS XE Cupertino 17.8.1	
CAS feature to perform Super Frame to Extended Super Frame conversion	Channel Associated Signaling (CAS) is a method of signaling each traffic channel rather than having a dedicated signaling channel. CAS uses the same channel, which carries voice or data to pass control signals. This provides an advantage as the implementation of CAS is inexpensive. Supports CAS feature with "in-band" signaling type. You can configure CAS on a specific interface or under global CEM class.
Digital Signaling level zero (DS0) Loopbacks - Network and Local	DS0 loopback is used for testing and troubleshooting the T1 or E1 channel over PSN. You can configure local and remote loopback on channelized T1 or E1 controller (DS0 channel). If the PSN has several NxDS0 pseudowires that are configured at the TDM side, then the same number of NxDS0 loopbacks can be configured on the controller. This provides better TDM maintenance.
Cisco IOS XE Cupertino 17.7.1	

Feature	Description
Increased MPLS label scale support	Starting with Cisco IOS XE Cupertino 17.7.1 release, you can further increase the MPLS label range from 32,768 to 40,950 to configure the dynamic label range.
TAP and Split TAP Support for Protected Interfaces	TAP and split TAP support for the following protected interfaces on both receive and transmit direction: • Automatic Protection Switching (APS) • Unidirectional Path Switching Ring (UPSR) • Card Protection Group (CPG) With this feature support, you can perform monitoring and debugging on these virtual protection interfaces.
Cisco IOS XE Bengaluru 17.6.1	
Test Access Port (TAP) or Test Access Digroup (TAD)	Support for Test access port or digroup (TAP/TAD) in the following aspects: • Non-intrusive monitoring for both receive and transmit directions. • Split and terminate cross connection for intrusive testing in both directions. The TAP feature helps in monitoring and debugging purpose.
Cisco IOS XE Bengaluru 17.5.1	
RSP-based Non-Intrusive Monitor Ports	This feature allows you to transmit data to multiple connections from a single source using the RSP-based non-intrusive monitor port or Terminal Access Point (TAP) port. It establishes a one-way cross-connect listen connection that listens to either the source or destination of an existing cross-connect or a local connect connection. This feature is only supported on Cisco RSP3 module. This feature is supported on NCS 4206/4216 routers. This feature is supported on the following CEM interface modules: • 1-port OC481/ STM-16 or 4-port OC-12/OC-3 / STM-1/STM-4 + 12-Port T1/E1 + 4-Port T3/E3 CEM Interface Module • 48-port T3/E3 CEM Interface Module • 48-port T1/E1 CEM Interface Module • NCS 4200 1-Port 10 Gigabit MR + 8-Port 20 Gigabit LR CEM, iMSG Interface Module
Support for Static MPLS Labels on Cisco RSP3 Module	This feature allows you to provision an Any Transport over Multiprotocol (AToM) label switching static pseudowire without the use of a directed control connection. In environments that do not or cannot use directed control protocols, this feature provides a means for provisioning the pseudowire parameters statically at the Cisco IOS Command-Line Interface (CLI). This feature is supported on Cisco RSP3 module. This feature is supported on NCS 4206/4216 routers.
Cisco IOS XE Bengaluru 17.4.1	

Feature	Description
Support for all 0s and 1s BERT patterns	All 0s and 1s BERT pattern support on SONET and SDH interfaces.
STS1E Framed SAToP Support on IMA3G	Support on clock recovery on STS-1e controller for framed SAToP on the following modes: • T3 • CT3 • VT-15
Cisco IOS XE Amsterdam 17.3.1	
ACR and DCR Scale Support	Adaptive Clock Recovery (ACR) and Differential Clock Recovery (DCR) are techniques used for Circuit Emulation (CEM) to recover clocks on the Cisco RSP3 module.
Pseudowire Scale Support	A maximum of 26,880 CEM Pseudowires are supported on the Cisco RSP3 chassis using combination of the 1-Port OC-192 or 8-Port Low Rate CEM interface module.