



New and Changed Information

This chapter provides release-specific information about all features.

- [New and Changed Feature Information, on page 1](#)

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	Release & Platform
Provisioning	

Feature	Release & Platform
Zero-Touch Provisioning	<p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> • Cisco Catalyst 9400 Series Switches <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> • Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX) <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches <p>Cisco IOS XE Fuji 16.8.2</p> <ul style="list-style-type: none"> • Cisco ASR 1000 Aggregation Services Routers (ASR1004, ASR1006, ASR1006-X, ASR1009-X, ASR1013)
Zero Touch Provisioning: HTTP Download	<p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches

Feature	Release & Platform
iPXE	<p>Cisco IOS XE Denali 16.3.2 and Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3650 Series Switches <p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> • Cisco Catalyst 9400 Series Switches <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches
Shells and Scripting	
Guest Shell	<p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> • Cisco Catalyst 9400 Series Switches <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> • Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX) • Cisco Cloud Services Router 1000V Series <p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches

Feature	Release & Platform
Python APIs	<p data-bbox="776 289 1101 321">Cisco IOS XE Everest 16.5.1a</p> <ul data-bbox="813 338 1219 527" style="list-style-type: none"> <li data-bbox="813 338 1219 369">• Cisco Catalyst 3650 Series Switches <li data-bbox="813 386 1219 417">• Cisco Catalyst 3850 Series Switches <li data-bbox="813 434 1219 466">• Cisco Catalyst 9300 Series Switches <li data-bbox="813 483 1219 514">• Cisco Catalyst 9500 Series Switches <p data-bbox="776 556 1101 588">Cisco IOS XE Everest 16.5.1b</p> <ul data-bbox="813 604 1325 636" style="list-style-type: none"> <li data-bbox="813 604 1325 636">• Cisco 4000 Series Integrated Services Routers <p data-bbox="776 667 1089 699">Cisco IOS XE Everest 16.6.2</p> <ul data-bbox="813 716 1219 747" style="list-style-type: none"> <li data-bbox="813 716 1219 747">• Cisco Catalyst 9400 Series Switches <p data-bbox="776 779 1052 810">Cisco IOS XE Fuji 16.7.1</p> <ul data-bbox="813 827 1481 942" style="list-style-type: none"> <li data-bbox="813 827 1481 890">• Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX) <li data-bbox="813 907 1289 938">• Cisco Cloud Services Router 1000V Series <p data-bbox="776 974 1065 1005">Cisco IOS XE Fuji 16.8.1a</p> <ul data-bbox="813 1022 1425 1054" style="list-style-type: none"> <li data-bbox="813 1022 1425 1054">• Cisco Catalyst 9500-High Performance Series Switches

Feature	Release & Platform
Python CLI Module	<p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> • Cisco Catalyst 9400 Series Switches <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> • Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX) • Cisco Cloud Services Router 1000V Series <p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Router models with a minimum of 4 GB RAM. • Cisco ASR 1000 Aggregation Services Routers (ASR1004, ASR1006, ASR1006-X, ASR1009-X, ASR1013) <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches

Feature	Release & Platform
EEM Python Module	<p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers <p>Cisco IOS XE Everest 16.6.2.</p> <ul style="list-style-type: none"> • Cisco Catalyst 9400 Series Switches <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> • Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX) • Cisco Cloud Services Router 1000V Series <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches
Model-Driven Programmability	

Feature	Release & Platform
NETCONF Protocol	<p>Cisco IOS XE Denali 16.3.1</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers • Cisco ASR 1000 Series Aggregation Services Routers • Cisco Cloud Services Router 1000V Series <p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9400 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco 1000 Series Integrated Services Routers • Cisco ASR 900 Series Aggregation Services Routers • Cisco ASR 920 Series Aggregation Services Routers • Cisco Catalyst 9500-High Performance Series Switches • Cisco cBR-8 Converged Broadband Router • Cisco Network Convergence System 4200 Series
NETCONF and RESTCONF IPv6 Support	<p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers • Cisco ASR 1000 Series Aggregation Services Routers • Cisco ASR 900 Series Aggregation Services Routers • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9400 Series Switches • Cisco Catalyst 9500 Series Switches • Cisco cBR-8 Converged Broadband Router • Cisco Cloud Services Router 1000V Series

Feature	Release & Platform
NETCONF Global Lock and Kill Session	<p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco 1100 Series Integrated Services Routers • Cisco 4000 Series Integrated Services Routers • Cisco ASR 1000 Series Aggregation Services Routers • Cisco ASR 900 Series Aggregation Services Routers • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9400 Series Switches • Cisco Catalyst 9500 Series Switches • Cisco cBR-8 Converged Broadband Router • Cisco Cloud Services Router 1000v Series
RESTCONF Protocol	<p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Router • Cisco ASR 1000 Aggregation Services Routers • Cisco Cloud Services Router 1000V Series <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco 1000 Series Integrated Services Routers • Cisco ASR 900 Series Aggregation Services Routers • Cisco ASR 920 Series Aggregation Services Router • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9400 Series Switches • Cisco Catalyst 9500 and 9500-High Performance Series Switches • Cisco cBR-8 Converged Broadband Router • Cisco Network Convergence System 4200 Series

Feature	Release & Platform
gNMI Protocol	Cisco IOS XE Fuji 16.8.1a <ul style="list-style-type: none"> • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9400 Series Switches • Cisco Catalyst 9500 Series Switches
Model-Based AAA	Cisco IOS XE Fuji 16.8.1 <ul style="list-style-type: none"> • Cisco 1000 Series Integrated Services Routers • Cisco 4000 Series Integrated Services Routers • Cisco ASR 1000 Series Aggregation Services Routers • Cisco ASR 900 Series Aggregation Services Routers • Cisco ASR 920 Series Aggregation Services Routers • Cisco Cloud Services Router 1000v Series • Cisco Network Convergence System 4200 Cisco IOS XE Fuji 16.8.1a <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9400 Series Switches • Cisco Catalyst 9500 Series Switches

Feature	Release & Platform
Model-Driven Telemetry NETCONF Dial-In	<p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> • Cisco Catalyst 3650 Series Switches • Cisco Catalyst 3850 Series Switches • Cisco Catalyst 9300 Series Switches • Cisco Catalyst 9500 Series Switches <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> • Cisco Catalyst 9400 Series Switches <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> • Cisco 4000 Series Integrated Services Routers • Cisco ASR 1000 Series Aggregation Services Routers (ASR1001-HX, ASR1001-X, ASR1002-HX, ASR1002-X) <p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> • Cisco ASR 1000 RP2 and RP3 Series Aggregation Services Routers <p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> • Cisco 1000 Series Integrated Services Routers • Cisco ASR 1000 RP2 and RP3 Series Aggregation Services Routers <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> • Cisco Catalyst 9500-High Performance Series Switches

Feature	Release & Platform
In-Service Model Updates	<p data-bbox="816 296 1138 321">Cisco IOS XE Everest 16.5.1a</p> <ul data-bbox="850 342 1256 422" style="list-style-type: none"><li data-bbox="850 342 1256 367">• Cisco Catalyst 9300 Series Switches<li data-bbox="850 390 1256 415">• Cisco Catalyst 9500 Series Switches <p data-bbox="816 457 1138 483">Cisco IOS XE Everest 16.5.1b</p> <ul data-bbox="850 504 1360 529" style="list-style-type: none"><li data-bbox="850 504 1360 529">• Cisco 4000 Series Integrated Services Routers <p data-bbox="816 571 1122 596">Cisco IOS XE Everest 16.6.1</p> <ul data-bbox="850 617 1256 697" style="list-style-type: none"><li data-bbox="850 617 1256 642">• Cisco Catalyst 3650 Series Switches<li data-bbox="850 665 1256 690">• Cisco Catalyst 3850 Series Switches <p data-bbox="816 739 1122 764">Cisco IOS XE Everest 16.6.2</p> <ul data-bbox="850 785 1256 810" style="list-style-type: none"><li data-bbox="850 785 1256 810">• Cisco Catalyst 9400 Series Switches <p data-bbox="816 852 1089 877">Cisco IOS XE Fuji 16.7.1</p> <ul data-bbox="850 898 1370 924" style="list-style-type: none"><li data-bbox="850 898 1370 924">• Cisco ASR 1000 Aggregation Services Routers <p data-bbox="816 963 1101 989">Cisco IOS XE Fuji 16.8.1a</p> <ul data-bbox="850 1010 1468 1035" style="list-style-type: none"><li data-bbox="850 1010 1468 1035">• Cisco Catalyst 9500-High Performance Series Switches.

