Cisco Evolved Programmable Network Manager Business

This simplified, converged, and multilayer management solution provides end-to-end lifecycle management for carrier-grade networks of all sizes. It promotes business agility and operational efficiencies through automated device operations, fast provisioning, and proactive assurance.

Challenges

In today's competitive market, service providers must operate with a new level of agility, simplicity, and efficiency. It's crucial to accelerate the time to market of network services and to speed up deployment of new devices and feature updates. To reduce operating expenses (OpEx), service providers are looking for an integrated, end-to-end management solution that provides greater efficiency, ease of deployment, and simple maintenance. At the same time, they need a solution that will enable them to meet customer expectations for a superior user experience and fast service introduction.

However, many existing solutions are complicated, requiring extensive domain knowledge, and they are often restricted to specific network types. Most rely on manual, error-prone processes and require ongoing maintenance. And instead of providing a holistic, multilayer view of the network, they provide a single-layered approach to network management.

Smaller service providers may have difficulty adopting complex management applications because of their limited resources. These providers need an automated solution with more out-of-box features to minimize associated maintenance and training costs. Larger service providers need a solution that addresses operational efficiency challenges and, if needed, allows them to maintain split IP and optical operations teams in the midst of converging networks. These products should also scale easily, up and down for networks of different sizes, as well as satisfy different requirements for all tiers.

Solution

The Cisco® Evolved Programmable Network (EPN) Manager is a network management solution that provides simplified, converged, multilayer management for carrier-grade networks of all sizes. It promotes business agility and operational efficiencies through automated device operations, fast provisioning, and proactive assurance.

With Cisco EPN Manager, service providers can quickly respond to major market transitions, including explosive traffic growth, new business models, and packet optical network convergence. EPN Manager prepares its customers for technology advancements, including software-defined networks (SDN) and network functions virtualization (NFV), by designing its model-driven architecture to include modularity, extensibility, and flexibility.

It also provides end-to-end lifecycle management across device management, network provisioning, and network assurance. Consistent workflows across optical and metro network scenarios help increase operational efficiencies through automation and reduce operating expenses through lower training requirements. A model-driven architecture, with content decoupled from the platform, greatly improves agility when delivering content and device packs. It's a flexible, easy-to-deploy solution with a common inventory and data model, and it includes a visually appealing user interface that provides a single product experience across management functions.

Business Benefits

EPN Manager provides integrated lifecycle management of carrier-grade networks. It is a flexible, end-to-end solution for managing the Cisco EPN, including computing, storage, and networks (Figure 1).

It helps service providers to:

- Improve business agility by:
  ◦ Reducing time to market for network services
  ◦ Reducing time from device introduction or feature update to its actual network deployment
  ◦ Delivering frequent, domain-specific content asynchronous from the management platform
- Increase operational efficiencies through automated provisioning of services and faster resolution of network issues by quickly identifying affected circuits and virtual connections
- Achieve unparalleled simplicity by providing a shared information model, consistent workflows, and ease of deployment
- Reduce total cost of ownership through integrated, end-to-end management for the entire carrier network, supporting multiple domains right out of the box

Figure 1.   Simplified, Converged, and Multilayer Management
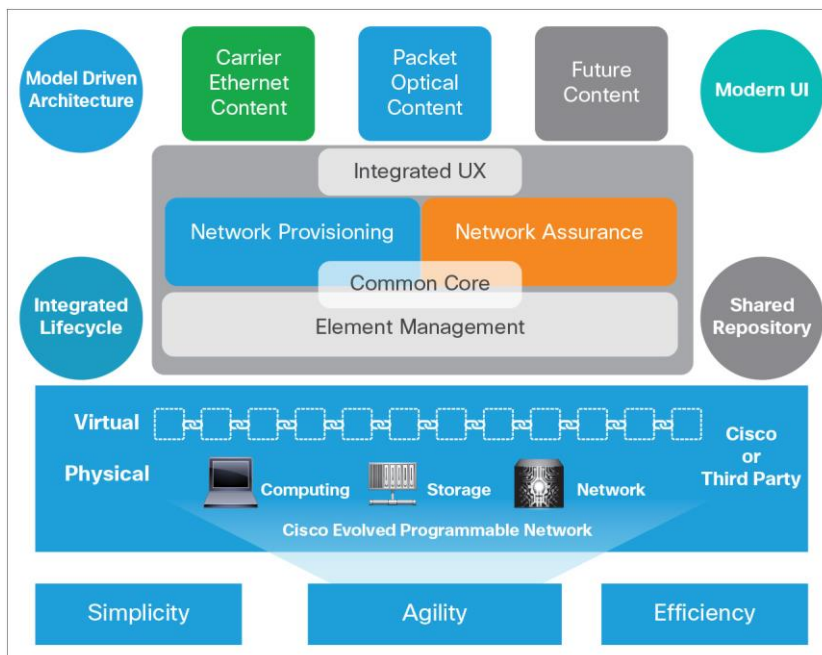
Product Functions

EPN Manager includes the following functions that work together transparently as one product:

Element and device management

- Device and resource discovery
- Device health monitoring, including fault and performance metrics
- Device configuration and activation

Network provisioning

- Point-and-click provisioning for Carrier Ethernet, optical transport and service provider Wi-Fi
- Multilayer views
- Service intent and network reconciliation

Network assurance

- Event and fault management for optical transport circuits, Ethernet virtual connections (EVC), and service provider Wi-Fi, including event correlation
- Proactive network health monitoring, including network-level alarms, threshold crossing alerts (TCAs), metric gathering, and performance reporting

User interface and user experience

- Unified menu that converges optical, Carrier Ethernet, wireless and wired capabilities to provide a single, intuitive structure for accessing tasks and operations
- Contextual dashboards and 360-degree user and device views that display only the most relevant information for fast and efficient troubleshooting and remediation

Multidomain Networks

EPN Manager supports optical transport, Carrier Ethernet, and service provider Wi-Fi.

IP and Optical Convergence

To consolidate management for converging packet and optical transport networks, EPN Manager provides similar workflows across optical and metro network scenarios. This approach increases operational efficiencies and reduces training costs. EPN Manager also supports a wide range of Cisco Optical Networking solutions, including Cisco Network Convergence System 2000 Series routers and Cisco ONS 15454 MSTP routers for dense wavelength-division multiplexing (DWDM) technology, as well as Cisco Network Convergence System 4000 Series routers, supporting optical and transport networks (OTN).

Carrier Ethernet

Turnkey, end-to-end lifecycle management is provided across device management, network provisioning, and network assurance. EPN Manager simplifies management of Metro Ethernet Forum (MEF) Carrier Ethernet 2.0 services, delivering a single product experience and similar workflows across lifecycle tasks. It also supports a comprehensive service provider portfolio of access, edge, and core platforms, including the Cisco ASR 9000 Series Routers, Cisco ASR 900 Series Aggregation Services Routers, Cisco aggregation switches, and Cisco Ethernet access switches.

Service Prover Wi-Fi

EPN Manager lets you manage your network more efficiently so that you can achieve the highest levels of wireless and wired network performance, service assurance, and end-user experience. It delivers key wireless radio frequency (RF) management capabilities, including user access visibility, reporting, and troubleshooting. In addition, EPN Manager provides network infrastructure lifecycle functions such as discovery, inventory, configuration and image management, compliance reporting, and integrated best practices to support efficient operational workflows. It supports a comprehensive portfolio of Cisco WLAN controllers, unified access points and autonomous access points.

Ordering Information

Cisco EPN Manager is available for order. Please contact your Cisco sales representative to find out more.

Software Download and Documentation

Cisco EPN Manager provides comprehensive documentation, including reference guides, end-user guides, and more. Please contact your Cisco sales representative for access to technical documentation and software downloads.

Services and Support

Cisco offers a wide range of services programs to help accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, promoting high levels of customer satisfaction. Cisco services help you protect your network investment, optimize network operations, and prepare the network for new applications to extend network intelligence and the power of your business. For more information please visit the Cisco Services page on Cisco.com.

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For More Information

For more information on Cisco EPN Manager for carrier-grade networks, please email ask-epn-manager@cisco.com.

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