



## New and Changed Information

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This chapter provides release-specific information about all features.

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

## New and Changed 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	

Feature	Release & Platform
	<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 Series Aggregation Services Routers (ASR1004, ASR1006, ASR1006-X, ASR1009-X, ASR1013)</li> </ul> <p>Cisco IOS XE Gibraltar 16.12.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 Series Switches</li> </ul> <p><b>Note</b> This feature is not supported on C9200L SKUs.</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300L SKUs</li> <li>• Cisco Catalyst 9600 Series Switches</li> <li>• Cisco Catalyst 9800-40 Wireless Controllers</li> <li>• Cisco Catalyst 9800-80 Wireless Controllers</li> </ul> <p>Cisco IOS XE Amsterdam 17.2.1</p> <ul style="list-style-type: none"> <li>• Cisco Cloud Services Router 1000V Series</li> <li>• Cisco C1100 Terminal Services Gateway (Supported only on C1100TGX-1N24P32A)</li> </ul> <p>Cisco IOS XE Amsterdam 17.3.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 8200 Series Edge Platforms</li> </ul>

Feature	Release & Platform
	<ul style="list-style-type: none"> <li>• Cisco Catalyst 8300 Series Edge Platforms</li> </ul>
Zero Touch Provisioning: HTTP Download	<p>Cisco IOS XE Fuji 16.8.1</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 Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul>
DHCPv6 Support for Zero-Touch Provisioning	<p>Cisco IOS XE Fuji 16.9.1</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 Amsterdam 17.3.2a</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9800-40 Wireless Controllers</li> <li>• Cisco Catalyst 9800-80 Wireless Controllers</li> </ul>
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> <p>Cisco IOS XE Gibraltar 16.11.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9600 Series Switches</li> </ul>

Feature	Release & Platform
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 16.8.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul> <p>Cisco IOS XE Fuji 16.9.1</p> <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> </ul> <p>Cisco IOS XE Gibraltar 16.11.1b</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9800-40 Wireless Controllers</li> <li>• Cisco Catalyst 9800-80 Wireless Controllers</li> </ul> <p>Cisco IOS XE Gibraltar 16.12.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 Series Switches</li> </ul> <p><b>Note</b> This feature is not supported on C9200L SKUs.</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300L SKUs</li> <li>• Cisco Catalyst 9600 Series Switches</li> </ul> <p>Cisco IOS XE Amsterdam 17.3.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 8200 Series Edge Platforms</li> <li>• Cisco Catalyst 8300 Series Edge Platforms</li> </ul>

Feature	Release & Platform
Python 3 Support in Guest Shell	<p>Cisco IOS XE Amsterdam 17.1.1</p> <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1000-RP1, ASR1000-RP2, ASR1000-RP3, ASR1001-X, ASR1001-HX, ASR1002-X, ASR1002-HX)</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9400 Series Switches</li> <li>• Cisco Catalyst 9500 Series Switches</li> <li>• Cisco Catalyst 9600 Series Switches</li> <li>• Cisco ISR 4000 Series Integrated Services Routers</li> </ul>
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>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 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 Series 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 Protocol	

Feature	Release & Platform
	<p>Cisco IOS XE Denali 16.3.1</p> <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> <li>• Cisco Cloud Services Router 1000V Series</li> </ul> <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> </ul> <p>Cisco IOS XE Everest 16.6.2</p> <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> <p>Cisco IOS XE Fuji 16.8.1a</p> <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregation Services Routers</li> <li>• Cisco Catalyst 9500-High Performance Series Switches</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 and 9200L Series Switches</li> <li>• Cisco Catalyst 9300L SKUs</li> </ul> <p>Cisco IOS XE Gibraltar 16.10.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9800-40 Wireless Controllers</li> <li>• Cisco Catalyst 9800-80 Wireless Controllers</li> <li>• Cisco Network Convergence System 520 Series</li> </ul> <p>Cisco IOS XE Gibraltar 16.11.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9600 Series Switches</li> </ul> <p>Cisco IOS XE Gibraltar 16.12.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9800-L Wireless Controllers</li> </ul>

Feature	Release & Platform
	Cisco IOS XE Amsterdam 17.3.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 8200 Series Edge Platforms</li> <li>• Cisco Catalyst 8300 Series Edge Platforms</li> </ul>
NETCONF and RESTCONF IPv6 Support	Cisco IOS XE Fuji 16.8.1a <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> <li>• Cisco ASR 900 Series Aggregation 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> </ul> Cisco IOS XE Gibraltar 16.11.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul>
NETCONF Global Lock and Kill Session	Cisco IOS XE Fuji 16.8.1a <ul style="list-style-type: none"> <li>• Cisco 1100 Series Integrated Services Routers</li> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> <li>• Cisco ASR 900 Series Aggregation 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> </ul>

Feature	Release & Platform
NETCONF-YANG SSH Server Support	Cisco IOS XE Gibraltar 16.12.1 <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregation Services Routers</li> <li>• Cisco ASR 1000 Aggregation Services Routers</li> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9200 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 Catalyst 9600 Series Switches</li> <li>• Cisco Catalyst 9800 Series Wireless Controllers</li> <li>• Cisco cBR-8 Converged Broadband Router</li> <li>• Cisco Cloud Services Router 1000V Series</li> <li>• Cisco Network Convergence System 520 Series</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul>

Feature	Release & Platform
RESTCONF Protocol	<p data-bbox="818 294 1127 321">Cisco IOS XE Everest 16.6.1</p> <ul data-bbox="850 342 1373 472" style="list-style-type: none"> <li data-bbox="850 342 1349 369">• Cisco 4000 Series Integrated Services Router</li> <li data-bbox="850 390 1373 417">• Cisco ASR 1000 Aggregation Services Routers</li> <li data-bbox="850 438 1328 466">• Cisco Cloud Services Router 1000V Series</li> </ul> <p data-bbox="818 508 1102 535">Cisco IOS XE Fuji 16.8.1a</p> <ul data-bbox="850 556 1463 1079" style="list-style-type: none"> <li data-bbox="850 556 1360 583">• Cisco 1000 Series Integrated Services Routers</li> <li data-bbox="850 604 1433 632">• Cisco ASR 900 Series Aggregation Services Routers</li> <li data-bbox="850 653 1422 680">• Cisco ASR 920 Series Aggregation Services Router</li> <li data-bbox="850 701 1256 728">• Cisco Catalyst 3650 Series Switches</li> <li data-bbox="850 749 1256 777">• Cisco Catalyst 3850 Series Switches</li> <li data-bbox="850 798 1256 825">• Cisco Catalyst 9300 Series Switches</li> <li data-bbox="850 846 1256 873">• Cisco Catalyst 9400 Series Switches</li> <li data-bbox="850 894 1463 974">• Cisco Catalyst 9500 and 9500-High Performance Series Switches</li> <li data-bbox="850 995 1328 1022">• Cisco cBR-8 Converged Broadband Router</li> <li data-bbox="850 1043 1393 1071">• Cisco Network Convergence System 4200 Series</li> </ul> <p data-bbox="818 1113 1089 1140">Cisco IOS XE Fuji 16.9.2</p> <ul data-bbox="850 1161 1256 1188" style="list-style-type: none"> <li data-bbox="850 1161 1256 1188">• Cisco Catalyst 9200 Series Switches</li> </ul> <p data-bbox="818 1228 1154 1255">Cisco IOS XE Gibraltar 16.11.1</p> <ul data-bbox="850 1276 1378 1509" style="list-style-type: none"> <li data-bbox="850 1276 1256 1304">• Cisco Catalyst 9600 Series Switches</li> <li data-bbox="850 1325 1349 1352">• Cisco Catalyst 9800-CL Wireless Controllers</li> <li data-bbox="850 1373 1344 1400">• Cisco Catalyst 9800-40 Wireless Controllers</li> <li data-bbox="850 1421 1344 1449">• Cisco Catalyst 9800-80 Wireless Controllers</li> <li data-bbox="850 1470 1378 1497">• Cisco Network Convergence System 520 Series</li> </ul> <p data-bbox="818 1539 1154 1566">Cisco IOS XE Gibraltar 16.12.1</p> <ul data-bbox="850 1587 1333 1614" style="list-style-type: none"> <li data-bbox="850 1587 1333 1614">• Cisco Catalyst 9800-L Wireless Controllers</li> </ul> <p data-bbox="818 1656 1170 1684">Cisco IOS XE Amsterdam 17.3.1</p> <ul data-bbox="850 1705 1328 1787" style="list-style-type: none"> <li data-bbox="850 1705 1328 1732">• Cisco Catalyst 8200 Series Edge Platforms</li> <li data-bbox="850 1753 1328 1780">• Cisco Catalyst 8300 Series Edge Platforms</li> </ul>

Feature	Release & Platform
RESTCONF YANG-Patch Support	Cisco IOS XE Amsterdam 17.1.1 <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 1000 Aggregation Services Routers (ASR1000-RP2, ASR1000-RP3, ASR1001-HX, ASR1001-X, ASR1002-HX, ASR1002-X)</li> <li>• Cisco Catalyst 9200 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 Network Convergence System 520 Series</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul>
NETCONF and RESTCONF Service-Level ACLs	Cisco IOS XE Gibraltar 16.11.1 <ul style="list-style-type: none"> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregated Services Routers</li> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9200 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 Catalyst IE3200 Rugged Series</li> <li>• Cisco Catalyst IE3300 Rugged Series</li> <li>• Cisco Catalyst IE3400 Rugged Series</li> <li>• Cisco Embedded Services 3300 Series Switches</li> <li>• Cisco IR1101 Integrated Services Router Rugged</li> <li>• Cisco Network Convergence System 4200 Series</li> <li>• Cisco Network Convergence System 520 Series</li> </ul>

Feature	Release & Platform
gNMI Protocol	<p>Cisco IOS XE Fuji 16.8.1a</p> <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> <p>Cisco IOS XE Gibraltar 16.10.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> </ul> <p>Cisco IOS XE Gibraltar 16.11.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9600 Series Switches</li> </ul> <p>Cisco IOS XE Gibraltar 16.12.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 and 9200L Series Switches</li> <li>• Cisco Catalyst 9300L SKUs</li> <li>• Cisco cBR-8 Converged Broadband Router</li> </ul> <p>Cisco IOS XE Amsterdam 17.1.1</p> <ul style="list-style-type: none"> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregation Services Router</li> <li>• Cisco Network Convergence System 520 Series</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul> <p>Cisco IOS XE Amsterdam 17.2.1r</p> <ul style="list-style-type: none"> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> </ul>

Feature	Release & Platform
gNMI Username and Password Authentication	Cisco IOS XE Gibraltar 16.12.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 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 Catalyst 9600 Series Switches</li> <li>• Cisco Catalyst IE3200 Rugged Series</li> <li>• Cisco Catalyst IE3200 Rugged Series</li> <li>• Cisco Catalyst IE3300 Rugged Series</li> <li>• Cisco Catalyst IE3400 Rugged Series</li> <li>• Cisco Embedded Service 3300 Series Switches</li> </ul>
gRPC Network Operations Interface: gNOI Certificate Management & gNOI Bootstrapping with Certificate Service	Cisco IOS XE Amsterdam 17.3.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9200 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 Catalyst 9600 Series Switches</li> </ul>



Feature	Release & Platform
Model-Based AAA	<p data-bbox="816 289 1089 321">Cisco IOS XE Fuji 16.8.1</p> <ul data-bbox="850 338 1446 678" style="list-style-type: none"><li data-bbox="850 338 1360 369">• Cisco 1000 Series Integrated Services Routers</li><li data-bbox="850 388 1360 420">• Cisco 4000 Series Integrated Services Routers</li><li data-bbox="850 438 1446 470">• Cisco ASR 1000 Series Aggregation Services Routers</li><li data-bbox="850 489 1433 520">• Cisco ASR 900 Series Aggregation Services Routers</li><li data-bbox="850 539 1433 571">• Cisco ASR 920 Series Aggregation Services Routers</li><li data-bbox="850 590 1321 621">• Cisco Cloud Services Router 1000v Series</li><li data-bbox="850 640 1321 672">• Cisco Network Convergence System 4200</li></ul> <p data-bbox="816 709 1102 741">Cisco IOS XE Fuji 16.8.1a</p> <ul data-bbox="850 758 1256 993" style="list-style-type: none"><li data-bbox="850 758 1256 789">• Cisco Catalyst 3650 Series Switches</li><li data-bbox="850 808 1256 840">• Cisco Catalyst 3850 Series Switches</li><li data-bbox="850 858 1256 890">• Cisco Catalyst 9300 Series Switches</li><li data-bbox="850 909 1256 940">• Cisco Catalyst 9400 Series Switches</li><li data-bbox="850 959 1256 991">• Cisco Catalyst 9500 Series Switches</li></ul>

Feature	Release & Platform
Model-Driven Telemetry NETCONF Dial-In	

Feature	Release & Platform
	<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 1000 Series Integrated Services Routers</li> <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 Catalyst 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 Router</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 and 9200L Series Switches</li> <li>• Cisco Catalyst 9300L SKUs</li> </ul> <p>Cisco IOS XE Gibraltar 16.10.1</p> <ul style="list-style-type: none"> <li>• Cisco Cloud Services Router 1000v</li> <li>• Cisco Network Convergence System 520 Series</li> </ul> <p>Cisco IOS XE Gibraltar 16.11.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9600 Series Switches</li> </ul>

Feature	Release & Platform
	Cisco IOS XE Amsterdam 17.3.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 8200 Series Edge Platforms</li> <li>• Cisco Catalyst 8300 Series Edge Platforms</li> </ul>
Model-Driven Telemetry gRPC Dial-out	Cisco IOS XE Gibraltar 16.10.1 <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregated Services Router</li> <li>• Cisco Catalyst 9200 and 9200L Series Switches</li> <li>• Cisco Catalyst 9300 and 9300L Series Switches</li> <li>• Cisco Catalyst 9400 Series Switches</li> <li>• Cisco Catalyst 9500 and 9500-High Performance Series Switches</li> <li>• Cisco cBR-8 Converged Broadband Router</li> <li>• Cisco Cloud Services Router 1000V Series</li> <li>• Cisco Network Convergence System 520 Series</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul> Cisco IOS XE Gibraltar 16.11.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9600 Series Switches</li> </ul> Cisco IOS XE Amsterdam 17.3.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 8200 Series Edge Platforms</li> <li>• Cisco Catalyst 8300 Series Edge Platforms</li> </ul>

Feature	Release & Platform
Model-Driven Telemetry gNMI Dial-In	<p data-bbox="816 296 1154 321">Cisco IOS XE Gibraltar 16.12.1</p> <ul data-bbox="850 342 1463 659" style="list-style-type: none"> <li>• Cisco Catalyst 9200 and 9200L Series Switches</li> <li>• Cisco Catalyst 9300 and 9300L Series Switches</li> <li>• Cisco Catalyst 9400 Series Switches</li> <li>• Cisco Catalyst 9500 and 9500-High Performance Series Switches</li> <li>• Cisco Catalyst 9600 Series Switches</li> <li>• Cisco cBR-8 Converged Broadband Router</li> </ul> <p data-bbox="816 695 1170 720">Cisco IOS XE Amsterdam 17.1.1</p> <ul data-bbox="850 741 1430 926" style="list-style-type: none"> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregated Services Router</li> <li>• Cisco Network Convergence System 520 Series</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul> <p data-bbox="816 961 1170 987">Cisco IOS XE Amsterdam 17.2.1</p> <ul data-bbox="850 1008 1446 1033" style="list-style-type: none"> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> </ul> <p data-bbox="816 1068 1170 1094">Cisco IOS XE Amsterdam 17.3.1</p> <ul data-bbox="850 1115 1446 1140" style="list-style-type: none"> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> </ul>

Feature	Release & Platform
TLS for gRPC Dial-Out	Cisco IOS XE Amsterdam 17.1.1 <ul style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 1000 Series Aggregation Services Routers ASR1000-RP1, ASR1000-RP2, ASR1000-RP3, ASR1001-HX, ASR1001-X, ASR1002-HX, ASR1002-X)</li> <li>• Cisco Catalyst 9200 Series Switches</li> <li>• Cisco Catalyst 9300 Series Switches</li> <li>• Cisco Catalyst 9400 Series Switches</li> <li>• Cisco Catalyst 9500 and 9500-High Performance Series Switches</li> <li>• Cisco Catalyst 9600 Series Switches</li> <li>• Cisco cBR-8 Converged Broadband Router</li> <li>• Cisco Cloud Services Router 1000V Series</li> <li>• Cisco Catalyst IE3200 Rugged Series</li> <li>• Cisco Catalyst IE3300 Rugged Series</li> <li>• Cisco Catalyst IE3400 Rugged Series</li> <li>• Cisco IR1101 Integrated Services Router Rugged</li> <li>• Cisco Network Convergence System 520 Series</li> <li>• Cisco Network Convergence System 4200 Series</li> </ul>
TLDP On-Change Notifications	Cisco IOS XE Amsterdam 17.2.1 <ul style="list-style-type: none"> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco Catalyst 9200 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>

Feature	Release & Platform
Kill Telemetry Subscription	<p data-bbox="818 289 1154 321">Cisco IOS XE Gibraltar 16.11.1</p> <ul data-bbox="850 338 1430 884" style="list-style-type: none"> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregated Services Routers</li> <li>• Cisco Catalyst 3650 Series Switches</li> <li>• Cisco Catalyst 3850 Series Switches</li> <li>• Cisco Catalyst 9200 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 IR1101 Integrated Services Router Rugged</li> <li>• Cisco Network Convergence System 4200 Series</li> <li>• Cisco Network Convergence System 520 Series</li> </ul> <p data-bbox="818 919 1170 951">Cisco IOS XE Gibraltar 16.11.1a</p> <ul data-bbox="850 968 1446 1251" style="list-style-type: none"> <li>• Cisco 1000 Series Integrated Services Routers</li> <li>• Cisco 4000 Series Integrated Services Routers</li> <li>• Cisco ASR 1000 Series Aggregation Services Routers</li> <li>• Cisco ASR 900 Series Aggregation Services Routers</li> <li>• Cisco ASR 920 Series Aggregation Services Routers</li> <li>• Cisco Cloud Services Router 1000V Series</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>
Application Hosting	
Application Hosting	<p>Cisco IOS XE Gibraltar 16.12.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 Series Switches</li> </ul> <p>Cisco IOS XE Amsterdam 17.1.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p>Cisco IOS XE Amsterdam 17.2.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9500-High Performance Series Switches</li> <li>• Cisco Catalyst 9600 Series Switches</li> </ul>
Application Hosting: Front-Panel Network Port Access	<p>Cisco IOS XE Gibraltar 16.12.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 Series Switches</li> </ul> <p>Cisco IOS XE Amsterdam 17.1.1</p> <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <p><b>Note</b> Cisco Catalyst 9410R Switch does not support front-panel application-hosting.</p>



Feature	Release & Platform
Application Hosting: Front-Panel USB Port Access	Cisco IOS XE Gibraltar 16.12.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 Series Switches</li> </ul> Cisco IOS XE Amsterdam 17.1.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9400 Series Switches</li> </ul> <b>Note</b> Cisco Catalyst 9410R Switch does not support front-panel application-hosting.
Application Hosting: ThousandEyes Integration	Cisco IOS XE Amsterdam 17.3.3 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 and 9300-L Series Switches</li> </ul>
Native Docker Container: Application Auto-Restart	Cisco IOS XE Amsterdam 17.2.1 <ul style="list-style-type: none"> <li>• Cisco Catalyst 9300 Series Switches</li> </ul>
<b>OpenFlow</b>	
OpenFlow	Cisco IOS XE Fuji 16.9.1 <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 and Cisco Catalyst 9500-High Performance Series Switches</li> </ul>
OpenFlow Power over Ethernet	Cisco IOS XE Gibraltar 16.12.1 <ul style="list-style-type: none"> <li>• Catalyst 9300 Series Switches</li> <li>• Catalyst 9400 Series Switches</li> </ul>

