# Cisco Network Operations Automation Service



Information technology environments encompass multiple advanced network technologies, including security and wireless systems for borderless networks, video systems for unified communications, and storage and virtualization management for flexible deployments.

Several important differentiators help us to achieve our network automation service success:

- High-level domain expertise with the Cisco® Enterprise Orchestrator platform
- Cisco networking best practices to minimize the risk of human errors
- A growing library of network operation automation packs
- Current process assessements for error-free automation
- Expertise in automating networks and management infrastructures
- Expertise with multivendor infrastructures

Significant time, effort and expertise are required for network operations groups to support these complex networks. Added to this complexity are the demands from the business to support more devices, more crossover technologies, and more network services that place additional strains on the network service delivery infrastructure.

Network operations teams are asked to do more with less, but typically spend most of their time on provisioning, repetitive maintenance procedures, housekeeping tasks, and rudimentary support procedures. Because most of these tasks are manually coordinated, configuration errors are responsible for most problems in a typical network.

## The Value of Automation

Network process automation eliminates human errors, improves response times by processing incident management requests in an automated fashion, and lowers costs by giving operations teams the ability to migrate mundane and repetitive tasks from CCIE® level 3 to level 1 personnel.

Successful process automation can transform IT operations by freeing valuable network personnel to work on innovative and strategic efficiency programs. However, network automation solutions require effective processes, appropriate tools, and people with expertise to ultimately be successful.

## Intelligently Automate Your Network Operations

Cisco Network Operations Automation Service (NOAS) automates best practices for network engineering and operations. Cisco NOAS is intended to automate proactive and reactive network operations tasks, integrating Cisco best practices with the customer's operational processes and tools environment. The service allows companies to reduce the cost of ongoing network maintenance and support through the automation of manual procedures.

Cisco NOAS promotes automation across multiple devices and technologies by providing standardization of processes and procedures to manage networks. The service deploys Cisco intellectual capital through automated workflows for Cisco equipment based on Cisco best practices for network management. Cisco intellectual capital offers a unique differentiation within the marketplace by focusing on tried and tested procedures based on the expertise of Cisco CCIE-certified personnel. Cisco NOAS contributes to the reduction of operational costs and operational risk, and improvement of IT quality of service.

## Take Full Advantage of the Cisco Intelligent Automation Platform

Network Operations Automation Service uses Cisco Enterprise Orchestrator as a foundation to deliver automated, integrated, and orchestrated processes for service delivery and operational support. This comprehensive process automation engine is designed to help you standardize, unify, and automate best practices for the network in heterogeneous environments, encompassing Cisco and non-Cisco devices (Figure 1).

**Figure 1.**     Platform for Cisco Network Operations Automation Service
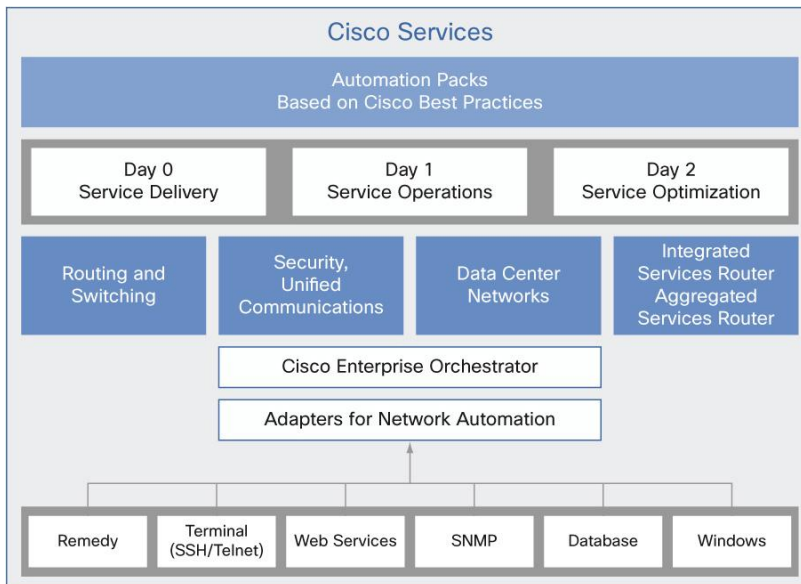


## Cisco Network Operations Automation Service Overview

Cisco NOAS is a Cisco Services offering that includes Cisco Advanced Services, Cisco Networks Operations prebuilt workflows, Cisco Enterprise Orchestrator, and network automation adapters. This service is intended to supplement a current maintenance agreement for Cisco products and is only available where all products in an existing customer's network are supported with a minimum of core services, including the prerequisite completion of Cisco's Network Operation Automation Service Planning Workshop and the setup and startup steps (Table 1).

**Table 1.** Cisco Services Helps Plan, Build, Implement, and Optimize Based on Your Unique Environment

| Service Step | Deliverables |
|---|---|
| Planning workshop | • Customer requirements document<br>• List of up to 15 custom workflows |
| Setup and startup | • Cisco Enterprise Orchestrator<br>• Up to 15 custom workflows<br>• Prebuilt workflows |
| Optimization | • Quarterly workflows<br>• New software releases |

With this practical engagement, customers gain an enhanced understanding of their network's current capabilities. A comprehensive roadmap is constructed that allows the team to identify the desired automation goals and objectives. The roadmap serves as a vital tool for generating recommendations that optimize the value gained from the automation process and providing a technical blueprint.

The Cisco Advanced Services team builds and deploys workflows that automate the targeted procedures, diagnostics, and software remediation actions. The technology foundation that the services team uses to develop and deploy the automation includes the Cisco Enterprise Orchestrator platform with network automation adapters. Table 2 outlines some of the types of process Cisco NOAS can automate. Each network topology is unique, and Cisco Network Management best practices are implemented throughout the automation workflows, to ultimately provide better service delivery and lower operational costs.

**Table 2.** Cisco NOAS Is Applicable to Many Network Operations Processes

| Type of Process | Description | Advantage |
|---|---|---|
| Provisioning | Performs day 1 service provisioning of new device additions to the network | Allows faster time-to-value for new network device and architectural deployments |
| Configuration and change management | Performs day 2 service operations based on change management initiated by incident management systems | Orchestrates across multiple domains and technologies to promote IT process changes from the application layer to the device layer |
| Incident management | Processes can be triggered by events from incident management systems. New incident records may be created or existing ones updated based on the progress of the workflow | These decisions trigger the retrieval of additional configuration, performance, and availability information to diagnose a specific problem |
| Best practices | Uses Cisco intellectual capital to deploy industry best practices in the customer network | Provides higher network availability and reliability |
| Process execution | Delivers execution of processes either in an automated manner or through guided manual operations, to facilitate full control and interactions among multiple IT groups | Encourages a collaborative non-silo IT environment |

## Ease of Use

This Cisco Service provides a unique and context-sensitive interface facilitating the development of even the most complex and critical network procedures. The service includes an easy-to-use drag-and-drop workflow creation environment that allows users to build sequences of operations in a logical flow. The service provides a comprehensive set of prebuilt workflows, activities, and primitives, which accelerates the development of complex customer-specific workflows.

## Adapter Activity Libraries for Integration

The Cisco Network Operations Automation Service provides a wide range of adapters that facilitate integration with third-party network entities. The service also provides a web services adapter to facilitate integration with custom-developed products and standard products such as HP Service Desk. This ability to integrate across the spectrum of element management systems, databases, and ticketing systems provides tremendous value to the customer.

## Why Cisco Services?

Cisco Services make networks, applications, and the people who use them work better together. Today, the network is a strategic platform in a world that demands better integration between people, information, and ideas. The network works better when services, together with products, create solutions aligned with business needs and opportunities. Cisco takes an architectural approach to help you transform, optimize, and protect your enterprise network to reduce costs, deliver high availability, and improve performance.

## For More Information

To learn more about Cisco Network Operations Automation Service and other Cisco Intelligent Automation products and services, visit us at http://www.cisco.com/en/US/products/sw/netmgtsw/services.html or contact your Cisco Service Account Manager