New and Changed Information

See Data Models Configuration Guide for Cisco NCS 1001 and Telemetry Configuration Guide for Cisco NCS 1000 Series to refer the other configuration guides of NCS 1001.

This table summarizes new and changed information for configuration guide for Release 6.3.2, and lists where the features are documented.

Table 1: New and Changed Features - R6.3.2

Feature	Description	Where Documented
Cisco ONS 15216-MD48-CME2	Cisco ONS 15216-MD48-CME2 is a 2x2 dual coupler and splitter module, that have the MUX and the DEMUX functions implemented as two different sections. The DEMUX section includes an optical splitter to split the optical signal evenly into two different output ports: EVEN-TX port and ODD-TX port. The optical coupler provides the MUX section and combines even and odd channels signals at 100 GHz spacing (EVEN-RX and ODD-RX ports respectively) into a signal of 50 GHz channel spacing. The DEMUX section also provides the input signal to dual monitor ports. The MUX section also duplicates the combined spectrum on two output ports.	*Installing the Cisco ONS 15216-MD-48-CM Interleaver and Deinterleaver Pluggable and Cisco ONS 15216-MD-48-CME, 15216-MD48-CME2 Coupler and Splitter Pluggable*

Feature	Description	Where Documented
ILA Configuration	The optical amplifier module (NCS1K-EDFA) can be configured in In-line amplifier (ILA) mode. ILA mode is used when it is not possible to connect to terminal nodes with a single span. ILA mode is supported only in slots 1 and 3.	In-Line Amplifier
Event Driven Telemetry	NCS 1001 supports Event-based telemetry. Several sensor paths are supported for Event-based telemetry in NCS 1001.	*Telemetry Configuration Guide for Cisco NCS 1000 Series*
Network Topology Discovery	Network topology discovery feature based on OSPF protocol, allows to discover NCS 1001 nodes connected to each other through OSC links without configuring the static routes.	Network Topology Discovery
Open Config Optical Model	The Open Config Optical Model is a cross-connect model that provides a unique way to provision Cisco NCS 1001 using YANG models that are defined for configuration data and operational data. The gRPC (google-defined Remote Procedure Calls) and NETCONF (Network Configuration Protocol) communication protocols are used to establish connection between the client and Cisco NCS 1001. Cisco NCS 1001 supports open config models according to the optical transport functions available on system. The following are the open config supported models. • Amplifier model, supported by NCS1001 EDFA modules. • Transport Line Protection model, supported by NCS 1001 PSM modules. • Channel Monitoring model, supported by NCS1001 EDFA by means of its OCM capability.	*Data Models Configuration Guide for the Cisco NCS 1001*.

Feature	Description	Where Documented
PSM Autothreshold	NCS 1001 supports autothreshold for Protection Switching Module (PSM). RX Power is the optical power reading from a photodiode, and is a total power on the path where the photodiode is placed. The RX-low-threshold is available in the show controller ots Parameter Statistics. Two RX low thresholds can be set on the PSM-one for RX working port (W-RX), and another for RX protected port (P-RX). When auto-threshold is not enabled, the RX-low threshold value active on PSM working and protected RX-ports are the default values or the values set by the user manually. If auto-threshold is enabled on the PSM, the RX-low thresholds values for port 1 and 2 configured by the user are ignored. The PSM Auto-threshold configuration is highly recommended for a three-way topology.	Autothreshold for Protection Switching Module
PSM Virtual Diode	Protection Switching Module (PSM) Virtual diode provides an optical power reading even if PSM does not have a photodiode on COM-RX. The value of the virtual COM-RX is calculated using the power provided by the photodiodes on Working-TX and Protected-TX. PSM does not have photodiode on COM-RX. There are two photodiodes on Working-TX and Protected-TX present after the VOA.	PSM Virtual Photodiode

Feature	Description	Where Documented
PSM Path Protection	NCS 1001 supports Protection Switching Module (PSM) Path Protection.When the path protection is configured with a manual threshold, you must ensure that: • During the first installation, the value on the PSM RX-low Threshold should be set as 3dB below the minimum power for a single channel. The value must ensure that the PSM is able to switch on with a single channel or when the EDFA is in APR (+8dBm). • When the system is up and running with the final number of channels, the PSM RX-low Threshold must be set 3dB below the target power. • After a fiber cut and restore, in order to ensure that the PSM is able to switch on, it is necessary to set the value of PSM RX-low Threshold similar to the value set during the installation. The PSM Auto-threshold configuration is highly recommended for a three-way topology. In a three-way topology, when the path protection is configured with a manual threshold, you must follow the above steps. If you did not configure all the above steps properly, you may encounter the following issues: • Switch may not be bidirectional. • Double switch on PSM in path protection, when set in 3 way configuration.	Configure Protection Switching Module

Feature	Description	Where Documented
PSM 3 way Protection	NCS 1001 supports PSM 3 way protection scheme formed by combining a Section Protection scheme with a Path Protection scheme. There is no confiugration change required in PSM to implement the PSM 3 way protection scheme. The Path protection scheme is in the middle of one of the two paths of Section Protection scheme.	

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