New and Changed Information

This chapter provides release-specific information about all features.

New and Changed Feature Information

This table summarizes the new and changed features, the supported platforms, and links to features.

Table 1: New and Changed Feature Information

Feature	Description	Release & Platform
Provisioning		
Zero-Touch Provisioning	To address network provisioning challenges, Cisco introduces a Zero-Touch Provisioning model. Zero-Touch Provisioning automates the process of installing or upgrading software images, and installing configuration files on Cisco devices that are deployed in a network for the first time. It reduces manual tasks required to scale the network capacity.	Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches

Feature	Description	Release & Platform
iPXE	iPXE is an enhanced version of the Pre-boot eXecution Environment (PXE), which is an open standard for network booting. A boot loader enables network boot for a device, which is offline. A network boot source is detected on power up from a preconfigured DHCP Server on a managed network. Booting an image located on an FTP, HTTP, or TFTP server is supported. In Cisco IOS XE Everest 16.5.1a, iPXE supports IPV6 iPXE boot, DHCP Option 77 for IPv4 iPXE boot, and DHCPv6 Option 15 for iPXE network boot.	Cisco IOS XE Denali 16.3.2 and Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3650 Series Switches
Shells and Scripting		
Guest Shell	Guestshell is a virtualized Linux-based environment, designed to run custom Linux applications, including Python for automated control and management of Cisco devices. It also includes the automated provisioning (Day zero) of systems. This container shell provides a secure environment, decoupled from the host device, in which users can install scripts or software packages and run them.	Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches
Python APIs	Python programmabililty supports Python APIs.	Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches
Python CLI Module	Python Programmability provides a Python module that allows users to interact with IOS using CLIs.	Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches

Feature	Description	Release & Platform
EEM Python Module	Embedded Event Manager (EEM) policies support Python scripts. Python scripts can be executed as part of EEM actions in EEM applets.	Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches
Model-Driven Programmability		
Data Models	Cisco IOS XE supports the Yet Another Next Generation (YANG) data modeling language. YANG can be used with the Network Configuration Protocol (NETCONF) to provide the desired solution of automated and programmable network operations.	Cisco IOS XE Denali 16.3.1 • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches In Cisco IOS XE Everest 16.5.1a, this feature was implemented on Cisco Catalyst 9300 Series Switches.
Operational Data	YANG data models enables you to read operational state data from devices.	Cisco IOS XE Everest 16.5.1a • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches