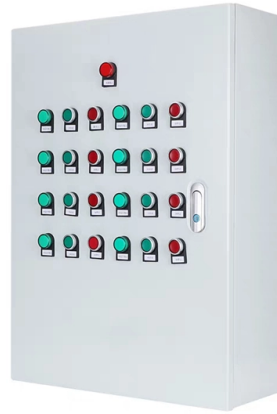


Join OTN Router 400G



AI Overview

To join a 400G OTN router, you need to configure the appropriate line cards, ODUk controllers, and coherent optics modules to establish a high-speed optical transport connection.

Hardware Requirements

- Line Cards: For Cisco NCS 4000 series, use cards such as NCS4K-4H-OPW-QC2, NCS4K-24LR-O-S, or NCS4K-2H-OK, which support high-speed OTN ports and 400G aggregation .
- Coherent Optics Modules: Use CFP2-DCO modules for 400G transport. Nokia's CFP2-DCO modules support 100G to 400G capacities and provide multi-haul coherent WDM line interfaces suitable for metro, regional, and long-haul networks .
- Client Ports: QSFP+ pluggables can be used on the client side, typically five QSFP+ modules at 40G each to achieve 400G total bandwidth .

Configuration Steps

- OTUk/ODUk Mapping: Map client signals (Ethernet, MPLS, IP) into ODUk containers according to ITU-T G.709 standards. ODUk acts as the server layer for client signals, and OTUk carries the ODUk over the optical network .
- Configure ODU Controllers: In the Node View of the router management interface (CTC for Cisco), select the line card, set the administrative state, enable GCC1, and configure Time Slot Granularity (TSG) if needed. Enable performance monitoring (PM) for the ODUk .
- Cross-Connection: Establish ODU cross-connections between client and network ports to create end-to-end channels. Configure squelching to shut down the laser in case of network failure, preventing unnecessary power usage and alarms

Article Content

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Optical transport network

An optical transport network (OTN) is a digital wrapper that encapsulates frames of data, to allow multiple data sources to be sent on the same channel. This creates an optical virtual private network

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Configuration Guide for Cisco NCS 4000 Series

Check the GCC1 check box to enable the GCC1 on the corresponding OTN. Choose Enable. From the TSG drop-down list, choose the TSG (Time Slot Granularity) value from 1.25 to 2.5.

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Cisco ASR 900 Router Series Configuration Guide, Cisco IOS XE 17

The chassis acts as an aggregator for ethernet, TDM, and SONET traffic to connect to an OTN network and vice versa. The ports on the interface modules are capable of OTN functionality. The OTN

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Causeway one work

One platform to plan, monitor, communicate and analyse traffic disruptions.

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Understand ODU and ODU Cross Connections NTP-K1 Configure the OTN Controllers Using CTC Upgrade to 400G Fabric Card Using CTC Upgrade FPD Understand ODU and ODU

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400G ZR/ZR+ Remote Routers/Switches In case of symmetric 400G routers interconnect multiple option can be considered – assuming a WDM system in the middle 3 major use cases are possible

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BRKSPG-2029

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Growing the Network with 400 Gbps Coherent Pluggable Optics

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1 Router/Switch Compatibility 2

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://ntmmgroup.co.za>

Email: sales@ntmmgroup.co.za

Phone: +27 82 471 2596

Address: Unit 7, Optic Park, 24 High-Tech Lane, Century City, Cape Town,
7441, South Africa

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