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Service Packs

A central theme behind the Cisco MSX solution is reducing the operational cost of deploying and maintaining managed services. The solution shifts the deployment of managed services away from the manual configuration of the latest network devices to the creation of an abstracted model representing the service definition. This approach allows the service intent of the user, to be realized by using the service models to automate the creation and customization of network services.

The keys to the Cisco MSX solution are virtualization, plug-n-play CPE devices, and a flexible orchestration engine capable of centralizing the configurations of all the devices involved in the delivery of a service. With flexibility inherent in the orchestration engine, operators can offer end customers the ability to order the service that best meets their technical and TCO requirements.

The Cisco MSX solution enables new services by the installation of service packs. Cisco MSX service packs can be developed by Cisco or third parties, which are then installed on top of the MSX platform and offered to end users using the MSX offer catalog.

This chapter contains the following sections:

Cisco MSX SD-Branch Service Pack

The Cisco MSX SD-Branch service pack enables unified routing, switching, storage, processing, and a host of other computing and networking activities into a single box. The Cisco MSX SD-Branch service pack provides a way to collapse the services that a branch requires into a single box, which results in the simplified management of services, and smaller device footprint at a branch site.

The Cisco MSX SD-Branch service pack includes the following:

- An orchestration environment to allow the automation of virtualized network service deployment, consisting of multiple VNFs.
- VNFs, which provide the desired network functionality, or even non-networking software applications, which are required at a deployment location.
- The NFV Infrastructure Software (NFVIS) platform to facilitate the deployment and operation of VNFs and hardware components.

Some of the advantages of the Cisco MSX SD-Branch service pack are:

- Zero touch provisioning for initial device connectivity through PnP server processes.
- Service provisioning of on-premises CPEs through orchestration.
- User interface portal for ordering service, network visualization, and performance or fault monitoring.
- Lifecycle Management.

SD-Branch supports the branch site on the Cisco 5000 series Enterprise Network Compute System (ENCS) platform.

For more information on the SD-Branch service pack, see the *Cisco Managed Services Accelerator (MSX) SD-Branch Service Pack Guide*.

Cisco MSX SD-WAN Service Pack

Cisco MSX SD-WAN service pack enables operators to deploy and manage SD-WAN services for their customers. The deployment of an SD-WAN service in the context of a managed service requires deployment per customer and includes the SD-WAN management control plane (vManage, vBond and vSmart), and the corresponding data plane (vEdge and cEdge devices).

The Cisco MSX SD-WAN service pack allows creating SD-WAN Control Plane Service for Viptela. It also allows for seamless integration to a specific tenant's Meraki service providing the capability to create Meraki networks and managing the devices in them.

The Cisco MSX SD-WAN service pack management control plane and data plane consists of:

- vManage—The vManage is a centralized dashboard that enables the automatic configuration, management, and monitoring of the overlay network. Users log in to vManage to centrally manage all aspects of the network life cycle—from the initial deployment, on-going monitoring and troubleshooting, to change control and software upgrades.
- vBond—The vBond facilitates the initial bring-up by performing initial authentication and authorization of all elements into the network. vBond provides the information on how each of the components connects to other components. It plays an important role in enabling devices that sit behind NAT gateways to communicate with the network.
- vSmart Controller—The vSmart controllers establish the secure SSL connections to all other components in the network and run an Overlay Management Protocol (OMP) to exchange routing, security, and policy information. The centralized policy engine in vSmart provides policy constructs to manipulate routing information, access control, segmentation, extranets, and service chaining.
- vEdge and cEdge Routers—The vEdge router establishes secure connectivity to all the control components and establishes IPSec sessions with other vEdge or cEdge routers in the WAN network. In the Cisco MSX SD-WAN service pack, you can additionally deploy a virtualized instance on Cisco 5000 Enterprise Network Compute System (ENCS) platform.

Some of the advantages of the Cisco MSX SD-WAN service pack are:

- Provides the interface to associate the tenant (customer) with the Control Plane and Data Plane.
- User interface portal for ordering service (Control Plane and Data Plane Connectivity) and network visualization.
- Lifecycle management of services.

For more information on the SD-WAN service pack, see the [Cisco Managed Services Accelerator \(MSX\) SD-WAN Service Pack Documentation](#).

Cisco MSX Managed Device Service Pack

Cisco MSX Managed Device service pack enables operators to provide their customers templated device configuration services through a self-service portal. With the Cisco MSX Managed Device service pack, IT organizations can on-board devices that are located at the customer premises (CPEs) and apply or manage configuration settings remotely from its Network Operations Center (NOC). The operator can configure parameterized configuration templates that needs to be deployed on these CPEs.

Operators can also use Managed Device service to create and manage networks comprising Meraki devices and services.

The Cisco MSX Managed Device service pack makes device deployment fast and easy. Some of the advantages are as follows:

- Zero touch provisioning for initial device connectivity through PnP server processes.
- Service provisioning of on-premises routers through NSO orchestration.
- User Interface portal for configuration templates, ordering service, and performance or fault monitoring.

For more information on the Managed Device service pack, see the [Cisco Managed Services Accelerator \(MSX\) Managed Device Service Pack Documentation](#).

Cisco MSX Enterprise Access Service Pack

Cisco MSX Enterprise Access provides consistent management and automation of an Enterprise Network Fabric (wired and wireless network infrastructure). Cisco MSX Enterprise Access DNA-Controller allows operators to offer managed intent-based policy and network segmentation as well as traditional LAN/WAN provisioning from one central place. Cisco MSX Enterprise Access also provides the network health at the global enterprise level by transparently aggregating all the enterprise network domains in on a single pane of glass.

Benefits of using Cisco MSX Enterprise Access:

- Enables enterprise customers to monitor the health of their network.
- Gives network architects the tools to orchestrate key business functions like onboarding, secure segmentation, IoT integration, and guest access.
- Enables policy-based automation from the edge to the cloud.
- Automates user and device policy for any application across the wireless and wired network via a single network fabric.
- Federated Management of multiple Cisco DNA Center controllers per MSX Tenant.
- Configuration and provisioning for external network services access (Fusion Router Configuration for Enterprise Access).
- Cisco DNA Center and end-point bulk updates.
- Centralized template management.
- WLAN Provisioning for Non-Fabric deployment.

For more information on the Enterprise Access service pack, see the [Cisco Managed Services Accelerator\(MSX\) Enterprise Access Service Pack Documentation](#).



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