Cisco Optical Site Manager (COSM)

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Cisco® Optical Site Manager (COSM) introduces programmability and automation, enabling end-to-end, software-defined automated networks that ease turn-up and site operations and maximize revenue for our customers.

Product overview

COSM provides a **site aggregation function** for Optical Sites consisting of any NCS 1000 and/or NCS2000 devices. COSM provides an abstraction of the optical site topology with the underlying connected network elements, interacting with an SDN controller and/or to a web UI user.

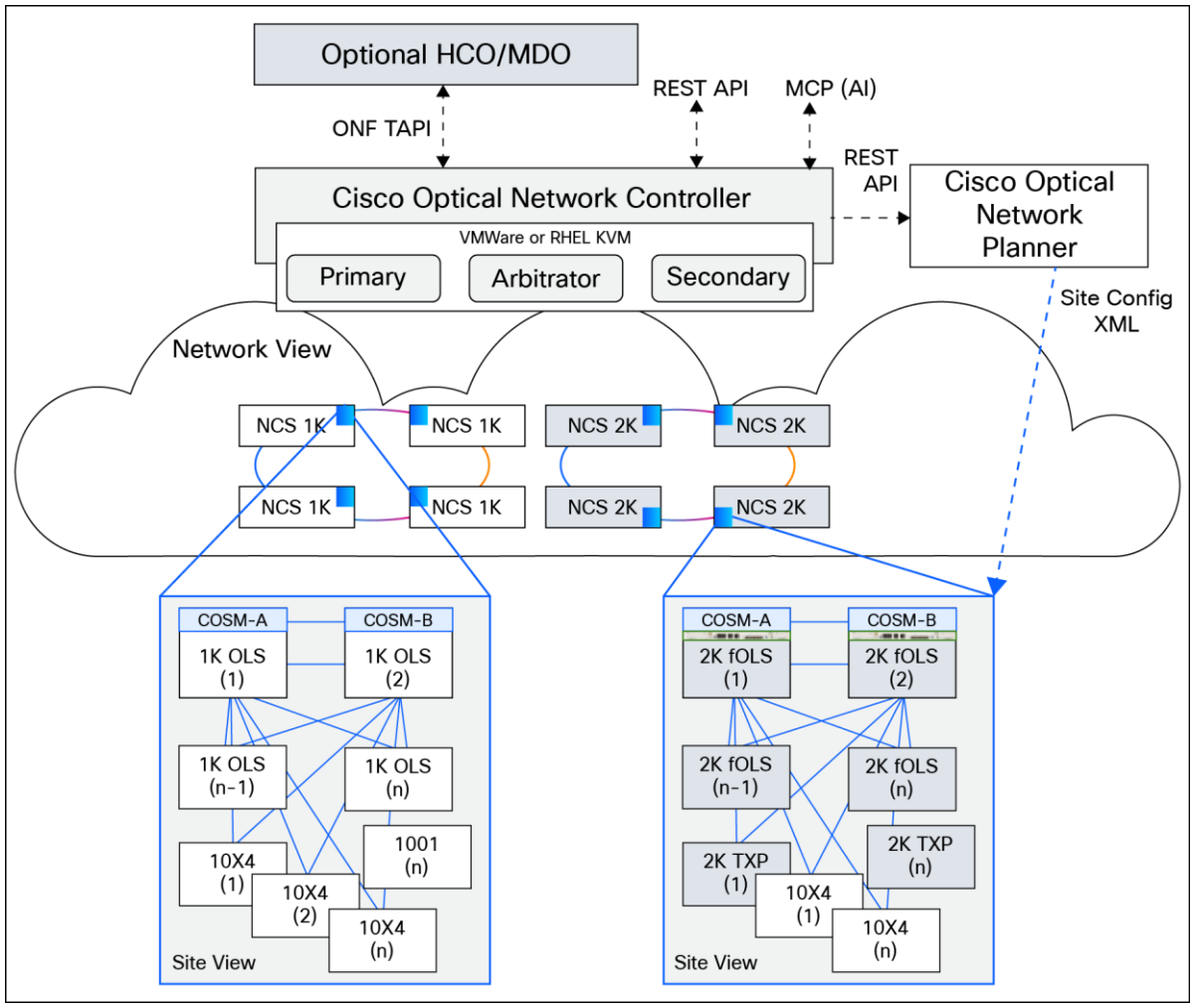


Figure 1.
Cisco Optical Site Manger

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Challenge and solution

With the growing traffic driven by Cloud Compute, Generative Artificial Intelligence, IoT, 5G, and OTT Video, the bandwidth carried on core and metropolitan DWDM networks is growing exponentially, while operators' revenues struggle to keep pace. To adapt to the fast-paced bandwidth consumption, new bandwidth-catering models need to be driven by service providers, operators, and hyperscalers to support the end-user requirements.

Operators can provide fast-paced bandwidth, scale, and ease of deployment with the Network Convergence System (NCS) 1000 and/or 2000 platforms. They are all state-of-the-art **disaggregated and open platforms** with the inclusion of streaming telemetry and NETCONF/YANG models automating the network turn-up, operation, and maintenance.

While some of the operators (namely hyperscalers) automate, control, and monitor the disaggregated model using their own software automation tools (consuming APIs driven directly from NCS 1000/2000 Network Elements), other operators expect a vendor base software automation.

- Cisco Optical Site Manager (COSM) is designed to provide state-of-the-art, easy-to-use software automation, with seamless Cisco Optical Network Controller (CONC) integration, or with third-party Controllers (subject to integration).

Benefits

Cisco Optical Site Manager (COSM) provides the following functions:

- Seamless integration with Cisco Optical Network Controller (CONC) for SDN automation.
- OLS site, OT site, or OLS+OT site abstraction (Open Line System, Open Terminal).
- Site aggregation, topology, and nodal functional view.
- Site-level alarm correlation.
- Current PM up to last 32 bins.
- OAM—Connection verification, loopbacks, PRBS, OTDR, TCA, etc.
- Web UI with site-level management.
- Mechanical layout for chassis, cards, and passive devices.
- Card and module configurations.

COSM is designed to provide detailed level site management integrated with Cisco Optical Network Controller (CONC) and then Cisco's Hierarchical Controller and Orchestrator (HCO).

COSM streams site-level data base information such as inventory, site topology, correlated alarms, and performance monitoring. CONC consumes, stores, and represents the information at the network level, providing end-to-end circuit provisioning, monitoring, and troubleshooting with topology and analytics tools.

While COSM is designed to work seamlessly with CONC, it can also work as a standalone for a GUI Local Craft (useful for deployments, or local management) and/or interaction with a third-party controller.

COSM provides enhanced Netconf/YANG North bound interface and Web GUI.

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The COSM application is hosted in the NCS 1000 controller cards for NCS1000 Nodes and/or NCS2000 SVO line card **(Shelf Virtualization Orchestrator – a new NCS2000 controller allowing deployment of up to 15 COSM instances)**

COSM can provide High Availability once enabled in two devices or two SVO line cards

COSM enabled in NCS1010/1014 manages the local site (node) with the underlaying NCS 1000/2000, COSM enabled in NCS2000 SVO line card manage the local site (node) with the underlaying NCS 1000/2000 devices, COSM enabled in NCS1004 can manage collocated NCS1001/1004 and COSM enabled in NCS1001 can manage NCS1001 standalone device

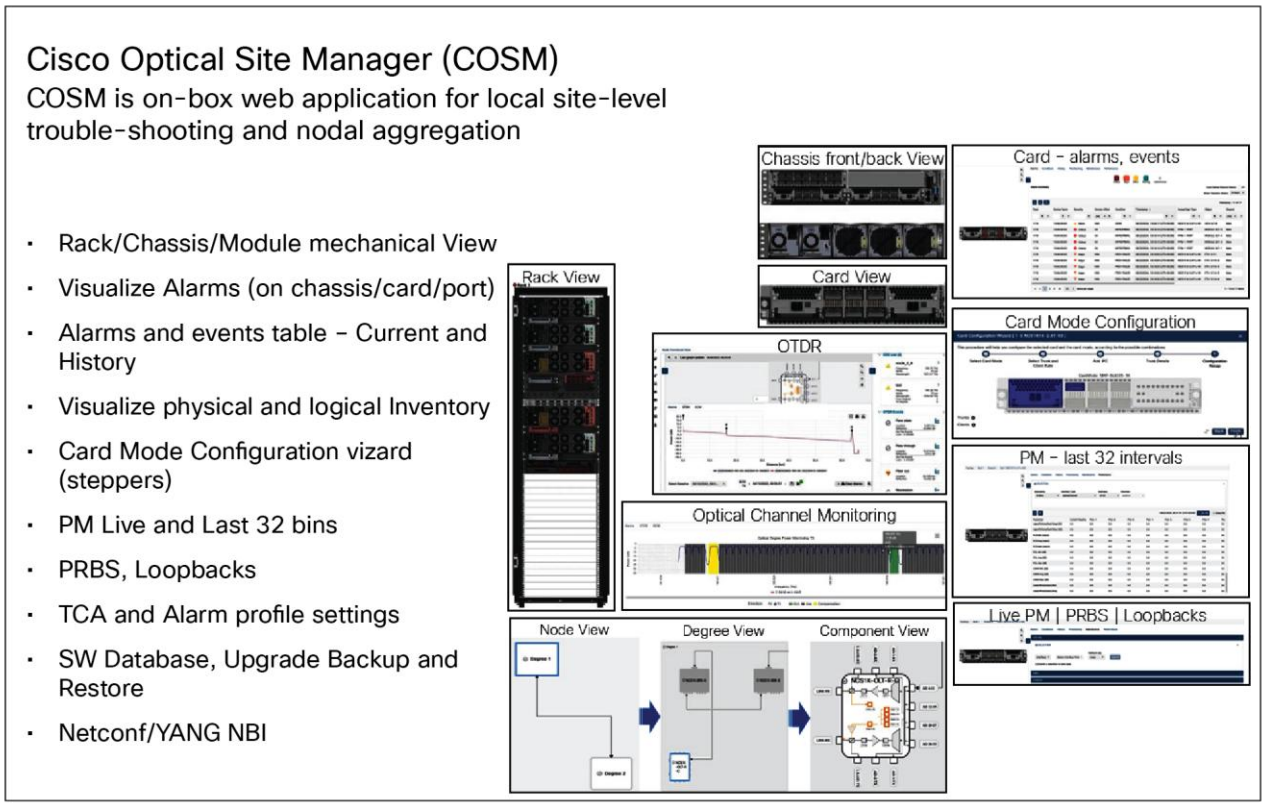
Product description

Cisco Optical Site Manager is a software application, deployed in the NCS 1000 controller cards or in NCS2000 SVO line card.

The software application can be enabled in one or two controllers for high availability.

Cisco Optical Site Manager (one or two) software Instances work with open Netconf/YANG North bound Interface, which aggregates current and future NCS 1000/2000 devices at the site and provides an abstracted site/node to Cisco Optical Network Controller (CONC) or to a third-party controller.

In addition, Cisco Optical Site Manager provides a Web UI for site-level operation and maintenance.



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Warranty information

Find warranty information on Cisco.com at the Product Warranties page.

Ordering and licensing information

The Cisco Optical Site Manager is based on Smart Licensing, enabling a pay-as-you-grow license model based on the number of line cards managed by the application.

Cisco Smart Licensing is a flexible licensing model that streamlines how you activate and manage software. For further info,

please refer to https://www.cisco.com/c/en_my/products/software/smart-accounts/software-licensing.htmls.

COSM uses a flexible pay-as-you-grow model, where the customer pays only for components being managed or abstracted by COSM.

COSM Smart Licensing counts the number of line cards (excluding common cards like controllers, PSU, Fan, etc.) being managed by the COSM app and reports back to the Smart Licensing agent.

Product ID	Description
OAS-COSM-MLCL	Cisco Optical Site Manager - Managed Line Card License

Cisco sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to **information about key environmental sustainability topics** (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

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Our experts recommend

- Interconnecting Data Centers for Cloud Scale At-a-Glance

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