Release Notes for Cisco Routed Optical Networking Release 4.0

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Routed Optical Networking

Routed Optical Networking simplifies complex multilayer networks by collapsing network layers and minimizing the functional overlap. Routed Optical Networking also improves the overall network efficiency by optimizing each layer of the network. The architecture also integrates open data models and standard APIs, enriching powerful automation making Routed Optical Networking easier to operate than legacy networks.

Routed Optical Networking is able to provide improvements and simplification because it:

- Leverages state of the art optical and routing technologies to converge services over an IP infrastructure connected by a simplified DWDM layer
- Merges IP and private line services onto a single unified IP layer
- Simplifies end-to-end network architecture
- Utilizes a modern software stack that spans across network management and control planes
- Improves the capacity and cost efficiency of networks
- Has a smaller carbon footprint
- Offers unified capacity planning, unified EMS, unified path optimization, orchestration, and assurance
- Provides an automation ecosystem with open, programmable, and modular components
- Total Cost of Ownership savings across CapEx and OpEx

Routed Optical Networking utilizes high-density routers, high-capacity ZR or ZR+ pluggable digital coherent optics, simplified DWDM line systems, and end-to-end multi-layer automation to create next generation networks.

New features in Release 4.0

This section provides a brief description of the new features introduced in this release.

Table 1. New software features for Routed Optical Networking, Release 4.0

Feature	Release	Description
Automation Starter Solution	Crosswork Hierarchical Controller Release 11.0 Crosswork Network Controller Element Management System 7.1	The Routed Optical Networking Automation Starter solution is a simplified automation stack comprised of Crosswork Hierarchical Controller 11.0 and CNC 7.1 EMS. The reduced footprint installation fully supports IP network inventory, topology, and PM data using CNC EMS and full multi-layer network management using Crosswork HCO.
HCO Discovery and Assurance for QDD-OLS	Crosswork Hierarchical Controller Release 11.0	QDD-OLS pluggable discovery and assurance is supported in Crosswork Hierarchical Controller Release 11.0

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Support for QDD 400G Ultra-Long Haul pluggable modules	Cisco IOS XR Release 25.2.1	The following routers support DP04QSDD-ULH-A1: • 88-LC0-36FH-M • 88-LC0-36FH • NC57-18DD-SE • NC57-24DD
Support for QSFP28 ZR DCO	Cisco IOS XR Release 25.2.1	The following routers support DP01QS28-E20 and DP01QS28-E25: • ASR-9902 • ASR-9903 • A9903-20HG-PEC • A9K-4HG • A99-4HG • A9K-8HG • A9K-20HG • A99-32HG • A99-4T • N540X-16Z4G8Q2C-D/A • N540-ACC-SYS
NCS 2000 SVO and EPNM adapters	Crosswork Hierarchical Controller Release 11.0	Crosswork Hierarchical Controller can now manage NCS 2000 devices directly with the help of the SVO adapter.
CMIS AppSel support	Cisco IOS XR Release 25.2.1	You can now manage your DP04QSDD-ULH-A1 modules using Common Management Interface Specification AppSel.

Open issues

This table lists the open issues in this specific software release.

Note: This software release may contain open bugs first identified in other releases. To see additional information, click the bug ID to access the Cisco Bug Search Tool.

Table 2. Open issues for Routed Optical Networking, Release 4.0

Bug ID	Description
CSCwo63497	Incorrect Channel Power Value Displayed Under Optical Cross Connections for All OXCs
CSCwo76407	Service Status Shows as OOS-AU, AINS Instead of OOS-AU, AINS & FLT Under Optical Cross Connections
CSCwo97263	DAC Rates Not Updated for 400G ULH After Configuration
CSCwq07255	HCO IP Link Service Create failure due to Bandwidth Mismatch btw Coherent DSP & Eth IF in CNC
CSCwq09784	HCO CrossLink Validation not supported for 100G ZR (E20/25)
CSCwo87237	NCS57b1(LNT) - ZR Ports are not showing under NI and SHQL
CSCwp65619	ONC Displays Incorrect Submode (N/A) for 400G-ULH Coherent Optics aliens

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CSCwq20807	CoherentDSP 0/0/1/0 on asr9903 Router Not Reflected in CNC API Response After Service Creation, Causing IP Link Creation Failure in HCO
CSCwp65792	Issue with Termination API response from CNC for QDD-OLS pluggable
CSCwp64091	The setting of Expected Power on add/drop ports is no more available in 25.1.1
CSCwq10237	CONC Displays Incorrect Submode (N/A) for 100G-ZR(E20/E25) Coherent Optics aliens
CSCwq18209	[Brain] HCO::Operation Details Missing in Service Manager Due to Brain Unavailability During IP-Link Creation
CSCwq08085	Configured Tx Power Displays as -999.90 dBm for All Appsel Codes in 400G-ULH Optics

Related documentation

Cisco Optical Network Planner Configuration Guide, Release 7.1

Cisco WAE 7.6.0 Installation Guide

Cisco Crosswork Network Controller 7.1 Installation Guide

Cisco Network Services Orchestrator 6.4.1 Documentation

Cisco Crosswork Network Controller 7.1 Administration Guide

Cisco Crosswork Hierarchical Controller 11.0 Administration Guide

Cisco Optical Network Controller 25.1.2 Configuration Guide

Cisco NSO Transport-SDN Function Pack Bundle User Guide 6.0

Installation Guide for Cisco Evolved Programmable Network Manager 8.1

Cisco NSO Routed Optical Networking Core Function Pack Documentation

Hardware Installation Guide for Cisco NCS 1010 and Cisco NCS 1000 Passive Modules

Cisco NCS 1010 Configuration Guides

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