Cisco NCS 1014 Advanced Multihaul Optical Platform - An Overview

This chapter provides an overview for Cisco NCS 1014 Advanced Multihaul Optical Platform.

Cisco NCS 1014 Chassis and Line Cards

The Cisco NCS 1014 chassis is an advanced multihaul optical platform supporting transponders and line system cards. It is a 2RU chassis that delivers a universal transponder solution which provides excellent performance for metro, long-haul and submarine applications.

Cisco NCS 1014 chassis has the following modules:

- Removable controller
- Removable backup solid state drive (SSD)
- Two replaceable power supply units (PSU)
- Three replaceable fan modules
- Four line cards

In Release 7.11.1, the Cisco NCS 1014 chassis supports the following line cards:

- NCS1K14-2.4T-K9—2.4T DWDM Transponder Card
- NCS1K14-CCMD-16-C/L—16-port Colorless Mux/Demux Optical Line Card
- NCS1K4-1.2T-K9—1.2T DWDM Transponder Card

From Release 24.1.1, the Cisco NCS 1014 chassis supports the NCS1K14-2.4T-X-K9—2.4T-X DWDM Transponder/Muxponder Card

1.2T Card

The 1.2T DWDM line card is a transponder that has 12 client ports to deliver 100GE and OTU4 client traffic. This line card has two trunks that operate at any rate between 100G and 600G in 50G increments. It uses Advanced Encryption Standard with a 256-bit key length (AES256)-based Layer-1 encryption to encrypt client-side data for 100GE and OTU4. The NCS1K4-1.2T-K9 line card is a single-slot unit that supports C-band traffic.

2.4T Line Card

The 2.4T line card is a coherent optics Transponder and Muxponder for the Cisco NCS 1014 chassis. It is a single-slot card that supports C-band traffic at trunk ports. This line card delivers 400GE, 100GE, and OTU4 client traffic over two trunk ports operating at speeds ranging from 400G to 1.2T each.

CCMD-16 Line Card

The CCMD-16 optical line card has:

- Two line ports to transmit and receive using the same LC connectors.
- 16 ports for add/drop with LC connector-based interfaces

There are two variants of the optical line card:

- **NCS1K14-CCMD-16-C**

  The NCS1K14-CCMD-16-C line card is a C-band, 16-port Colorless Direct attach optical line card with EDFA. It can host up to 16 channels. It supports any signal distribution between 191250 and 196200 GHz, for example, the 64 channels grid with 75-GHz spacing.

- **NCS1K14-CCMD-16-L**

  The NCS1K14-CCMD-16-L line card is an L-band, 16-port Colorless Direct attach optical line card with EDFA. It can host up to 16 channels. It supports any signal distribution between 186025 and 191000 GHz, for example, the 64 channels grid with 75-GHz spacing.

Document Objective

The Cisco NCS 1014 Configuration Guide describes how to configure various card modes for the line cards that are supported in the Cisco NCS 1014 chassis.

Document Organization

This document is organized into the following chapters:

Chapter	Description
Configuring the Card Mode	Describes different card mode configurations and supported data rates for the 1.2T, 2.4T and 2.4T-X line cards.

Chapter	Description
Performance Monitoring	Describes the configuration and retrieval of PM counters for the optics, Ethernet, coherent DSP, OCH, and OMS controller types in flex-bin, 30-second, 15-minute, or 24-hour intervals.