# What's New for Cisco IOS XE 17.15.x

This chapter describes the new hardware and software features that are supported on the Cisco NCS 4201 and Cisco NCS 4202 Series routers.

For information on features supported for each release, see Feature Compatibility Matrix.

## What's New in Hardware for Cisco IOS XE 17.15.1

| Optics | Description |
| --- | --- |
| Management Port LED Status Indicators | The right LED indicator for the management port on the router now displays the link status and activity of the management port. You can monitor and troubleshoot the status and activity of the management port more effectively when the LED indicator turns green or in the Off state.<br><br>For more details on the link status and activity, see the CPU Management Port LED Indication table. |

## What's New in Software for Cisco IOS XE 17.15.1

| Feature | Description |
| --- | --- |
| **Alarm Configuring and Monitoring** | |
| SONET Alarms for APS | • With Automatic Protection Switching (APS), SONET alarms soaking as per the recommendation from GR-253.<br><br>• Alarm is raised or cleared during APS manual, force, and lock out switch actions.<br><br>• When traffic is switched to an alternate link in the APS group, the severity of the alarms is affected based on service impact. |

| Feature | Description |
|---|---|
| SD-BER and SF-BER Alarms for T1/E1 and T3/E3 services | Signal Failure-Bit Error Rate (SF-BER) and Signal Degrade-BER (SD-BER) alarms are declared when there is a signal failure or signal degradation that happens in the traffic. These alarms may be raised when the error rate of a given entity exceeds the user-configured BER threshold value. This helps the administrator to take corrective actions. |
| **CEM OCx** | |
| DDS DS0 Remote Latching Loopback | DS0 loopback is used for testing and troubleshooting the T1 or E1, T3 or E3, and OCx channel over PSN. You can configure DS0 loopback on these controllers for remote devices. |
| Protection Switching Count for Protected SONET Interface | In SONET with redundancy, an Automatic protection switching (APS) occurs between working and standby protection networks due to reasons like a circuit failure. Whenever the switching happens, the switching count is tracked using a Protection Switching Count (PSC) parameter. Depending on the PSC count, you can debug the network to identify the reason for extensive switching and work on the corrective actions. |
| **TCAM and NFT Commands** | |
| TCAM and NFT Commands | New commands have been introduced for the Ternary Content-Addressable Memory (TCAM) and NFT. **TCAM** You can now view the Ternary Content-Addressable Memory (TCAM) utilization for each control plane TCAM entry. Command: show platform hardware pp active tcam utilization control-plane-sessions **NFT** • You can now enable the collection of the packets punted to the CPU from the NFT hash table. Command: platform nft-summarization enable • Once the above command is enabled, you can use a timer to clean up the NFT hash table. Command: platform nft-summarization timer-value • You can view a summary of the packets punted to the CPU from the NFT hash table. Command: show platform hardware pp active infrastructure pi nft summary |