



## New and Changed Information

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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"> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX)</li> </ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.8.2</p> <ul style="list-style-type: none"> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1004, ASR1006, ASR1006-X, ASR1009-X, ASR1013)</li> </ul>
Zero Touch Provisioning: HTTP Copy	<p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1004, ASR1006, ASR1006-X, ASR1009-X, ASR1013)</li> </ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul>

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"> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3650 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.9.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 Series Switches</li> </ul>
Shells and Scripting	
Guest Shell	<p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX)</li> <li>• Cisco Cloud Services Router 1000V Series</li> </ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul>

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

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

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

Feature	Release & Platform
NETCONF Network Management Interface	<p>Cisco IOS XE Denali 16.3.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco 4000 Series Integrated Services Routers</li> </ul> <p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul> <p>Cisco IOS XE Fuji 16.9.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 Series Switches</li> </ul> <p>Cisco IOS XE Gibraltar 16.10.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9800 Series Wireless Controllers</li> <li>• Cisco Network Convergence System 520 Series</li> <li>• Cisco IR1101 Integrated Services Router Rugged</li> </ul>

Feature	Release & Platform
NETCONF and RESTCONF IPv6 Support	Cisco IOS XE Fuji 16.8.1a <ul style="list-style-type: none"><li>• Cisco 1000 Series Integrated Services Routers</li><li>• Cisco ASR 1000 Series Aggregated Services Routers</li><li>• Cisco ASR 900 Series Aggregated Services Routers</li><li>• Cisco Catalyst 3650 Series Switches</li><li>• Cisco Catalyst 3850 Series Switches</li><li>• Cisco Catalyst 9300 Series Switches</li><li>• Cisco Catalyst 9400 Series Switches</li><li>• Cisco Catalyst 9500 Series Switches</li><li>• Cisco cBR-8 Converged Broadband Router</li><li>• Cisco Cloud Services Router 1000V Series</li><li>• Cisco ISR 4000 Series Integrated Services Routers</li></ul>
gNMI Protocol	Cisco IOS XE Fuji 16.8.1a <ul style="list-style-type: none"><li>• Cisco Catalyst 9300 Series Switches</li><li>• Cisco Catalyst 9400 Series Switches</li><li>• Cisco Catalyst 9500 Series Switches</li></ul>



Feature	Release & Platform
Model-Based AAA	<p data-bbox="815 289 1089 321">Cisco IOS XE Fuji 16.8.1</p> <ul data-bbox="850 342 1446 726" style="list-style-type: none"><li data-bbox="850 342 894 363">• aa</li><li data-bbox="867 390 1360 415">Cisco 1000 Series Integrated Services Routers</li><li data-bbox="850 443 1360 468">• Cisco 4000 Series Integrated Services Routers</li><li data-bbox="850 495 1446 520">• Cisco ASR 1000 Series Aggregation Services Routers</li><li data-bbox="850 548 1430 573">• Cisco ASR 900 Series Aggregation Services Routers</li><li data-bbox="850 600 1430 625">• Cisco ASR 920 Series Aggregation Services Routers</li><li data-bbox="850 653 1321 678">• Cisco Cloud Services Router 1000v Series</li><li data-bbox="850 705 1321 730">• Cisco Network Convergence System 4200</li></ul> <p data-bbox="815 758 1101 789">Cisco IOS XE Fuji 16.8.1a</p> <ul data-bbox="850 810 1256 1045" style="list-style-type: none"><li data-bbox="850 810 1256 835">• Cisco Catalyst 3650 Series Switches</li><li data-bbox="850 863 1256 888">• Cisco Catalyst 3850 Series Switches</li><li data-bbox="850 915 1256 940">• Cisco Catalyst 9300 Series Switches</li><li data-bbox="850 968 1256 993">• Cisco Catalyst 9400 Series Switches</li><li data-bbox="850 1020 1256 1045">• Cisco Catalyst 9500 Series Switches</li></ul>

Feature	Release & Platform
Model-Driven Telemetry NETCONF Dial-In	<p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1001-HX, ASR1001-X, ASR1002-HX, ASR1002-X)</li> </ul> <p>Cisco IOS XE Fuji 16.8.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 1000 RP2 and RP3 Series Aggregation Services Routers</li> </ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco 9500-High Performance Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.9.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregation Services Routers</li> <li>• Cisco cBR-8 Converged Broadband Router</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul> <p>Cisco IOS XE Fuji 16.9.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 Series Switches</li> </ul>

Feature	Release & Platform
In-Service Model Updates	<p>Cisco IOS XE Everest 16.5.1a</p> <ul style="list-style-type: none"><li>• Cisco Catalyst 9300 Series Switches</li><li>• Cisco Catalyst 9500 Series Switches</li></ul> <p>Cisco IOS XE Everest 16.5.1b</p> <ul style="list-style-type: none"><li>• Cisco 4000 Series Integrated Services Routers</li></ul> <p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"><li>• Cisco Catalyst 3650 Series Switches</li><li>• Cisco Catalyst 3850 Series Switches</li></ul> <p>Cisco IOS XE Everest 16.6.2</p> <ul style="list-style-type: none"><li>• Cisco Catalyst 9400 Series Switches</li></ul> <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"><li>• Cisco ASR 1000 Aggregation Services Routers</li></ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"><li>• Cisco Catalyst 9500-High Performance Series Switches.</li></ul>

Feature	Release & Platform
RESTCONF Network Management Interface	<p>Cisco IOS XE Everest 16.6.1</p> <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1001-HX and ASR1002-HX)</li> <li>• Cisco Cloud Services Router 1000V Series</li> </ul> <p>Cisco IOS XE Fuji 16.7.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 9xx Series Aggregation Services Routers</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9400 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.9.2</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 Series Switches</li> </ul>
OpenFlow	
OpenFlow	<p>Cisco IOS XE Fuji 16.9.1</p> <ul style="list-style-type: none"> <li>• Catalyst 9300 Series Switches</li> <li>• Catalyst 9400 Series Switches</li> <li>• Catalyst 9500 Series Switches</li> <li>• Catalyst 9500 Series High Performance Switches</li> </ul>