



Cisco Active Network Abstraction 3.6.5 VNE Reference Guide

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Preface

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Abstract

This Reference Guide lists the devices, software versions, topologies, modules, events, and technologies that are supported on the VNEs provided with Cisco Active Network Abstraction (Cisco ANA) version 3.6.5.



Note

This Guide contains a subset of the total list of VNEs supported by this version of Cisco ANA. For information about additional supported VNEs, contact Cisco Professional Services.

Audience

The audience for this document includes:

- Network viewers, who monitor the network and perform basic (non-privileged) system functions.
- Network operators, who perform day-to-day operations, such as creating business tags and maps, and controlling alarm life cycles.
- Network administrators, who activate services and configure the network.
- System administrators, who manage the system configuration and security.

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CHAPTER 1

Introduction

This chapter introduces Virtual Network Elements (VNEs) and describes the types of information available in this Guide.

This chapter contains the following topics:

- [Introduction to VNEs, page 1-1](#)
- [Understanding the Tables, page 1-1](#)

Introduction to VNEs

VNEs (Virtual Network Elements) are independent software processes that run on the Cisco ANA Unit Servers. Each VNE is assigned to manage a single network element (NE) using the NE's management interfaces (for example, SNMP and/or Telnet). The VNEs maintain a live model, or abstraction, of each NE and the entire network.

As the VNE loads, it starts investigating the NE and automatically builds a live model of the NE, including its physical and logical inventory, its configuration and its status. After modeling the NE, the VNE begins negotiating with peer VNEs, which represent the peer NEs, in order to determine NE connectivity and topology at different layers. This model of the network topology, NE state, and NE inventory is constantly being updated by the VNEs, which track every change that occurs in the NEs and the network.

The VNEs communicate between themselves to analyze end-to-end flows, which provide information for root-cause and impact analysis, service path tracing, and more.

Understanding the Tables

This section presents legends that describe key information that can be found in the VNE support information chapters in this Guide.

This section contains the following topics:

- [Certification Level Legend, page 1-2](#)
- [Expedite Legend, page 1-2](#)

Certification Level Legend

Table 1-1 describes the meaning of the certification levels found in the VNE support information tables in this Reference Guide.

Table 1-1 **Certification Level Legend**

Certification Level	Description
N	Not supported.
S	Supported.
V	Verified.

Expedite Legend

Table 1-2 describes the meaning of the Expedite column found in the service event (service alarm) tables in this Reference Guide.

Table 1-2 **Expedite Legend in Service Event Tables**

Value	Descriptions
Y	The service event is expedited by a syslog or trap generated by the device. This means that the syslog or trap causes the VNE to poll the device without waiting for the usual polling cycle, thus enabling quicker detection of the event.
N	The service event is not expedited. This means that the VNE will detect this event during the next regularly scheduled polling cycle.



CHAPTER 2

Overview—Supported Network Elements in Cisco ANA 3.6.5

This chapter provides an overview of network elements (NEs) that are supported by Cisco ANA 3.6.5 and includes the following sections:

- [Supported Alcatel-Lucent Devices in Cisco ANA 3.6.5, page 2-1](#)
- [Supported Cisco Security Appliances in Cisco ANA 3.6.5, page 2-2](#)
- [Supported Cisco Gateways in Cisco ANA 3.6.5, page 2-2](#)
- [Supported Cisco Routers in Cisco ANA 3.6.5, page 2-3](#)
- [Supported Cisco Switches in Cisco ANA 3.6.5, page 2-9](#)
- [Supported Juniper Devices in Cisco ANA 3.6.5, page 2-14](#)
- [Supported Redback Devices in Cisco ANA 3.6.5, page 2-14](#)
- [Supported Generic Devices in Cisco ANA 3.6.5, page 2-15](#)
- [Supported Devices Not Included in VNE Reference Guide, page 2-15](#)

Supported Alcatel-Lucent Devices in Cisco ANA 3.6.5

This document includes support information for the following Alcatel-Lucent devices:

- [Alcatel-Lucent 7450 Ethernet Service Switch](#)
- [Alcatel-Lucent Intelligent Services Access Manager](#)
- [Alcatel-Lucent Riverstone](#)
- [Alcatel-Lucent CBX, GX, B-STDx Switches](#)

Table 2-1 **Supported Alcatel-Lucent Devices in Cisco ANA 3.6.5**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Alcatel-Lucent 7450 Ethernet Service Switch				
ess-7450	Alcatel ESS-7450	1.3.6.1.4.1.6527.1.6.1	3.5.2	V
ess-7450	Alcatel ESS-7450	1.3.6.1.4.1.6527.1.6.3	3.5.2	V
Alcatel-Lucent Intelligent Services Access Manager				
ISAM 7302	Alcatel-Lucent 7302 ISAM	1.3.6.1.4.1.637.61.1	3.6.0	V

Table 2-1 *Supported Alcatel-Lucent Devices in Cisco ANA 3.6.5 (Continued)*

NE Type	Product Name	SysOID	ANA Version	Certification Level
ISAM 7330	Alcatel-Lucent 7330 ISAM	1.3.6.1.4.1.637.61.1	3.6.0	V
Alcatel-Lucent Riverstone				
CPU-RS1100	RS1100	1.3.6.1.4.1.5567.1.1.13	3.6.2	S
CPU-RS3100	RS3100	1.3.6.1.4.1.5567.1.1.11	3.6.2	S
Alcatel-Lucent CBX, GX, B-STDX Switches				
cbx500	Lucent CBX 500	.1.3.6.1.4.1.277.1	3.6.0	S
gx550	Lucent GX 550 Switch	.1.3.6.1.4.1.277.1	3.6.0	S
B-STDX 9000	Lucent B-STDX 9000	.1.3.6.1.4.1.277.1	3.6.0	S
B-STDX 8000	Lucent B-STDX 8000	.1.3.6.1.4.1.277.1	3.6.0	S

Supported Cisco Security Appliances in Cisco ANA 3.6.5

This document includes support information for the following Cisco Security Appliances:

- [Cisco Adaptive Security Appliance 5550 Series](#)

Table 2-2 *Supported Cisco Security Appliances in Cisco ANA 3.6.5*

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco Adaptive Security Appliance 5550 Series				
ciscoASA5550	Cisco ASA 5550 Security Appliance	1.3.6.1.4.1.9.1.753	3.6.3	S
ciscoASA5550sc	Cisco ASA 5550 Security Appliance	1.3.6.1.4.1.9.1.763	3.6.3	S

Supported Cisco Gateways in Cisco ANA 3.6.5

This document includes support information for the following Cisco gateway:

- [Cisco AS5300 Series Universal Gateways](#)

Table 2-3 *Supported Cisco Gateway in Cisco ANA 3.6.5*

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco AS5300 Series Universal Gateways				
ciscoAS5300	Cisco AS5300 Access Server	1.3.6.1.4.1.9.1.162	3.6.0	S

Supported Cisco Routers in Cisco ANA 3.6.5

This document includes support information for the following Cisco routers:

- [Cisco 800 Series Routers](#)
- [Cisco 1000 Series Routers](#)
- [Cisco 1600 Series Routers](#)
- [Cisco 1700 Series Modular Access Routers](#)
- [Cisco 1800 Series Integrated Services Routers](#)
- [Cisco 2500 Series Routers](#)
- [Cisco 2600 Series Multiservice Platform Routers](#)
- [Cisco 2800 Series Integrated Services Routers](#)
- [Cisco 3600 Series Multiservice Platform Routers](#)
- [Cisco 3700 Series Multiservice Access Routers](#)
- [Cisco 3800 Series Integrated Services Routers](#)
- [Cisco 7200 Series Routers](#)
- [Cisco 7400 Series Routers](#)
- [Cisco 7600 Series Routers](#)
- [Cisco 10000 Series Routers](#)
- [Cisco 12000 Series Routers](#)
- [Cisco XR 12000 Series Routers](#)
- [Cisco CRS-1 Carrier Routing System](#)
- [Cisco ASR 1000 Series Routers](#)
- [Cisco ASR 9000 Series Aggregation Services Routers](#)

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco 800 Series Routers				
cisco801	Cisco 801 ISDN Router	1.3.6.1.4.1.9.1.212	3.6.0	S
cisco802	Cisco 802 ISDN Router	1.3.6.1.4.1.9.1.213	3.6.0	S
cisco803	Cisco 803 ISDN Router	1.3.6.1.4.1.9.1.214	3.6.0	S
cisco804	Cisco 804 ISDN Router	1.3.6.1.4.1.9.1.215	3.6.0	S
cisco805	Cisco 805 Serial Router	1.3.6.1.4.1.9.1.245	3.6.0	S
cisco802J	Cisco 802 ISDN Router	1.3.6.1.4.1.9.1.295	3.6.1	S
cisco804J	Cisco 804 ISDN Router	1.3.6.1.4.1.9.1.296	3.6.1	S
cisco826QuadV	Cisco 826 ADSL Router	1.3.6.1.4.1.9.1.321	3.6.1	S
cisco806	Cisco 806 Broadband Router	1.3.6.1.4.1.9.1.384	3.6.0	S
cisco811	Cisco 811 ISDN Router	1.3.6.1.4.1.9.1.395	3.6.0	S

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
cisco813	Cisco 813 ISDN Router	1.3.6.1.4.1.9.1.396	3.6.0	S
cisco826	Cisco 826 ADSL Router	1.3.6.1.4.1.9.1.322	3.6.0	S
cisco827	Cisco 827 ADSL Router	1.3.6.1.4.1.9.1.284	3.6.0	S
cisco827H	Cisco 827 H ADSL Router	1.3.6.1.4.1.9.1.446	3.6.0	S
cisco827QuadV	Cisco 827-4V ADSL Router	1.3.6.1.4.1.9.1.270	3.6.0	S
cisco828	Cisco 828 G.SHDSL Router	1.3.6.1.4.1.9.1.382	3.6.0	S
cisco831	Cisco 831 Ethernet Broadband Router	1.3.6.1.4.1.9.1.497	3.6.0	S
cisco836	Cisco 836 ADSL over ISDN Broadband Router	1.3.6.1.4.1.9.1.499	3.6.0	S
cisco837	Cisco 837 ADSL Broadband Router	1.3.6.1.4.1.9.1.495	3.6.1	S
cisco876	Cisco 876 Integrated Services Router	1.3.6.1.4.1.9.1.568	3.6.1	S
cisco877	Cisco 877 Integrated Services Router	1.3.6.1.4.1.9.1.569	3.6.1	S
cisco878	Cisco 878 Integrated Services Router	1.3.6.1.4.1.9.1.570	3.6.1	S
cisco871	Cisco 871 Integrated Services Router	1.3.6.1.4.1.9.1.571	3.6.1	S
Cisco 1000 Series Routers				
cisco1003	Cisco 1003 Router	1.3.6.1.4.1.9.1.41	3.5.2	S
cisco1005	Cisco 1005 Router	1.3.6.1.4.1.9.1.49	3.5.2	S
Cisco 1600 Series Routers				
cisco1601	Cisco 1601 Router	1.3.6.1.4.1.9.1.113	3.6.1	S
cisco1602	Cisco 1602 Router	1.3.6.1.4.1.9.1.114	3.6.1	S
cisco1603	Cisco 1603 Router	1.3.6.1.4.1.9.1.115	3.6.1	S
cisco1604	Cisco 1604 Router	1.3.6.1.4.1.9.1.116	3.6.1	S
ciscoPro1601	Cisco Pro 1601	1.3.6.1.4.1.9.1.117	3.6.1	S
ciscoPro1602	Cisco Pro 1602	1.3.6.1.4.1.9.1.118	3.6.1	S
ciscoPro1603	Cisco Pro 1603	1.3.6.1.4.1.9.1.119	3.6.1	S
cisco1605	Cisco 1605 Router	1.3.6.1.4.1.9.1.172	3.6.1	S
Cisco 1700 Series Modular Access Routers				
cisco1701ADSLBRI	Cisco 1701 ADSL Security Access Router	1.3.6.1.4.1.9.1.550	3.6.1	S
cisco1710	Cisco 1710 Security Access Router	1.3.6.1.4.1.9.1.200	3.6.1	S
cisco1711	Cisco 1711 Security Access Router	1.3.6.1.4.1.9.1.538	3.6.1	S
cisco1712	Cisco 1712 Security Access Router	1.3.6.1.4.1.9.1.539	3.6.1	S
cisco1720	Cisco 1720 Modular Access Router	1.3.6.1.4.1.9.1.201	3.6.1	S
cisco1721	Cisco 1721 Modular Access Router	1.3.6.1.4.1.9.1.444	3.6.1	S
cisco1750	Cisco 1750 Modular Access Router	1.3.6.1.4.1.9.1.216	3.6.1	S
cisco1760	Cisco 1760-V Modular Access Router	1.3.6.1.4.1.9.1.416	3.6.1	S
cisco1751	Cisco 1751 Modular Access Router	1.3.6.1.4.1.9.1.326	3.6.1	S

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco 1800 Series Integrated Services Routers				
cisco1801	Cisco 1801 Integrated Services Router	1.3.6.1.4.1.9.1.638	3.6.0	S
cisco1802	Cisco 1802 Integrated Services Router	1.3.6.1.4.1.9.1.639	3.6.0	S
cisco1803	Cisco 1803 Integrated Services Router	1.3.6.1.4.1.9.1.640	3.6.0	S
cisco1811	Cisco 1811 Integrated Services Router	1.3.6.1.4.1.9.1.641	3.6.0	S
cisco1812	Cisco 1812 Integrated Services Router	1.3.6.1.4.1.9.1.642	3.6.0	S
cisco1841	Cisco 1841 Integrated Services Router	1.3.6.1.4.1.9.1.620	3.6.0	S
Cisco 2500 Series Routers				
cisco2500	Cisco 2500 Router	1.3.6.1.4.1.9.1.13	3.6.0	S
cisco2501	Cisco 2501 Router	1.3.6.1.4.1.9.1.17	3.6.0	S
cisco2501FRADFX	Cisco 2501 Router	1.3.6.1.4.1.9.1.165	3.6.0	S
cisco2501LANFRADFX	Cisco 2501 Router	1.3.6.1.4.1.9.1.166	3.6.0	S
cisco2502	Cisco 2502 Router	1.3.6.1.4.1.9.1.18	3.6.0	S
cisco2502LANFRADFX	Cisco 2502 Router	1.3.6.1.4.1.9.1.167	3.6.0	S
cisco2503	Cisco 2503 Router	1.3.6.1.4.1.9.1.19	3.6.0	S
cisco2504	Cisco 2504 Router	1.3.6.1.4.1.9.1.20	3.6.0	S
cisco2505	Cisco 2505 Router	1.3.6.1.4.1.9.1.21	3.6.0	S
cisco2506	Cisco 2506 Router	1.3.6.1.4.1.9.1.22	3.6.0	S
cisco2507	Cisco 2507 Router	1.3.6.1.4.1.9.1.23	3.6.0	S
cisco2508	Cisco 2508 Router	1.3.6.1.4.1.9.1.24	3.6.0	S
cisco2509	Cisco 2509 Router	1.3.6.1.4.1.9.1.25	3.6.0	S
cisco2510	Cisco 2510 Access Server	1.3.6.1.4.1.9.1.26	3.6.0	S
cisco2511	Cisco 2511 Router	1.3.6.1.4.1.9.1.27	3.6.0	S
cisco2512	Cisco 2512 Access Server	1.3.6.1.4.1.9.1.28	3.6.0	S
cisco2513	Cisco 2513 Router	1.3.6.1.4.1.9.1.29	3.6.0	S
cisco2514	Cisco 2514 Router	1.3.6.1.4.1.9.1.30	3.6.0	S
cisco2515	Cisco 2515 Router	1.3.6.1.4.1.9.1.31	3.6.0	S
cisco2516	Cisco 2516 Router	1.3.6.1.4.1.9.1.42	3.6.0	S
cisco2517	Cisco 2517 Router	1.3.6.1.4.1.9.1.67	3.6.0	S
cisco2518	Cisco 2518 Router	1.3.6.1.4.1.9.1.68	3.6.0	S
cisco2519	Cisco 2519 Router	1.3.6.1.4.1.9.1.69	3.6.0	S
cisco2520	Cisco 2520 Router	1.3.6.1.4.1.9.1.70	3.6.0	S
cisco2521	Cisco 2521 Router	1.3.6.1.4.1.9.1.71	3.6.0	S
cisco2522	Cisco 2522 Router	1.3.6.1.4.1.9.1.72	3.6.0	S
cisco2523	Cisco 2523 Router	1.3.6.1.4.1.9.1.73	3.6.0	S

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
cisco2524	Cisco 2524 Router	1.3.6.1.4.1.9.1.74	3.6.0	S
cisco2525	Cisco 2525 Router	1.3.6.1.4.1.9.1.75	3.6.0	S
ciscoPro2501	Cisco Pro 2501	1.3.6.1.4.1.9.1.56	3.6.0	S
Cisco 2600 Series Multiservice Platform Routers				
cisco2610	Cisco 2610	1.3.6.1.4.1.9.1.185	3.6.0	S
cisco2610XM	Cisco 2610XM	1.3.6.1.4.1.9.1.466	3.6.0	S
cisco2610XM	Cisco 2610XM-DC	1.3.6.1.4.1.9.1.466	3.6.0	S
cisco2610XM	Cisco 2610XM-RP5	1.3.6.1.4.1.9.1.466	3.6.0	S
cisco2611	Cisco 2611	1.3.6.1.4.1.9.1.186	3.6.0	S
cisco2611XM	Cisco 2611XM	1.3.6.1.4.1.9.1.467	3.6.0	S
cisco2611XM	Cisco 2611XM-DC	1.3.6.1.4.1.9.1.467	3.6.0	S
cisco2611XM	Cisco 2611XM-RP5	1.3.6.1.4.1.9.1.467	3.6.0	S
cisco2612	Cisco 2612	1.3.6.1.4.1.9.1.187	3.6.0	S
cisco2613	Cisco 2613	1.3.6.1.4.1.9.1.195	3.6.0	S
cisco2620	Cisco 2620	1.3.6.1.4.1.9.1.208	3.6.0	S
cisco2620XM	Cisco 2620XM	1.3.6.1.4.1.9.1.468	3.6.0	S
cisco2620XM	Cisco 2620XM-DC	1.3.6.1.4.1.9.1.468	3.6.0	S
cisco2620XM	Cisco 2620XM-RP5	1.3.6.1.4.1.9.1.468	3.6.0	S
cisco2621	Cisco 2621	1.3.6.1.4.1.9.1.209	3.6.0	S
cisco2621XM	Cisco 2621XM	1.3.6.1.4.1.9.1.469	3.6.0	S
cisco2621XM	Cisco 2621XM-DC	1.3.6.1.4.1.9.1.469	3.6.0	S
cisco2621XM	Cisco 2621XM-RP5	1.3.6.1.4.1.9.1.469	3.6.0	S
cisco2650	Cisco 2650	1.3.6.1.4.1.9.1.319	3.6.0	S
cisco2650XM	Cisco 2650XM	1.3.6.1.4.1.9.1.470	3.6.0	S
cisco2650XM	Cisco 2650XM-DC	1.3.6.1.4.1.9.1.470	3.6.0	S
cisco2650XM	Cisco 2650XM-RP5	1.3.6.1.4.1.9.1.470	3.6.0	S
cisco2651	Cisco 2651	1.3.6.1.4.1.9.1.320	3.6.0	S
cisco2651XM	Cisco 2651XM	1.3.6.1.4.1.9.1.471	3.6.0	S
cisco2651XM	Cisco 2651XM-DC	1.3.6.1.4.1.9.1.471	3.6.0	S
cisco2651XM	Cisco 2651XM-RP5	1.3.6.1.4.1.9.1.471	3.6.0	S
cisco2691	Cisco 2691	1.3.6.1.4.1.9.1.413	3.6.0	S
cisco2610M	Cisco 2610M	1.3.6.1.4.1.9.1.418	3.6.0	S
cisco2610	Cisco2610	1.3.6.1.4.1.9.1.185	3.6.2	S
Cisco 2800 Series Integrated Services Routers				
cisco2801	Cisco 2801 Integrated Services Router	1.3.6.1.4.1.9.1.619	3.6.0	S

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
cisco2811	Cisco 2811 Integrated Services Router	1.3.6.1.4.1.9.1.576	3.6.0	S
cisco2821	Cisco 2821 Integrated Services Router	1.3.6.1.4.1.9.1.577	3.6.0	S
cisco2851	Cisco 2851 Integrated Services Router	1.3.6.1.4.1.9.1.578	3.6.0	S
Cisco 3600 Series Multiservice Platform Routers				
cisco3620	Cisco 3620 Multiservice Platform	1.3.6.1.4.1.9.1.122	3.6.0	S
cisco3640	Cisco 3640 Multiservice Platform	1.3.6.1.4.1.9.1.110	3.6.0	S
cisco3660	Cisco 3660 Multiservice Platform	1.3.6.1.4.1.9.1.205	3.6.0	S
cisco3661Ac	Cisco 3661Ac Multiservice Platform	1.3.6.1.4.1.9.1.338	3.6.0	S
cisco3661Dc	Cisco 3661Dc Multiservice Platform	1.3.6.1.4.1.9.1.339	3.6.0	S
cisco3662Ac	Cisco 3662Ac Multiservice Platform	1.3.6.1.4.1.9.1.340	3.6.0	S
cisco3662AcCo	Cisco 3662AcCo Multiservice Platform	1.3.6.1.4.1.9.1.342	3.6.0	S
cisco3662Dc	Cisco 3662Dc Multiservice Platform	1.3.6.1.4.1.9.1.341	3.6.0	S
cisco3662DcCo	Cisco 3662DcCo Multiservice Platform	1.3.6.1.4.1.9.1.343	3.6.0	S
ciscoSC3640	Cisco SC3640 Multiservice Platform	1.3.6.1.4.1.9.1.189	3.6.0	S
Cisco 3700 Series Multiservice Access Routers				
cisco3725	Cisco 3725 Multiservice Access Router	1.3.6.1.4.1.9.1.414	3.6.0	S
cisco3745	Cisco 3745 Multiservice Access Router	1.3.6.1.4.1.9.1.436	3.6.0	S
Cisco 3800 Series Integrated Services Routers				
cisco3825	Cisco 3825 Integrated Services Router	1.3.6.1.4.1.9.1.543	3.6.0	S
cisco3845	Cisco 3845 Integrated Services Router	1.3.6.1.4.1.9.1.544	3.6.0	S
Cisco 7200 Series Routers				
cisco7202	Cisco 7202 Router	1.3.6.1.4.1.9.1.194	3.6.0	V
cisco7206	Cisco 7206 Router	1.3.6.1.4.1.9.1.108	3.6.0	V
cisco7204	Cisco 7204 Router	1.3.6.1.4.1.9.1.125	3.6.0	V
cisco7204VXR	Cisco 7204 VXR Router	1.3.6.1.4.1.9.1.223	3.6.0	V
cisco7206VXR	Cisco 7206 VXR Router	1.3.6.1.4.1.9.1.222	3.6.0	V
cisco7201	cisco 7201 Router	1.3.6.1.4.1.9.1.821	3.6.4	S
Cisco 7400 Series Routers				
cisco7401ASR	Cisco 7401ASR	1.3.6.1.4.1.9.1.403	3.6.0	S
Cisco 7600 Series Routers				
cisco7604	Cisco 7604 Router	1.3.6.1.4.1.9.1.658	3.6.0	V
cisco7606	Cisco 7606 Router	1.3.6.1.4.1.9.1.402	3.6.0	V
cisco7609	Cisco 7609 Router	1.3.6.1.4.1.9.1.509	3.6.0	V
cisco7613	Cisco 7613 Router	1.3.6.1.4.1.9.1.528	3.6.0	V
cisco7604sysID	Cisco 7604 sysID Router	1.3.6.1.4.1.9.5.63	3.6.1	V
cisco7603	Cisco OSR 7603 Router	1.3.6.1.4.1.9.1.401	3.6.1	S

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
cisco7603S	Cisco 7603S Router	1.3.6.1.4.1.9.1.862	3.6.1	S
cisco7606s	Cisco 7606S Router	1.3.6.1.4.1.9.1.863	3.6.1	S
cisco7609S	Cisco 7609S Router	1.3.6.1.4.1.9.1.864	3.6.1	S
cisco763sysID	Cisco 763 sysID Router	1.3.6.1.4.1.9.5.53	3.6.1	S
cisco7606sysID	Cisco 7606 sysID Router	1.3.6.1.4.1.9.5.54	3.6.1	S
cisco7609sysID	Cisco 7609 sysID Router	1.3.6.1.4.1.9.5.55	3.6.1	S
cisco7613sysID	Cisco 7613 sysID Router	1.3.6.1.4.1.9.5.60	3.6.1	S
Cisco 10000 Series Routers				
cisco10005	Cisco 10005 Router	1.3.6.1.4.1.9.1.437	3.6.0	S
cisco10008	Cisco 10008 Router	1.3.6.1.4.1.9.1.438	3.6.0	S
Cisco 12000 Series Routers				
cisco12004	Cisco 12004 Router	1.3.6.1.4.1.9.1.181	3.6.0	V
cisco12006	Cisco 12006 Router	1.3.6.1.4.1.9.1.590	3.6.0	V
cisco12008	Cisco 12008 Router	1.3.6.1.4.1.9.1.182	3.6.0	V
cisco12010	Cisco 12010 Router	1.3.6.1.4.1.9.1.348	3.6.0	V
cisco12012	Cisco 12012 Router	1.3.6.1.4.1.9.1.173	3.6.0	V
cisco12016	Cisco 12016 Router	1.3.6.1.4.1.9.1.273	3.6.0	V
cisco12404	Cisco 12404 Router	1.3.6.1.4.1.9.1.423	3.6.0	V
cisco12406	Cisco 12406 Router	1.3.6.1.4.1.9.1.388	3.6.0	V
cisco12410	Cisco 12410 Router	1.3.6.1.4.1.9.1.394	3.6.0	V
cisco12416	Cisco 12416 Router	1.3.6.1.4.1.9.1.385	3.6.0	V
cisco12810	Cisco 12810 Router	1.3.6.1.4.1.9.1.478	3.6.0	V
cisco12816	Cisco 12816 Router	1.3.6.1.4.1.9.1.477	3.6.0	V
Cisco XR 12000 Series Routers				
cisco12012	Cisco 12012 Router	1.3.6.1.4.1.9.1.173	3.6.0	V
cisco12004	Cisco 12004 Router	1.3.6.1.4.1.9.1.181	3.6.0	V
cisco12008	Cisco 12008 Router	1.3.6.1.4.1.9.1.182	3.6.0	V
cisco12016	Cisco 12016 Router	1.3.6.1.4.1.9.1.273	3.6.0	V
cisco12010	Cisco 12010 Router	1.3.6.1.4.1.9.1.348	3.6.0	V
cisco12416	Cisco 12416 Router	1.3.6.1.4.1.9.1.385	3.6.0	V
cisco12406	Cisco 12406 Router	1.3.6.1.4.1.9.1.388	3.6.0	V
cisco12410	Cisco 12410 Router	1.3.6.1.4.1.9.1.394	3.6.0	V
cisco12404	Cisco 12404 Router	1.3.6.1.4.1.9.1.423	3.6.5	V
cisco12816	Cisco 12816 Router	1.3.6.1.4.1.9.1.477	3.6.0	V
cisco12810	Cisco 12810 Router	1.3.6.1.4.1.9.1.478	3.6.0	V
cisco12006	Cisco 12006 Router	1.3.6.1.4.1.9.1.590	3.6.0	V

Table 2-4 **Supported Cisco Routers in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco CRS-1 Carrier Routing System				
ciscoCrs16S	Cisco CRS-1 16-Slot Carrier Routing System	1.3.6.1.4.1.9.1.613	3.6.0	V
ciscoCrs8S	Cisco CRS-1 8-Slot Single-Shelf System	1.3.6.1.4.1.9.1.643	3.6.0	V
ciscoCrs4S	Cisco CRS-1 4-Slot Single-Shelf System	1.3.6.1.4.1.9.1.822	3.6.0	V
Cisco ASR 1000 Series Routers				
ciscoASR1002	Cisco ASR1002 Chassis, 4 built-in GE, Dual P/S, 4GB DRAM	1.3.6.1.4.1.9.1.923	3.6.5	V
ciscoASR1006	Cisco ASR1006 Chassis, Dual P/S	1.3.6.1.4.1.9.1.925	3.6.5	V
Cisco ASR 9000 Series Aggregation Services Routers				
ciscoASR9010	Cisco ASR 9010 chassis	1.3.6.1.4.1.9.1.1017	3.6.5	V

Supported Cisco Switches in Cisco ANA 3.6.5

This document includes support information for the following Cisco switches:

- [Cisco Catalyst 2900 Series Switches](#)
- [Cisco ME 3400 Series Ethernet Access Switches](#)
- [Cisco Catalyst 3500 XL Series Switches](#)
- [Cisco Catalyst 3550 Series Switches](#)
- [Cisco Catalyst 3560 Series Switches](#)
- [Cisco Catalyst 3750 Series Switches](#)
- [Cisco Catalyst 3750 Metro Series Switches](#)
- [Cisco Catalyst 4000 Series Switches](#)
- [Cisco Catalyst 4500 Series Switches](#)
- [Cisco Catalyst 4900 Series Switches](#)
- [Cisco ME 4900 Series Ethernet Switch](#)
- [Cisco Catalyst 6500 Series \(CatOS\) Switches](#)
- [Cisco Catalyst 6500 Series \(IOS\) Switches](#)
- [Cisco ME 6500 Series Ethernet Switches \(6524\)](#)

Table 2-5 **Supported Cisco Switches in Cisco ANA 3.6.5**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco Catalyst 2900 Series Switches				
wsc2948gsysID	Cisco Catalyst WS-C2948 Switch	.1.3.6.1.4.1.9.5.42	3.6.0	S
wsc2900sysID	Cisco Catalyst WS-C2900 Switch	.1.3.6.1.4.1.9.5.12	3.6.0	S
catalyst296024TT	Cisco Catalyst 2960-24TT Switch	.1.3.6.1.4.1.9.1.716	3.6.0	S
catalyst295048T	Cisco Catalyst 2950T 48 SI Switch	.1.3.6.1.4.1.9.1.559	3.6.0	S
catalyst295024GDC	Cisco Catalyst 2950G 24 EI DC Switch	.1.3.6.1.4.1.9.1.472	3.6.0	S
catalyst295024S	Cisco Catalyst 2950 24S Switch	.1.3.6.1.4.1.9.1.430	3.6.0	S
catalyst295048G	Cisco Catalyst 2950G 48 EI Switch	.1.3.6.1.4.1.9.1.429	3.6.0	S
catalyst295024G	Cisco Catalyst 2950G 24 EI Switch	.1.3.6.1.4.1.9.1.428	3.6.0	S
catalyst295012G	Cisco Catalyst 2950G 12 EI Switch	.1.3.6.1.4.1.9.1.427	3.6.0	S
cat2948gL3Dc	Cisco Catalyst C2948G-L3 Ethernet Switch	.1.3.6.1.4.1.9.1.386	3.6.0	S
catalyst2950t24	Cisco Catalyst 2950T 24 Switch	.1.3.6.1.4.1.9.1.359	3.6.0	S
catalyst295024C	Cisco Catalyst 2950C 24 Switch	.1.3.6.1.4.1.9.1.325	3.6.0	S
catalyst295024	Cisco Catalyst 2950 24 Switch	.1.3.6.1.4.1.9.1.324	3.6.0	S
catalyst295012	Cisco Catalyst 2950 12 Switch	.1.3.6.1.4.1.9.1.323	3.6.0	S
cat2948gL3	Cisco Catalyst C2948G-L3 Ethernet Switch	.1.3.6.1.4.1.9.1.275	3.6.0	S
catalyst2912MfXL	Cisco Catalyst 2912MF XL Switch	.1.3.6.1.4.1.9.1.221	3.6.0	S
catalyst2924MXL	Cisco Catalyst 2924M XL Switch	.1.3.6.1.4.1.9.1.220	3.6.0	S
catalyst2912XL	Cisco Catalyst 2912 XL Switch	.1.3.6.1.4.1.9.1.219	3.6.0	S
catalyst2924CXLv	Cisco Catalyst 2924C XL Switch	.1.3.6.1.4.1.9.1.218	3.6.0	S
catalyst2924XLv	Cisco Catalyst 2924 XL Switch	.1.3.6.1.4.1.9.1.217	3.6.0	S
catalyst2924CXL	Cisco Catalyst 2924C XL Switch	.1.3.6.1.4.1.9.1.184	3.6.0	S
catalyst2924XL	Cisco Catalyst 2924 XL Switch	.1.3.6.1.4.1.9.1.183	3.6.0	S
catalyst2916m-xl	Cisco Catalyst 2916M XL Switch	.1.3.6.1.4.1.9.1.171	3.6.0	S
catalyst2908xl	Cisco Catalyst 2908 XL Switch	.1.3.6.1.4.1.9.1.170	3.6.0	S
Cisco ME 3400 Series Ethernet Access Switches				
3400-24TS	Cisco Me 3400 Switch-24 10/100 + 2 SFP DC PS	1.3.6.1.4.1.9.1.736	3.6.1	S ¹
3400-24TS AC	Cisco Me 3400 Software 24PT-10/100 Plus 2PT SFP AC PS	1.3.6.1.4.1.9.1.736	3.6.1	S ²
3400-24TS DC	Cisco Me 3400 Software 24PT-10/100 Plus 2PT SFP DC PS	1.3.6.1.4.1.9.1.736	3.6.1	S ³
cisco340024TSA	Cisco ME 3400-24TS-A Switch	1.3.6.1.4.1.9.1.736	3.6.1	S
cisco340024TSD	Cisco ME 3400-24TS-D Switch	1.3.6.1.4.1.9.1.737	3.6.1	S
3400G-12CS	Cisco ME 3400G-12CS Ethernet Access Switch	1.3.6.1.4.1.9.1.780	3.6.1	S ⁴
ciscoMe3400g12CsA	Cisco ME 3400G-12CS AC Ethernet Access Switch	1.3.6.1.4.1.9.1.780	3.6.1	S

Table 2-5 **Supported Cisco Switches in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
ciscoMe3400g12CsD	Cisco ME 3400G-12CS DC Ethernet Access Switch	1.3.6.1.4.1.9.1.781	3.6.1	S
3400G-2CS	Cisco ME 3400-2CS Ethernet Access Switch	1.3.6.1.4.1.9.1.825	3.6.1	S ⁵
ciscoMe3400g2csA	Cisco ME 3400-2CS AC Ethernet Access Switch	1.3.6.1.4.1.9.1.825	3.6.1	S
ciscoMe3400eg2cs	Cisco ME 3400EG-2CS Ethernet Access Switch	1.3.6.1.4.1.9.1.1007	3.6.5	S
ciscoMe3400eg12Cs	Cisco ME 3400EG-12CS Ethernet Access Switch chassis	1.3.6.1.4.1.9.1.1008	3.6.5	S
ciscoMe3400e24Ts	Cisco ME 3400E-24TS Ethernet Access Switch chassis	1.3.6.1.4.1.9.1.1009	3.6.5	S
Cisco Catalyst 3500 XL Series Switches				
cat3524tXLEn	Cisco Catalyst 3524 PWR XL Switch	1.3.6.1.4.1.9.1.287	3.6.0	S
cat3548XL	Cisco Catalyst 3548 XL Switch	1.3.6.1.4.1.9.1.278	3.6.0	S
catalyst3508GXL	Cisco Catalyst 3508G XL Switch	1.3.6.1.4.1.9.1.246	3.6.0	S
catalyst3512XL	Cisco Catalyst 3512 XL Switch	1.3.6.1.4.1.9.1.247	3.6.0	S
catalyst3524XL	Cisco Catalyst 3524 XL Switch	1.3.6.1.4.1.9.1.248	3.6.0	S
catalystC3524PWRXLEn	catalystC3524PWRXLEn	1.3.6.1.4.1.9.1.515	3.6.1	S
Cisco Catalyst 3550 Series Switches				
catalyst355024	Cisco Catalyst 3550 24 Switch	1.3.6.1.4.1.9.1.366	3.6.0	S
catalyst355048	Cisco Catalyst 3550 48 Switch	1.3.6.1.4.1.9.1.367	3.6.0	S
catalyst355012T	Cisco Catalyst 3550 12T Switch	1.3.6.1.4.1.9.1.368	3.6.0	S
catalyst355012G	Cisco Catalyst 3550 12G Switch	1.3.6.1.4.1.9.1.431	3.6.0	S
cat355024Dc	Cisco Catalyst 3550 24 DC SMI Switch	1.3.6.1.4.1.9.1.452	3.6.0	S
cat355024Mmf	Cisco Catalyst 3550 24 FX SMI Switch	1.3.6.1.4.1.9.1.453	3.6.1	S
catalyst355024PWR	Cisco Catalyst 3550 24 PWR Switch	1.3.6.1.4.1.9.1.485	3.6.0	S
Cisco Catalyst 3560 Series Switches				
catalyst356024PS	Cisco Catalyst 3560-24PS Switch	1.3.6.1.4.1.9.1.563	3.6.1	S
catalyst356048PS	Cisco Catalyst 3560-48PS Switch	1.3.6.1.4.1.9.1.564	3.6.0	S
catalyst3560G24PS	Cisco Catalyst 3560G-24PS Switch	1.3.6.1.4.1.9.1.614	3.6.1	S
catalyst3560G24TS	Cisco Catalyst 3560G-24TS Switch	1.3.6.1.4.1.9.1.615	3.6.1	S
catalyst3560G48PS	Cisco Catalyst 3560G-48PS Switch	1.3.6.1.4.1.9.1.616	3.6.1	S
catalyst3560G48TS	Cisco Catalyst 3560G-48TS Switch	1.3.6.1.4.1.9.1.617	3.6.0	S
catalyst356024TS	Cisco Catalyst 3560-24TS Switch	1.3.6.1.4.1.9.1.633	3.6.1	S
Cisco Catalyst 3750 Series Switches				
catalyst37xxStack	Catalyst 3750-48/-24/-24T/-24TS/-24FS/Stack	1.3.6.1.4.1.9.1.516	3.6.0	S
catalyst375024	Cisco Catalyst 3750-24	1.3.6.1.4.1.9.1.511	3.6.4	S
catalyst375024PS	Cisco Catalyst 3750-24PS	1.3.6.1.4.1.9.1.536	3.6.4	S

Table 2-5 **Supported Cisco Switches in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
catalyst375024T	Cisco Catalyst 3750-24T	1.3.6.1.4.1.9.1.514	3.6.4	S
catalyst375024TS	Cisco Catalyst 3750 - 24TS	1.3.6.1.4.1.9.1.513	3.6.4	S
catalyst375048	Cisco Catalyst 3750-48	1.3.6.1.4.1.9.1.512	3.6.4	S
catalyst375048PS	Cisco Catalyst 3750-48PS	1.3.6.1.4.1.9.1.535	3.6.4	S
catalyst3750G16TD	Cisco Catalyst 3750G-16TD	1.3.6.1.4.1.9.1.591	3.6.4	S
catalyst3750G24PS	Cisco Catalyst 3750G-24PS	1.3.6.1.4.1.9.1.602	3.6.4	S
catalyst3750G24TS1U	Cisco Catalyst 3750G-24TS-1U	1.3.6.1.4.1.9.1.624	3.6.4	S
catalyst3750G48PS	Cisco Catalyst 3750G-48PS	1.3.6.1.4.1.9.1.603	3.6.4	S
catalyst3750G48TS	Cisco Catalyst 3750G-48TS	1.3.6.1.4.1.9.1.604	3.6.4	S
catalyst3750Ge12Sfp	Cisco Catalyst 3750G-12Sfp	1.3.6.1.4.1.9.1.530	3.6.4	S
catalyst3750Ge12SfpDc	Cisco catalyst 3750G-12S-SD	1.3.6.1.4.1.9.1.688	3.6.4	S
catalyst3750G24WS50	Cisco Catalyst 3750G-24WS-50	1.3.6.1.4.1.9.1.779	3.6.4	S
catalyst3750E48TD	Cisco Catalyst 3750E-48TD	1.3.6.1.4.1.9.1.790	3.6.4	S
catalyst3750E24PD	Cisco Catalyst 3750E-24PD	1.3.6.1.4.1.9.1.792	3.6.4	S
catalyst3750E24TD	Cisco Catalyst 3750E-24TD	1.3.6.1.4.1.9.1.789	3.6.4	S
catalyst3750E48PD	Cisco Catalyst 3750E-48PD	1.3.6.1.4.1.9.1.791	3.6.4	S
catalyst3750G24WS25	Cisco Catalyst 3750G-24WS-25	1.3.6.1.4.1.9.1.778	3.6.4	S
Cisco Catalyst 3750 Metro Series Switches				
catalyst375024ME	Cisco Catalyst 3750 Metro 24-DC Switch	1.3.6.1.4.1.9.1.574	3.6.0	S
Cisco Catalyst 4000 Series Switches				
wsc4003sysID	Cisco Catalyst 4003 Switch	1.3.6.1.4.1.9.5.40	3.6.0	V
wsc4006sysID	Cisco Catalyst 4006 Switch	1.3.6.1.4.1.9.5.46	3.6.0	V
catalyst4kGateway	Cisco Catalyst 4604 Access Gateway	1.3.6.1.4.1.9.1.318	3.6.0	V
cat4232L3	Cisco Catalyst 4006 Switch	1.3.6.1.4.1.9.1.300	3.6.0	S
cat4840gL3	Cisco Catalyst 4840G Switch	1.3.6.1.4.1.9.1.312	3.6.0	S
cisco4000	Cisco Catalyst 4000 Switch	1.3.6.1.4.1.9.1.7	3.6.0	V
Cisco Catalyst 4500 Series Switches				
cisco4500	Cisco Catalyst 4500 switch	1.3.6.1.4.1.9.1.14	3.6.0	V
cat4506	Cisco Catalyst 4506 switch	1.3.6.1.4.1.9.1.502	3.6.0	V
wsc4506sysID	Cisco Catalyst 4506 switch	1.3.6.1.4.1.9.5.59	3.6.0	V
cat4507	Cisco Catalyst 4507 switch	1.3.6.1.4.1.9.1.501	3.6.0	V
cat4503	Cisco Catalyst 4503 switch	1.3.6.1.4.1.9.1.503	3.6.0	V
wsc4503sysID	Cisco Catalyst 4503 Switch	1.3.6.1.4.1.9.5.58	3.6.3	S
Cisco Catalyst 4900 Series Switches				
catalyst4948	Cisco Catalyst 4948 Switch	1.3.6.1.4.1.9.1.626	3.6.1	S
catalyst494810GE	Cisco Catalyst 4948 10 Gigabit Ethernet Switch	1.3.6.1.4.1.9.1.659	3.6.1	S

Table 2-5 **Supported Cisco Switches in Cisco ANA 3.6.5 (Continued)**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Cisco ME 4900 Series Ethernet Switch				
ciscoMe492410GE	Cisco ME 4924-10GE Ethernet Aggregation Switch	1.3.6.1.4.1.9.1.788	3.6.1	S
Cisco Catalyst 6500 Series (CatOS) Switches				
wsc6009sysID	Catalyst 6009	1.3.6.1.4.1.9.5.39	3.6.0	V
wsc6506sysID	Catalyst 6506	1.3.6.1.4.1.9.5.45	3.6.0	V
wsc6509nebasysID	Catalyst 6509NEBA	1.3.6.1.4.1.9.5.61	3.6.4	V
wsc6509nebsysID	Catalyst 6509-NEB	1.3.6.1.4.1.9.5.47	3.6.0	V
wsc6513sysID	Catalyst 6513	1.3.6.1.4.1.9.5.50	3.6.0	V
wsc6509sysID	Catalyst 6509	1.3.6.1.4.1.9.5.44	3.6.0	V
wsc6504esysID	Catalyst 6504-E	1.3.6.1.4.1.9.5.64	3.6.1	V
wsc6503sysID	Catalyst 6503	1.3.6.1.4.1.9.5.56	3.6.1	S
cat6500FirewallSm	Catalyst 6500 Firewall Services Module	1.3.6.1.4.1.9.1.522	3.6.1	S
cat6500SslSm	Catalyst 6500 SSL Services Module	1.3.6.1.4.1.9.1.554	3.6.1	S
Cisco Catalyst 6500 Series (IOS) Switches				
cat6006	Cisco Catalyst 6006 Switch	1.3.6.1.4.1.9.1.280	3.6.0	V
ciscoWSC6509neba	Cisco Catalyst 6509-NEB-A Switch	1.3.6.1.4.1.9.1.534	3.6.0	V
cat6509Sp	Cisco Catalyst 6509-NEB Switch	1.3.6.1.4.1.9.1.310	3.6.0	V
ciscoWSC6503	Cisco Catalyst 6503 Switch	1.3.6.1.4.1.9.1.449	3.6.0	V
cat6506	Cisco Catalyst 6506 Switch	1.3.6.1.4.1.9.1.282	3.6.0	V
cat6509	Cisco Catalyst 6509 Switch	1.3.6.1.4.1.9.1.283	3.6.0	V
ciscoWSC6504E	Cisco Catalyst 6504-E Switch Chassis	1.3.6.1.4.1.9.1.657	3.6.0	V
ciscoWSC6513	Cisco Catalyst 6513 Switch	1.3.6.1.4.1.9.1.400	3.6.0	V
cisco6500VSS	Cisco Catalyst 6500 VSS	1.3.6.1.4.1.9.1.896	3.6.3	V
Cisco ME 6500 Series Ethernet Switches (6524)				
cisco6524 (ME-C6524GS-8S)	Cisco ME 6524	1.3.6.1.4.1.9.1.719	3.6.0	V
cisco6524 (ME-C6524GT-8S)	Cisco ME 6524	1.3.6.1.4.1.9.1.720	3.6.0	V

¹Same as cisco340024TSA. Differs based on chassis/power supply.²Same as cisco340024TSA. Differs based on chassis/power supply.³Same as cisco340024TSA. Differs based on chassis/power supply.⁴Same as ciscoMe3400g12CsA. Differs based on chassis/power supply.⁵Same as ciscoMe3400g2csA. Differs based on chassis/power supply.

Supported Juniper Devices in Cisco ANA 3.6.5

This document includes support information for the following Juniper devices:

- [Juniper M-Series Multiservice Edge Routers](#)
- [Juniper T-Series Core Platforms](#)

Table 2-6 *Supported Juniper Devices in Cisco ANA 3.6.5*

NE Type	Product Name	SysOID	ANA Version	Certification Level
Juniper M-Series Multiservice Edge Routers				
Juniper M10i	Juniper Networks M10i Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.11	3.5.2	S
Juniper M40e	Juniper Networks M40e Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.8	3.5.2	S
Juniper M320	Juniper Networks M320 Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.9	3.6.1	S
Juniper M5	Juniper Networks M5 Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.5	3.6.1	S
Juniper M7	Juniper Networks M7 Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.10	3.5.2	S
Juniper M20i	Juniper Networks M20i Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.2	3.6.2	S
Juniper M120	Juniper Networks M120 Multiservice Edge Router	1.3.6.1.4.1.2636.1.1.1.2.18	3.6.4	S
Juniper T-Series Core Platforms				
Juniper T640	T640	1.3.6.1.4.1.2636.1.1.1.2.6	3.6.2	S

Supported Redback Devices in Cisco ANA 3.6.5

This document includes support information for the following Redback devices:

- [SmartEdge 800 Multiservice Edge Router](#)
- [Redback SMS Family](#)

Table 2-7 *Supported Redback Devices in Cisco ANA 3.6.5*

NE Type	Product Name	SysOID	ANA Version	Certification Level
SmartEdge 800 Multiservice Edge Router				
Smart Edge 800	Smart Edge 800	1.3.6.1.4.1.2352.1.10	3.5.2	V
Redback SMS Family				
sms10000	Redback SMS 10000	1.3.6.1.4.1.2352.1.4	3.5.2	V
sms1800	Redback SMS 1800	1.3.6.1.4.1.2352.1.3	3.5.2	V
sms500	Redback SMS 500	1.3.6.1.4.1.2352.1.2	3.5.2	V
sms1000	Redback SMS 1000	1.3.6.1.4.1.2352.1.1	3.5.2	V

Supported Generic Devices in Cisco ANA 3.6.5

This document includes support information for the following Generic devices:

- [Generic VNE](#)

Table 2-8 **Supported Generic Devices in Cisco ANA 3.6.5**

NE Type	Product Name	SysOID	ANA Version	Certification Level
Generic VNE				
Generic device		.1.3.999.3	3.6.0	S

Supported Devices Not Included in VNE Reference Guide

The following devices are supported by Cisco ANA 3.6.5, but are not included in this Reference Guide:

- ADC BA40 DSLAM
- Alcatel ASAM
- Cisco 7300 Series Routers
- Cisco 7500 Series Routers
- Cisco AS5800 Series Universal Gateway
- Cisco Catalyst 1900 Series Switches
- Cisco SCE Service Control Engine
- ECI Hi-Focus DSLAM
- Lucent AnyMedia
- Lucent PacketStar PSAX
- Lucent Stinger MS+ DSL Access Concentrator
- Lucent Stinger MRT DSL Access Concentrator
- Lucent MAX TNT WAN access switch
- UTStarComm AN2000 IP-DSLAM



Note

For more information about support for these devices, contact your Cisco Project Manager or Cisco Account Team.



CHAPTER 3

Support Information for Alcatel-Lucent Devices

This chapter contains support information for Virtual Network Elements (VNEs) that manage Alcatel-Lucent devices in Cisco ANA 3.6.5, and contains the following topics:

- [Alcatel-Lucent 7450 Ethernet Service Switch, page 3-1](#)
- [Alcatel-Lucent Intelligent Services Access Manager, page 3-4](#)
- [Alcatel-Lucent Riverstone, page 3-7](#)
- [Alcatel-Lucent CBX, GX, B-STDx Switches, page 3-9](#)
- [Supported Technologies on Alcatel-Lucent Devices, page 3-15](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

Alcatel-Lucent 7450 Ethernet Service Switch

This section includes the following information about Alcatel-Lucent 7450 ESS devices:

- [Alcatel-Lucent 7450 ESS—Supported Software Versions, page 3-2](#)
- [Alcatel-Lucent 7450 ESS—Supported Topologies, page 3-2](#)
- [Alcatel-Lucent 7450 ESS—Supported Modules, page 3-2](#)
- [Alcatel-Lucent 7450 ESS—Supported Technologies, page 3-3](#)
- [Alcatel-Lucent 7450 ESS—Supported Service Events, page 3-3](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Alcatel-Lucent 7450 Ethernet Service Switch](#).

Alcatel-Lucent 7450 ESS—Supported Software Versions

Table 3-1 Supported Software Versions for Alcatel-Lucent 7450 ESS—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
3.0.R1	3.5.2	V
3.0.R7	3.5.2	V
4.0.R5	3.5.2	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Alcatel-Lucent 7450 ESS—Supported Topologies

Table 3-2 Supported Topologies for Alcatel-Lucent 7450 ESS—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0

Alcatel-Lucent 7450 ESS—Supported Modules

Table 3-3 Supported Modules for Alcatel-Lucent 7450 ESS—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
M10-1GB-SFP	3.5.2	MDA 10 Ports 1-Gigabit Ethernet SFP	V
M16-OC12/3-SFP	3.5.2	MDA 16 Ports OC12/OC3 SFP	V
M8-OC12/3-SFP	3.5.2	MDA 8 Ports OC12/OC3 SFP	V
M16-OC3-SFP	3.5.2	MDA 16 Ports OC3 SFP	V
M4-OC48-SFP	3.5.2	MDA 4 Ports OC48 SFP	V
M1-10GB	3.5.2	MDA 1 Port 10 GigabitP	V
M2-OC48-SFP	3.5.2	MDA 2 Ports OC48 SFP	V
20-100ETH-SFP	3.5.2	MDA 20 Port 100FX	V
M20-1GB-TX	3.5.2	MDA 20 Ports 10/100/1000 Ethernet TX	V
M2-10GB-XFP	3.5.2	MDA 2 Ports 10Gig Ethernet XFP	V
M20-1GB-SFP	3.5.2	MDA 20 Ports 10/100/1000 Ethernet SFP	V
VSM-CCA	3.5.2	VSM Cross Connect	V
M5-1GB-SFP-B	3.5.2	MDA 5 Ports 10/100/1000 Ethernet SFP	V

Table 3-3 **Supported Modules for Alcatel-Lucent 7450 ESS—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
M10-1GB-SFP-B	3.5.2	MDA 10 Ports 10/100/1000 Ethernet SFP	V
SFM-200G	3.5.2	200g CPM/SF module	V
SFM-100G	3.5.2	100g CPM/SF module	V
SFM2-200G	3.5.2	200g CPM/SF module	V
IOM-20G	3.5.2	2 x 10-Gig MDA IOM Card	V
M60-10/100ETH-TX	3.5.2	MDA 60 Ports 10/100 Ethernet TX	V
M60-10/100ET-TX	3.5.2	MDA 60 Ports 10/100 Ethernet TX	V
IOM-20G-B	3.5.2	2 x 10-Gig MDA IOM Card, B	V

Alcatel-Lucent 7450 ESS—Supported Technologies

The following technologies are supported by the Alcatel-Lucent 7450 ESS in Cisco ANA 3.6.5:

- [IP, page 3-15](#)
- [Ethernet \(IEEE 802.3\), page 3-18](#)
- [Physical Equipment, page 3-28](#)
- [Base Logical Components, page 3-29](#)
- [Common, page 3-30](#)

Alcatel-Lucent 7450 ESS—Supported Service Events

Table 3-4 **Supported Service Events for Alcatel-Lucent 7450 ESS—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Alcatel-Lucent Intelligent Services Access Manager

This section includes the following information about Alcatel-Lucent ISAM devices:

- [Alcatel-Lucent ISAM—Supported Software Versions, page 3-4](#)
- [Alcatel-Lucent ISAM—Supported Topologies, page 3-4](#)
- [Alcatel-Lucent ISAM—Supported Modules, page 3-5](#)
- [Alcatel-Lucent ISAM—Supported Technologies, page 3-6](#)
- [Alcatel-Lucent ISAM—Supported Service Events, page 3-7](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Alcatel-Lucent Intelligent Services Access Manager](#).

Alcatel-Lucent ISAM—Supported Software Versions

Table 3-5 *Supported Software Versions for Alcatel-Lucent ISAM—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
2.0.0.16	3.5.2	V
2.3.1.15	3.5.2	V
2.4.2.4	3.5.2	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Alcatel-Lucent ISAM—Supported Topologies

Table 3-6 *Supported Topologies for Alcatel-Lucent ISAM—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
ATM	ATM	3.5.2
Ethernet	Ethernet	3.5.2
Physical Layer	Physical Layer	3.5.2

Alcatel-Lucent ISAM—Supported Modules

Table 3-7 *Supported Modules for Alcatel-Lucent ISAM—Cisco ANA 3.6.5*

Module Name	Module Description	ANA Version	Certification Level
AACU-A	ADSL Alarm Control Unit version A (R3 equipment)	3.6.0	V
AACU-C	ADSL Alarm Control Unit version C (R4 equipment)	3.6.0	V
ABLT-D	MultiDSL POTS UD BVB LT standard version D	3.6.0	V
ABLT-E	Multi-DSL POTS Line Termination version E	3.6.0	V
ADLT-C	ADSL Line termination version C (4 lines)	3.6.0	V
ADLT-E	ADSL Line termination version E (4 lines)	3.6.0	V
ADLT-F	ADSL (Euro) Line termination version F (ISDN support, 4 lines)	3.6.0	V
ADLT-J	ADSL Line termination version J (12 lines)	3.6.0	V
ADLT-K	ADSL Line termination version K (12 lines)	3.6.0	V
ADLT-L	ADSL Line termination version L (24 lines)	3.6.0	V
ADLT-M	ADSL Line termination version M (12 lines)	3.6.0	V
ADLT-S	ADSL Line Termination version S - BVB enabled	3.6.0	V
ADLT-W	ADSL Line Termination version W - POTS/BVB ready	3.6.0	V
ADSE-A	ADSL Serial Extender version A	3.6.0	V
ADSE-B	ADSL Serial Extender version B	3.6.0	V
ADSE-C	ADSL Serial Extender version C	3.6.0	V
AICC-A	IMA ATM E1-NT 2 Mits Controller Card	3.6.0	V
ANY_BOARD	ANY_BOARD	3.6.0	V
ASCC-P	ASCC-P	3.6.0	V
ASCC-PE	PDH E3 Interface Controller Card	3.6.0	V
ASCC-S1	STM-1 Interface Controller Card	3.6.0	V
BSEC-A	Broad Band Shelf Extender Card	3.6.0	V
D1LT-A	DS1 Line termination version A	3.6.0	V
D1LT-B	4 T1 ports Using IMA Group	3.6.0	V
D3LT-A	DS3 Line termination version A	3.6.0	V
D3NT-A	DS3 Network Termination version A	3.6.0	V
D3NT-C	DS3 Network Termination version C	3.6.0	V
E1LT-A	E1 (IMA) Line Termination version A (4 lines)	3.6.0	V
E1NT-A	(Quad) E1 (IMA) Network Termination version A	3.6.0	V
E1NT-C	GANT-B motherboard and E1PL-B daughterboard (PLIM)	3.6.0	V
EBLT-A	ADSL2+ POTS Line Termination version A	3.6.0	V
EBLT-C	ADSL2+ POTS Line Termination version C	3.6.0	V
ECNT-A	7302 ISAM Combined network termination version A	3.6.0	V

Table 3-7 **Supported Modules for Alcatel-Lucent ISAM—Cisco ANA 3.6.5 (Continued)**

Module Name	Module Description	ANA Version	Certification Level
LTAC-C	Line Terminal ADSL Combiner Card	3.6.0	V
LTAC-D	Line Terminal ADSL Combiner Card	3.6.0	V
LTSC-A	Line Termination SHDSL Card	3.6.0	V
MACU-A	MiniRAM ACU version A	3.6.0	V
NBLC-A	Narrowband Line Card	3.6.0	V
SALT-A	1 Port OC3 Card	3.6.0	V
SALT-C	STM-1/OC3c (HCL based) Line Termination Unit version C	3.6.0	V
SANT-D	Synchronous (STM1) ATM Network Termination version D	3.6.0	V
SANT-E	GANT-A motherboard and SONI-A daughterboard (PLIM)	3.6.0	V
SANT-F	GANT-B motherboard and SONI-A daughterboard (PLIM)	3.6.0	V
SANT-G	Synchronous (STM1) ATM Network Termination version G	3.6.0	V
SHLT-B	SHDSL Line termination versioin B (12 lines)	3.6.0	V
SMLT-A	SHDSL Line termination version A (24 lines with IMA)	3.6.0	V
SMLT-B	SHDSL Line Termination Unit Version B(12 lines, with IMA)	3.6.0	V

Alcatel-Lucent ISAM—Supported Technologies

The following technologies are supported by the Alcatel-Lucent ISAM in Cisco ANA 3.6.5:

- [IP, page 3-15](#)
- [Ethernet \(IEEE 802.3\), page 3-18](#)
- [ATM, page 3-21](#)
- [Point to Point, page 3-25](#)
- [DSL, page 3-26](#)
- [Physical Technologies, page 3-27](#)
- [Physical Equipment, page 3-28](#)
- [Base Logical Components, page 3-29](#)
- [Common, page 3-30](#)
- [Additional Technologies, page 3-32](#)

Alcatel-Lucent ISAM—Supported Service Events

Table 3-8 *Supported Service Events for Alcatel-Lucent ISAM—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	N
Link Down/Up	3.6.0	N
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	N
Card Up/Down	3.6.0	N

Alcatel-Lucent Riverstone

This section includes the following information about Riverstone devices:

- [Riverstone—Supported Software Versions, page 3-8](#)
- [Riverstone—Supported Topologies, page 3-8](#)
- [Riverstone—Supported Modules, page 3-8](#)
- [Riverstone—Supported Technologies, page 3-9](#)
- [Riverstone—Supported Service Events, page 3-9](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Alcatel-Lucent Riverstone](#).

Riverstone—Supported Software Versions

Table 3-9 *Supported Software Versions for Riverstone—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
9.3.0.2	3.6.2	S
9.4.0.0	3.6.2	S
9.4.0.1	3.6.2	S
9.4.0.2	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Riverstone—Supported Topologies

Table 3-10 *Supported Topologies for Riverstone—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.2
Physical Layer ¹	Physical Layer	3.6.2

¹Only static

Riverstone—Supported Modules

Table 3-11 *Supported Modules for Riverstone—Cisco ANA 3.6.5*

Module Name	Module Description	ANA Version	Certification Level
CM	Control Module, Rev. 0	3.6.2	V
G3M-HTXB2-16	RS 3000 16-Port 10/100 TX Module via RJ-45 Rev. 4.0/0.1	3.6.2	V
G3M-GBCFM-02	2 port MPLS enabled GbE base module; requires GBICs Rev. 5.1	3.6.2	V
FLASH CARD	16/32Mb Flash card	3.6.4	S ¹

¹Support is for all flash card sizes

Riverstone—Supported Technologies

The following technologies are supported by the Riverstone in Cisco ANA 3.6.5:

- [IP](#), page 3-15
- [Ethernet \(IEEE 802.3\)](#), page 3-18
- [Physical Equipment](#), page 3-28
- [Base Logical Components](#), page 3-29
- [Common](#), page 3-30

Riverstone—Supported Service Events

Table 3-12 *Supported Service Events for Riverstone—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Link Down/Up	3.6.2	N
Device Unreachable	3.6.2	N
CPU Over Utilized	3.6.2	N
Memory Over Utilized	3.6.2	N
Device Unsupported	3.6.2	N
Module Unsupported	3.6.2	N
Port Flapping	3.6.2	N
Port Down	3.6.2	N
Cloud Problem	3.6.2	N

Alcatel-Lucent CBX, GX, B-STDx Switches

This section includes the following information about Alcatel-Lucent CBX, GX, B-STDx Switches devices:

- [Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Software Versions](#), page 3-10
- [Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Topologies](#), page 3-10
- [Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Modules](#), page 3-10
- [Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Technologies](#), page 3-14
- [Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Service Events](#), page 3-14



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Alcatel-Lucent CBX, GX, B-STDx Switches](#).

Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Software Versions

Table 3-13 *Supported Software Versions for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
07.02.02.08	3.6.0	S
07.02.04.19	3.6.0	S
07.03.01.14	3.6.0	S
08.00.03.11	3.6.0	S
08.00.03.11	3.6.0	S
08.00.03.07	3.6.0	S
08.00.03.11	3.6.0	S
08.00.03.22	3.6.0	S
09.01.01.04	3.6.0	S
09.01.01.13	3.6.0	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Topologies

Table 3-14 *Supported Topologies for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
Framerelay	Framerelay	3.6.0

Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Modules

Table 3-15 *Supported Modules for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5*

Module Name	Module Description	ANA Version	Certification Level
V35-6	6-port V.35 i/o card	3.6.0	S
FE3-1	1-port Fractional E3 i/o card	3.6.0	S
PON-ETHER-2	PON R2.0 Ethernet UNI sub-card 2 port	3.6.0	S

Table 3-15 **Supported Modules for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5 (Continued)**

Module Name	Module Description	ANA Version	Certification Level
BIO4-CH	Scorpion channelized BIO	3.6.0	S
BIO4-CH-OC12-1	Scorpion channelized OC12 PHY 1 port	3.6.0	S
BIO4-CH-STM1-2	Scorpion channelized stm-1 PHY 2 port	3.6.0	S
BIO4-CH-OC12-2	Scorpion channelized OC12 PHY 2 port	3.6.0	S
BIO4-CH-DS3-12	Scorpion channelized DS3 12 port	3.6.0	S
IOM6-CH-DS3-T3-6	Positron channelized DS3 6 port	3.6.0	S
IOM5-OC3-4	Positron OC3 ATM/POS card	3.6.0	S
IOM5-OC12-1	Positron OC12 ATM/POS card	3.6.0	S
IOM5-IP-SERVER	Positron IP Server card	3.6.0	S
HSSI-2	HSSI i/o card	3.6.0	S
NP-2	NP2	3.6.0	S
BIO4-CH-OC3-2	Scorpion channelized OC3 PHY 2 port	3.6.0	S
BIO4-CH-DS3-10	Scorpion channelized DS3 PHY 10 port	3.6.0	S
DSX1-10	10-port DSX-1 card	3.6.0	S
RS232-18	18-port X.21/V.24 I/O card, for STDx 3000/6000 only	3.6.0	S
RS232-8	8-port X.21/V.24 I/O card, for STDx 3000/6000 only	3.6.0	S
UT1-4-24	4-port 24-channel Un-Channelized T1	3.6.0	S
UE1-4-30	4-port 30-channel Un-Channelized E1	3.6.0	S
ATMDS3-1	1-port ATM DS3 UNI I/O card	3.6.0	S
ATME3-1	1-port ATM E3 UNI I/O card	3.6.0	S
PRI-4	4-port ISDN PRI I/O card	3.6.0	S
FT1-1-24	1-port 24-channel Fractional T1	3.6.0	S
E1-PRI-4	4-port E1 PRI I/O card	3.6.0	S
SFT1-4-24	4-port short haul 24-channel Fractional T1 card	3.6.0	S
SUT1-4-24	4-port short haul 24-channel Un-Channelized T1 card	3.6.0	S
ST1-PRI-4	4-port short haul PRI I/O card	3.6.0	S
T1-ATM	T1 ATM	3.6.0	S
E1-ATM	E1 ATM	3.6.0	S
ADS3-T3	ATM DS3 T3 (topaz)	3.6.0	S
ADS3-E3	ATM DS3 E3 (topaz)	3.6.0	S
CBR-DS1-S-4	4-port CBR T1 structured card	3.6.0	S
CBR-DS1-US-4	4-port CE T1 card	3.6.0	S
FE1-1-30	1-port 30-channel Fractional E1	3.6.0	S
CBR-E1-S-4	4-port CBR E1 structured card	3.6.0	S
CBR-E1-US-4	4-port CE E1 card	3.6.0	S

Table 3-15 **Supported Modules for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5 (Continued)**

Module Name	Module Description	ANA Version	Certification Level
ATMIWU-1	1-port ATM-IWU STM-1/STS-3c card	3.6.0	S
TOC3-ATM-4	4-port Topaz OC3c/STM1 ATM card	3.6.0	S
TSTM1-ATM-4	4-port Topaz STM1 ATM card (OBSOLETE code)	3.6.0	S
SP-4	4x4 switching processor (new terminology is "sp-10")	3.6.0	S
SP-8	8x8 switching processor (new terminology is "sp-20")	3.6.0	S
ATMCS-1	1-port ATM-CS card (siemens)	3.6.0	S
TOC12-ATM-1	1-port Topaz OC12c/STM4 ATM card	3.6.0	S
TSTM4-ATM-1	1-port Topaz STM4 ATM card (OBSOLETE code)	3.6.0	S
UIO-6	6-port universal i/o card	3.6.0	S
ADS1-T1	Topaz 8 port T1 ATM	3.6.0	S
ADS1-E1	Topaz 8 port E1 ATM	3.6.0	S
ADS1-J2	Topaz 8 port J2 ATM	3.6.0	S
E1-12	12-port E1 i/o card	3.6.0	S
BIO1416	Garnet BIO1 4 PHY sub-cards 16 ports	3.6.0	S
BIO1OC34	Garnet BIO1 OC3 PHY sub-card 4 ports	3.6.0	S
BIO1OC121	Garnet BIO1 OC12 PHY sub-card 1 port	3.6.0	S
BIO1OC12X4	Garnet BIO1 OC12x4 PHY sub-card 1 port 4 channels	3.6.0	S
BIO1OC481	Garnet BIO1 OC48 PHY sub-card 1 port	3.6.0	S
NP1	Garnet Node Processor card	3.6.0	S
CP1	Control Processor	3.6.0	S
SF1	Garnet Switch Fabric card	3.6.0	S
TM1	Garnet Timing Module card	3.6.0	S
TFDS3-T3-6	6-port Topaz DS3 T3 Ultracore card	3.6.0	S
TFDS3-E3-6	6-port Topaz DS3 E3 Ultracore card	3.6.0	S
TFAS-ETHER-4	4-port Topaz Fast Ethernet Ultracore card	3.6.0	S
FAST-ETHER-2	2-port BSTDX Fast Ethernet Ultracore card	3.6.0	S
LS-OC3-1	1-port BSTDX OC3c/STM-1 Ultracore card	3.6.0	S
TCFDS3-T3-6	6-port Topaz Cell Frame Cell DS3 T3 Ultracore card	3.6.0	S
TCFDS3-E3-6	6-port Topaz Cell Frame Cell DS3 E3 Ultracore card	3.6.0	S
TOC3-CFC-2	2-port Topaz Cell Frame Cell OC3c/STM-1 Ultracore card	3.6.0	S
UIO-8	8-port V.35 i/o card	3.6.0	S
ATMCS-E3-1	1-port ATM-CS-E3 card (siemens)	3.6.0	S
BE1-ATM-12	12-port BSTDX E1 ATM card	3.6.0	S
BT1-ATM-12	12-port BSTDX T1 ATM card	3.6.0	S
BDS3-1-0	1 port BSTDX Channelized 3/1/0	3.6.0	S

Table 3-15 **Supported Modules for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5 (Continued)**

Module Name	Module Description	ANA Version	Certification Level
GFETHER-4	Granite Topaz Fast Ethernet UC card	3.6.0	S
GFDS3-T3-6	Granite Topaz Frame DS3 UC card	3.6.0	S
GFDS3-E3-6	Granite Topaz Frame E3 UC card	3.6.0	S
GCHN-DS3-4	Granite Topaz Channalized DS3 card	3.6.0	S
G-SERVER	Granite Topaz Server card	3.6.0	S
FT1-4-24	4-port 24-channel Fractional T1	3.6.0	S
SP-30	8x8 sp with new PTS	3.6.0	S
SP-40	8x8 sp with new PTS and more memory	3.6.0	S
BIO3	Piranha GX550 Frame card	3.6.0	S
GENET-1	Piranha Gigabit Ethernet PHY	3.6.0	S
BIO1-DOWNLINK-1	GARNET DOWNLINK PHY card for shelf communications attachment	3.6.0	S
SHELF-UPLINK-1	1-port Shelf (fc) UPLINK card	3.6.0	S
SHELF-DS3-4	4-port Shelf DS3 transport card	3.6.0	S
SHELF-RED-DS3-4	4-port Shelf Redundant DS3 transport card	3.6.0	S
BRVX	BSTDx RVX Card	3.6.0	S
BCH-DS1-E1-12	12-port 9000 Channelized T1/E1 Card	3.6.0	S
FE1-4-30	4-port 30-channel Fractional E1	3.6.0	S
CBX-SUB-DS3	CBX Subrate DS3 Card	3.6.0	S
BIO1-DS3-4	Garnet BIO1 DS3 PHY sub-card 4 Ports	3.6.0	S
BIO1-E3-4	Garnet BIO1 DS3 PHY sub-card 4 Ports	3.6.0	S
ADS3-IMA-T3-3-28	TOPAZ Tsunami 3Port T3 IMA	3.6.0	S
ADS3-IMA-E3-3-30	TOPAZ Tsunami 3Port E3 IMA	3.6.0	S
BIO2-4-16	Garnet BIO2 4 PHY sub-cards 16 ports	3.6.0	S
SHELF-DS3-1-0-2	2 port GX250 DS3-1-0 Transport Card	3.6.0	S
SHELF-OC12-1	1 port GX250 OC12-OC3-DS3 Transport Card	3.6.0	S
BIO3-OC3-4	BIO3 OC3 ATM/POS PHY	3.6.0	S
BIO3-OC12-1	BIO3 OC12 ATM/POS PHY	3.6.0	S
FT3-1	1-port Fractional T3 i/o card	3.6.0	S
BIO3-IP-SERVER	BIO3 IP Server PHY	3.6.0	S
BIO3-OC12X4	BIO3 OC48 channelized PHY	3.6.0	S
BIO3-OC48-1	BIO3 OC48c PHY	3.6.0	S
GCHN-E1T1-32	Granite Topaz Channalized E1/T1 card	3.6.0	S
BIO-OSU-1	BIO OSU PHY sub-card 1 port	3.6.0	S
BIO-OSU-4	BIO OSU PHY sub-card 4 port	3.6.0	S
PON-DS1-4	PON DS1 UNI sub-card 4 port	3.6.0	S

Table 3-15 Supported Modules for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5 (Continued)

Module Name	Module Description	ANA Version	Certification Level
PON-DS1-8	PON DS1 UNI sub-card 8 port	3.6.0	S
PON-R1ETHER-1	PON R1.0 Ethernet UNI sub-card 1 port	3.6.0	S
PON-R2ETHER-1	PON R2.0 Ethernet UNI sub-card 1 port	3.6.0	S

Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Technologies

The following technologies are supported by the Alcatel-Lucent CBX, GX, B-STDx Switches in Cisco ANA 3.6.5:

- [IP, page 3-15](#)
- [ATM, page 3-21](#)
- [Frame Relay, page 3-24](#)
- [Point to Point, page 3-25](#)
- [Physical Technologies, page 3-27](#)
- [Physical Equipment, page 3-28](#)
- [Base Logical Components, page 3-29](#)
- [Common, page 3-30](#)
- [Additional Technologies, page 3-32](#)

Alcatel-Lucent CBX, GX, B-STDx Switches—Supported Service Events

Table 3-16 Supported Service Events for Alcatel-Lucent CBX, GX, B-STDx Switches—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Interface Status Down/Up	3.6.0	N
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N

Table 3-16 *Supported Service Events for Alcatel-Lucent CBX, GX, B-STDX Switches—Cisco ANA 3.6.5 (Continued)*

Event Name	ANA Version	Expedited
Tx Over Utilized	3.6.0	N
Card Up/Down	3.6.0	Y

Supported Technologies on Alcatel-Lucent Devices

The following sections list the objects and attributes that are supported on Alcatel-Lucent devices in Cisco ANA 3.6.5 per technology:

- [IP, page 3-15](#)
- [Ethernet \(IEEE 802.3\), page 3-18](#)
- [ATM, page 3-21](#)
- [Frame Relay, page 3-24](#)
- [Point to Point, page 3-25](#)
- [DSL, page 3-26](#)
- [Physical Technologies, page 3-27](#)
- [Physical Equipment, page 3-28](#)
- [Base Logical Components, page 3-29](#)
- [Common, page 3-30](#)
- [Additional Technologies, page 3-32](#)

IP

Table 3-17 *IP Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5*

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDX
IMO Name—IPIInterface				
IP Address	Y	Y	Y	Y
Subnetwork Mask	Y	Y	Y	Y
IP Interface Addresses Array	Y	Y		Y
Interface Name	Y	Y	Y	Y
Interface Description				Y
IP Interface State	Y	Y	Y	Y

Table 3-17 IP Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
OSPF Interface Cost				
Broadcast Address				
MTU				
Lookup Method				
Address Resolution Type			Y	
ARP Timeout				
Secured ARP				
ICMP Mask Reply				
IGMP Proxy				
HSRP Groups				
IP Multiplexing Table				
IANA Type			Y	
Containing CTPs				
Contained CTPs				
IMO Name—IIPMuxEntry				
Termination Point				
Destination IP Subnet				
IMO Name—IRoutingEntity				
Routing Table	Y	Y	Y	Y
ARP Entity		Y	Y	Y
Routing Table Changes			Y	
Name	Y	Y		Y
Logical Sons	Y	Y	Y	Y
IMO Name—IRoutingEntry				
Destination IP Subnet	Y	Y	Y	Y
Next Hop IP Address	Y	Y	Y	Y
Type	Y	Y	Y	Y
Routing Protocol Type	Y	Y	Y	Y
Outgoing Interface Name	Y	Y	Y	Y
IMO Name—IARPEntity				
ARP Table		Y	Y	
IMO Name—IARPEntity				
IP Address		Y	Y	

Table 3-17 IP Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
MAC Address		Y	Y	
Port		Y	Y	
Entry Type		Y	Y	
IMO Name—IIPPool				
IP Address Pool Entries				
Name				
Index				
IMO Name—IIPRangeBasedIIPPoolEntry				
Start IP Address				
End IP Address				
Unused Addresses				
Used Addresses				
Reserved Addresses				
IMO Name—IIPSubnetBasedIIPPoolEntry				
IP Subnet				
Unused Addresses				
Used Addresses				
Reserved Addresses				
IMO Name—HSRPGGroupEntry				
Group Number				
Port Description				
Priority				
Coupled Router				
State				
Tracking Interfaces				
Virtual IP Address				
Virtual MAC Address				
IMO Name—IITunnelGRE				
Name				
Tunnel Destination and Source				
IP Address				
IP Interface State				
IANA Type				

Table 3-17 IP Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Containing CTPs				
Contained CTPs				

Ethernet (IEEE 802.3)

Table 3-18 Ethernet (IEEE 802.3) Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—I LagPortEntry				
Actor and Partner Admin Keys				
Actor and Partner Oper Keys				
Selected and Attached Aggregation Identification				
Actor Port				
Actor Port Priority				
Partner Admin and Oper Port				
Partner Admin and Oper Port Priority				
Actor and Partner Admin States				
Actor and Partner Oper States				
IMO Name—I Ethernet				
MAC Address	Y	Y	Y	
Duplex Mode				
Output Flow Control				
Input Flow Control				
IANA Type		Y	Y ¹	
Containing CTPs				
Contained CTPs				
IMO Name—I VlanInterface				
Mode				

Table 3-18 Ethernet (IEEE 802.3) Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Native VLAN Identification				
Virtual LAN Table				
IANA Type				
Containing CTPs				
Contained CTPs				
IMO Name—IVlanEncapMux				
IANA Type			Y ²	
Containing CTPs				
Contained CTPs				
IMO Name—IIEEE802				
VLAN Identification	Y	Y	Y	
Binding Information				
Binding Status				
IANA Type		Y	Y	
Containing CTPs				
Contained CTPs				
IMO Name—IStpService				
Protocol Type				
Current and Bridge Max Age				
Current and Bridge Hello Time				
Current and Bridge Forward Delay				
Instance Information Table				
Same as ISystemService				
IMO Name—IMstService				
Protocol Properties				
Same as IStpService				
IMO Name—IMstProperties				
Force Version				
Configuration Format, Region Name and Revision Level				
External Root Cost				
Maximum Instances				

Table 3-18 Ethernet (IEEE 802.3) Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IStpInstanceInfo				
Object Identification				
Identification				
Priority				
Designated Parent and Root Bridges				
Root Cost				
Is Root				
Root Port Identification				
Port Information Table				
IMO Name—IMstInstanceInfo				
Instance Identification				
Same as IStpInstanceInfo				
IMO Name—IPvstpInstanceInfo				
Protocol Type				
Current and Bridg Maximum Age				
Current and Bridge Hello Time				
Current and Bridge Forward Delay				
Same as IStpInstanceInfo				
IMO Name—IRstpInstanceInfo				
Force Version				
Same as IStpInstanceInfo				
IMO Name—IStpPortInfo				
Object Identification				
Priority				
State				
Path Cost				
Is Edge				
Is Point to Point				
Role				

Table 3-18 Ethernet (IEEE 802.3) Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IMstPortInfo				
Hello Time				
Same as IStpPortInfo				
IMO Name—IEthernetChannel				
Group Number	Y			
Bandwidth				
Aggregation Protocol				
IANA Type	Y			
Containing CTPs				
Contained CTPs				

¹We support only dot1q encap

²We support only dot1q encap

ATM

Table 3-19 ATM Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IAtm				
ATM Address				
Interface Type		Y		Y
VP and VC Ranges		Y		Y
VC Table		Y		Y
Cross-Connect Table				Y
IANA Type				Y
Containing CTPs				
Contained CTPs				

Table 3-19 ATM Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IAtmVc				
Virtual Channel Identifier		Y		Y
Virtual Path Identifier		Y		Y
Shaping Profile				
Discarded and Received Input Data Counters		Y		Y
Dropped and Forward Output Data Counters		Y		Y
Ingress Traffic Descriptor		Y		
Egress Traffic Descriptor		Y		
Administrative Status		Y		Y
Operational Status		Y		Y
IANA Type				
Containing CTPs				
Contained CTPs				
IMO Name—IIMAGroup				
Description				
Speed				
Admin Status				
Oper Status				
Oper Status Last Change				
IANA Type				
Containing CTPs				
IMO Name—IAtmTrafficDescriptor				
Traffic Descriptor Type		Y		
Service Category		Y		
Cell Loss Priority		Y		
Cell Delay Variation		Y		
Cell Delay Variation Tolerance		Y		
Maximum High Priority and Aggregate Cell Rates		Y		
Minimum High Priority and Aggregate Cell Rates		Y		

Table 3-19 ATM Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Sustainable High Priority and Aggregate Cell Rates		Y		
Peak High Priority and Aggregate Cell Rates		Y		
Name		Y		
Index		Y		
IMO Name—IAtmTrafficShapingDescriptor				
Maximum Burst Size				
Sustainable and Peak Cell Rates				
Cell Delay Variation				
State				
Buffer Size				
Cell Loss Priority Discarded Size				
Name				
Index				
IMO Name—IAtmTrunk				
Same as IAtm				
IMO Name—IAtmLogicalPort/Trunk				
Resource Management Cell Termination				
Resource Management Cell Generation				
Effective Check Input and Output Capacities				
Admin Status				
Oper Status				
Same as IAtm				
IMO Name—IAtmTrunkVc				
Destination Description				Y
Same as IAtmVc				

Frame Relay

Table 3-20 **Frame Relay Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5**

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—Iframerelay/IFrTrunk				
Protocol Type				Y
VC Table				Y
Cross-Connect Table				Y
IANA Type				Y
Containing CTPs				
Contained CTPs				
IMO Name—IFrVc				
Data Link Connection Identifier				
Traffic Descriptor				
Discard and Received Input Data Counters				Y
Dropped and Forward Output Data Counters				Y
Ingress Traffic Descriptor				
Egress Traffic Descriptor				
Administrative Status				Y
Operational Status				Y
IANA Type				
Containing CTPs				
Contained CTPs				
IMO Name—IFRTrafficDescriptor				
Committed Rate				Y
Excess Burst Rate				Y
Name				Y
Index				Y
IMO Name—IFramerelayLogicalPort/Trunk				
Admin Status				
Oper Status				
Same as IFrameRelay				

Table 3-20 *Frame Relay Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5*

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IfrTrunkVc				
Destination Description				Y
Same as IFRvc				
IMO Name—IEncapsulation				
Virtual Connection Interface				Y
Binding Information				

Point to Point

Table 3-21 *Point to Point Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5*

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IvcBasedEncapsulation				
Virtual Connection				
Binding Information				
Binding Status		Y		
IANA Type				
Containing CTPs				
Contained CTPs				
IMO Name—Iencapsulation (HDLC/PPP)				
Virtual Connection				Y
Binding Information				
Binding Status				
IANA Type				
Containing CTPs				
Contained CTPs				

DSL

Table 3-22 DSL Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—I Dsl / Ildsl / ISdsl / Ishdsl				
Modulation Type				
Customer Identification		Y		
Traffic Descriptor		Y		
Same as IPhysicalLayer				
IMO Name—IADsl				
Maximum Reception and Transmission Bandwidth		Y		
Same as IDsl				
IMO Name—IADsl2				
Spectrum Traffic Descriptor		Y		
Traffic Descriptor		Y		
Same as IADsl		Y		
IMO Name—IADsltraTrafficDescriptor				
Max, Min and Target Transmission and Reception Noise Margins				
Max, Min and Planned Target Transmission and Reception Bit Rates				
Max Transmission Power Spectral Density				
Transmission and Reception Rate Adaption				
Channel type				
Name				
Index				
IMO Name—IADsl2SpectrumTrafficDescriptor				
Max, Min and Target Transmission and Reception Noise Margins		Y		

Table 3-22 DSL Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Max, Min and Planned Target Transmission and Reception Bit Rates				
Name		Y		
Index		Y		
IMO Name—IIsdnLayer2				
Control Administrative Status				
Oper Status				
Channels Table				
IANA Type				
Containing CTPs				
Contained CTPs				
IMO Name—IIsdnChannel				
Control Administrative Status				
Oper Status				
IMO Name—IIsdnLayer1				
Same as IPhysicalLayer				

Physical Technologies

Table 3-23 Physical Technologies Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IsonetSdh				
Specific Type				
Loopback Type		Y		Y
Scrambling Mode				Y
Same as IPhysicalLayer				
IMO Name—IDS0Bundle				
Bundled Time Slots				

Table 3-23 Physical Technologies Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Bundle Location				
IANA Type				
Containing CTPs				
Contained CTPs				
IMO Name—IDS1Pdh / IDS3Pdh				
Framing Type				Y
Cell Mapping Type				Y
Loopback Type				Y
Scrambling Mode				Y
Same as IPhysicalLayer				

Physical Equipment

Table 3-24 Physical Equipment Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IChassis				
Description		Y	Y	Y
Equipment Holder Type		Y		
Contained Equipment Holders				
Contained Equipments				
IMO Name—IShelf				
Description	Y	Y		
Status	Y	Y		
Equipment Holder Type		Y		
Contained Equipment Holders				
Contained Equipments				
IMO Name—IModule				
Module Name	Y	Y	Y	Y

Table 3-24 Physical Equipment Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Module Description	Y	Y	Y	Y
Software Version	Y	Y		Y
Operational Status	Y	Y	Y	Y
Hardware Type + Version	Y	Y	Y	Y
Managed IP Address		Y		Y
Redundant Equipment	Y			Y
Configured Redundancy	Y			Y
Redundancy Status	Y	Y		Y
Operational Status Last Changed	Y	Y		
Supported Physical Termination Points	Y	Y	Y	
Serial Number (soft property)	Y	Y	Y	Y

Base Logical Components

Table 3-25 Base Logical Components Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IManagedElement				
IP Address	Y	Y	Y	Y
Communication State	Y	Y	Y	
Investigation State	Y	Y	Y	
Element Category	Y	Y	Y	Y
Element Type and Key	Y	Y	Y	Y
Device Name	Y	Y	Y	Y
System Name	Y	Y	Y	Y
System Description	Y	Y	Y	Y
Up Time	Y	Y	Y	Y
Software Version	Y	Y	Y	Y

Table 3-25 Base Logical Components Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
Vendor Identity	Y	Y	Y	Y
Memory and CPU Usage	Y		Y	Y
IMO Name—IContext				
Name				
Bounded Connections				
IP Address Pools				
Forwarding Components List				
Traffic Descriptors List				
Tunnel Containers List				
Data Link Aggregation Containers List				
IMO Name—ISystemService				
Type				
Status				
Up Time	Y	Y		Y

Common

Table 3-26 Common Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDx
IMO Name—IPhysicalLayer				
Media Type	Y	Y	Y	Y
Clocking Source		Y		Y
Maximum Speed	Y	Y	Y	Y
Is Internal Port	Y			Y
Discarded Bandwidth				
Dropped Bandwidth				
Input Bandwidth				

Table 3-26 Common Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5 (Continued)

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDX
Output Bandwidth				
Discarded and Received Input Data Counters	Y	Y		Y
Dropped and Forward Output Data Counters	Y	Y		Y
Administrative Status	Y	Y	Y	Y
Operational Status	Y	Y	Y	Y
Last Changed	Y	Y	Y	Y
IANA Type	Y	Y	Y	Y
Containing CTPs				
Contained CTPs				
IMO Name—IBridge				
Bridge Table			Y ³	
Type			Y	
MAC Address	Y			
IP Interface	Y			
Name	Y			
Logical Sons	Y		Y	
IMO Name—IBridgeEntry				
Destination MAC	Y	Y	Y	
Outgoing Interface		Y	Y	
IMO Name—IVcSwitchingEntity				
Cross Connect Table				Y
Logical Sons				Y

³1.3.6.1.2.1.17.1.4.1 is mapping between port in the bridge table and ifindex of that port

Additional Technologies

Table 3-27 Additional Technologies Attribute Support on Alcatel-Lucent Devices—Cisco ANA 3.6.5

Attribute	7450 ESS	ISAM	Riverstone	CBX, GX, B-STDX
IMO Name—POS				
POS		Y		Y



CHAPTER 4

Support Information for Cisco Gateways

This chapter contains support information for Virtual Network Elements (VNEs) that manage Cisco gateways in Cisco ANA 3.6.5, and contains the following topics:

- [Cisco AS5300 Series Universal Gateways, page 4-1](#)
- [Supported Technologies on Cisco Gateways, page 4-3](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

Cisco AS5300 Series Universal Gateways

This section includes the following information about Cisco AS5300 Series gateways:

- [Cisco AS5300 Series—Supported Software Versions, page 4-1](#)
- [Cisco AS5300 Series—Supported Topologies, page 4-2](#)
- [Cisco AS5300 Series—Supported Modules, page 4-2](#)
- [Cisco AS5300 Series—Supported Technologies, page 4-2](#)
- [Cisco AS5300 Series—Supported Service Events, page 4-3](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco AS5300 Series Universal Gateways](#).

Cisco AS5300 Series—Supported Software Versions

Table 4-1 **Supported Software Versions for Cisco AS5300 Series—Cisco ANA 3.6.5**

Version Name	ANA Version	Certification Level
12.0(3)T1	3.6.0	S
12.1(10a)	3.6.0	S
12.1(11b)	3.6.0	S
12.1(22b)	3.6.0	S

Table 4-1 Supported Software Versions for Cisco AS5300 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
12.19(22b)	3.6.0	S
12.3(10c)	3.6.0	S
12.3(3)	3.6.0	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco AS5300 Series—Supported Topologies

Table 4-2 Supported Topologies for Cisco AS5300 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco AS5300 Series—Supported Modules

Table 4-3 Supported Modules for Cisco AS5300 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
AS5300-8CE1-4T	3.6.0	Octal Port Channelized E1/PRI and 4T Card	S
AS5300-AMAZON2-CARRIER	3.6.0	Access Server MICA Modem Carrier Card	S
PM-DTD-12M	3.6.0	MICA 12-Modem Module Card	S
CPU-AS5300	3.6.0	AS5300	S
AS5300-4CE1	3.6.0	Quad Port Channelized E1/PRI Card	S
AS5300-DTD-CARRIER	3.6.0	Access Server MICA Modem Carrier Card	S
PM-DTD-6M	3.6.0	MICA 6-Modem Module Card	S

Cisco AS5300 Series—Supported Technologies

The following technologies are supported by the Cisco AS5300 Series in Cisco ANA 3.6.5:

- [IP, page 4-4](#)
- [Ethernet \(IEEE 802.3\), page 4-6](#)
- [ACL, page 4-9](#)
- [Physical Equipment, page 4-9](#)
- [Base Logical Components, page 4-10](#)

- [Common, page 4-11](#)

Cisco AS5300 Series—Supported Service Events

Table 4-4 **Supported Service Events for Cisco AS5300 Series—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
Card Up/Down	3.6.0	Y

Supported Technologies on Cisco Gateways

The following sections list the objects and attributes that are supported on Cisco gateways in Cisco ANA 3.6.5 per technology:

- [IP, page 4-4](#)
- [Ethernet \(IEEE 802.3\), page 4-6](#)
- [ACL, page 4-9](#)
- [Physical Equipment, page 4-9](#)
- [Base Logical Components, page 4-10](#)
- [Common, page 4-11](#)

IP

Table 4-5 *IP Attribute Support on Cisco Gateways—Cisco ANA 3.6.5*

Attribute	AS5300
IMO Name—IIPInterface	
IP Address	Y
Subnetwork Mask	Y
IP Interface Addresses Array	Y
Interface Name	Y
Interface Description	Y
IP Interface State	Y
OSPF Interface Cost	
Broadcast Address	
MTU	Y
Lookup Method	
Address Resolution Type	
ARP Timeout	
Secured ARP	
ICMP Mask Reply	
IGMP Proxy	
HSRP Groups	
IP Multiplexing Table	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IIPMuxEntry	
Termination Point	
Destination IP Subnet	
IMO Name—IIRoutingEntity	
Routing Table	Y
ARP Entity	Y
Routing Table Changes	
Name	
Logical Sons	
IMO Name—IIRoutingEntry	
Destination IP Subnet	Y
Next Hop IP Address	Y

Table 4-5 IP Attribute Support on Cisco Gateways—Cisco ANA 3.6.5 (Continued)

Attribute	AS5300
Type	Y
Routing Protocol Type	Y
Outgoing Interface Name	Y
IMO Name—IARPEntity	
ARP Table	Y
IMO Name—IARPEntity	
IP Address	Y
MAC Address	Y
Port	Y
Entry Type	Y
IMO Name—IIPPool	
IP Address Pool Entries	
Name	
Index	
IMO Name—IIPRangeBasedIPPoolEntry	
Start IP Address	
End IP Address	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—IIPSubnetBasedIPPoolEntry	
IP Subnet	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—HSRPGGroupEntry	
Group Number	
Port Description	
Priority	
Coupled Router	
State	
Tracking Interfaces	
Virtual IP Address	
Virtual MAC Address	

Table 4-5 *IP Attribute Support on Cisco Gateways—Cisco ANA 3.6.5 (Continued)*

Attribute	AS5300
IMO Name—I Tunnel GRE	
Name	
Tunnel Destination and Source	
IP Address	
IP Interface State	
IANA Type	
Containing CTPs	
Contained CTPs	

Ethernet (IEEE 802.3)

Table 4-6 *Ethernet (IEEE 802.3) Attribute Support on Cisco Gateways—Cisco ANA 3.6.5*

Attribute	AS5300
IMO Name—I Lag Port Entry	
Actor and Partner Admin Keys	
Actor and Partner Oper Keys	
Selected and Attached Aggregation Identification	
Actor Port	
Actor Port Priority	
Partner Admin and Oper Port	
Partner Admin and Oper Port Priority	
Actor and Partner Admin States	
Actor and Partner Oper States	
IMO Name—I Ethernet	
MAC Address	Y
Duplex Mode	
Output Flow Control	
Input Flow Control	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—I Vlan Interface	
Mode	

Table 4-6 Ethernet (IEEE 802.3) Attribute Support on Cisco Gateways—Cisco ANA 3.6.5

Attribute	AS5300
Native VLAN Identification	
Virtual LAN Table	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IVlanEncapMux	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IIEEE802	
VLAN Identification	
Binding Information	
Binding Status	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IStpService	
Protocol Type	
Current and Bridge Max Age	
Current and Bridge Hello Time	
Current and Bridge Forward Delay	
Instance Information Table	
Same as ISystemService	
IMO Name—IMstService	
Protocol Properties	
Same as IStpService	
IMO Name—IMstProperties	
Force Version	
Configuration Format, Region Name and Revision Level	
External Root Cost	
Maximum Instances	
IMO Name—IStpInstanceInfo	
Object Identification	
Identification	
Priority	

Table 4-6 Ethernet (IEEE 802.3) Attribute Support on Cisco Gateways—Cisco ANA 3.6.5

Attribute	AS5300
Designated Parent and Root Bridges	
Root Cost	
Is Root	
Root Port Identification	
Port Information Table	
IMO Name—IMstInstanceInfo	
Instance Identification	
Same as IStpInstanceInfo	
IMO Name—IPvstpInstanceInfo	
Protocol Type	
Current and Bridge Maximum Age	
Current and Bridge Hello Time	
Current and Bridge Forward Delay	
Same as IStpInstanceInfo	
IMO Name—IRstpInstanceInfo	
Force Version	
Same as IStpInstanceInfo	
IMO Name—IStpPortInfo	
Object Identification	
Priority	
State	
Path Cost	
Is Edge	
Is Point to Point	
Role	
IMO Name—IMstPortInfo	
Hello Time	
Same as IStpPortInfo	
IMO Name—IEthernetChannel	
Group Number	
Bandwidth	
Aggregation Protocol	
IANA Type	
Containing CTPs	
Contained CTPs	

ACL

Table 4-7 *ACL Attribute Support on Cisco Gateways—Cisco ANA 3.6.5*

Attribute	AS5300
IMO Name—IAccessList	
Type	
Access List Entries	
Name	
Index	
IMO Name—IAccessListEntry	
Entry Identification	Y
Action Logic	Y
Source and Destination Address	Y
Source and Destination Wildcard	Y
Protocol Type	Y
Source and Destination Port Ranges	Y
Source and Destination Port Action	Y
Protocol Specific Info	Y
Differential Services Code Points	Y
Type of Service	Y
Precedence	Y
Matches	Y

Physical Equipment

Table 4-8 *Physical Equipment Attribute Support on Cisco Gateways—Cisco ANA 3.6.5*

Attribute	AS5300
IMO Name—IChassis	
Description	
Equipment Holder Type	
Contained Equipment Holders	
Contained Equipments	
IMO Name—IShelf	
Description	
Status	

Table 4-8 Physical Equipment Attribute Support on Cisco Gateways—Cisco ANA 3.6.5

Attribute	AS5300
Equipment Holder Type	
Contained Equipment Holders	
Contained Equipments	
IMO Name—IModule	
Module Name	Y
Module Description	Y
Software Version	Y
Operational Status	Y
Hardware Type + Version	Y
Managed IP Address	
Redundant Equipment	
Configured Redundancy	
Redundancy Status	
Operational Status Last Changed	
Supported Physical Termination Points	
Serial Number (soft property)	Y

Base Logical Components

Table 4-9 Base Logical Components Attribute Support on Cisco Gateways—Cisco ANA 3.6.5

Attribute	AS5300
IMO Name—IManagedElement	
IP Address	Y
Communication State	Y
Investigation State	Y
Element Category	Y
Element Type and Key	Y
Device Name	Y
System Name	Y
System Description	Y
Up Time	Y
Software Version	Y
Vendor Identity	Y

Table 4-9 Base Logical Components Attribute Support on Cisco Gateways—Cisco ANA 3.6.5

Attribute	AS5300
Memory and CPU Usage	Y
IMO Name—IContext	
Name	
Bounded Connections	
IP Address Pools	
Forwarding Components List	
Traffic Descriptors List	
Tunnel Containers List	
Data Link Aggregation Containers List	
IMO Name—ISystemService	
Type	
Status	
Up Time	

Common

Table 4-10 Common Attribute Support on Cisco Gateways—Cisco ANA 3.6.5

Attribute	AS5300
IMO Name—IPhysicalLayer	
Media Type	Y
Clocking Source	
Maximum Speed	Y
Is Internal Port	Y
Discarded Bandwidth	
Dropped Bandwidth	
Input Bandwidth	
Output Bandwidth	
Discarded and Received Input Data Counters	Y
Dropped and Forward Output Data Counters	Y
Administrative Status	Y
Operational Status	Y
Last Changed	Y
IANA Type	Y

Table 4-10 Common Attribute Support on Cisco Gateways—Cisco ANA 3.6.5 (Continued)

Attribute	AS5300
Containing CTPs	
Contained CTPs	
IMO Name—IBridge	
Bridge Table	
Type	
MAC Address	
IP Interface	
Name	
Logical Sons	
IMO Name—IBridgeEntry	
Destination MAC	
Outgoing Interface	
IMO Name—IVcSwitchingEntity	
Cross Connect Table	
Logical Sons	



CHAPTER 5

Support Information for Cisco Routers

This chapter contains support information for Virtual Network Elements (VNEs) that manage Cisco routers in Cisco ANA 3.6.5, and contains the following topics:

- [Cisco 800 Series Routers, page 5-2](#)
- [Cisco 1000 Series Routers, page 5-3](#)
- [Cisco 1600 Series Routers, page 5-5](#)
- [Cisco 1700 Series Modular Access Routers, page 5-7](#)
- [Cisco 1800 Series Integrated Services Routers, page 5-10](#)
- [Cisco 2500 Series Routers, page 5-14](#)
- [Cisco 2600 Series Multiservice Platform Routers, page 5-16](#)
- [Cisco 2800 Series Integrated Services Routers, page 5-20](#)
- [Cisco 3600 Series Multiservice Platform Routers, page 5-24](#)
- [Cisco 3700 Series Multiservice Access Routers, page 5-27](#)
- [Cisco 3800 Series Integrated Services Routers, page 5-30](#)
- [Cisco 7200 Series Routers, page 5-33](#)
- [Cisco 7400 Series Routers, page 5-39](#)
- [Cisco 7600 Series Routers, page 5-43](#)
- [Cisco 10000 Series Routers, page 5-52](#)
- [Cisco 12000 Series Routers, page 5-55](#)
- [Cisco XR 12000 Series Routers, page 5-63](#)
- [Cisco CRS-1 Carrier Routing System, page 5-72](#)
- [Cisco ASR 1000 Series Routers, page 5-82](#)
- [Cisco ASR 9000 Series Aggregation Services Routers, page 5-85](#)
- [Supported Technologies on Cisco Routers, page 5-88](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

Cisco 800 Series Routers

This section includes the following information about Cisco 800 Series routers:

- [Cisco 800 Series—Supported Software Versions, page 5-2](#)
- [Cisco 800 Series—Supported Topologies, page 5-2](#)
- [Cisco 800 Series—Supported Technologies, page 5-3](#)
- [Cisco 800 Series—Supported Service Events, page 5-3](#)

**Note**

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 800 Series Routers](#).

Cisco 800 Series—Supported Software Versions

Table 5-1 *Supported Software Versions for Cisco 800 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
12.0(7)T3	3.6.1	S
12.0(4)XM	3.6.1	S
12.3(14)T	3.6.2	S
12.4(11)T	3.6.2	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 800 Series—Supported Topologies

Table 5-2 *Supported Topologies for Cisco 800 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
Ethernet	Ethernet	3.6.0
GRE Tunnel	GRE Tunnel	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 800 Series—Supported Technologies

The following technologies are supported by the Cisco 800 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [DSL, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [VPN, page 5-105](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 800 Series—Supported Service Events

Table 5-3 *Supported Service Events for Cisco 800 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N

Cisco 1000 Series Routers

This section includes the following information about Cisco 1000 Series routers:

- [Cisco 1000 Series—Supported Software Versions, page 5-4](#)
- [Cisco 1000 Series—Supported Topologies, page 5-4](#)
- [Cisco 1000 Series—Supported Technologies, page 5-4](#)
- [Cisco 1000 Series—Supported Service Events, page 5-5](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 1000 Series Routers](#).

Cisco 1000 Series—Supported Software Versions

Table 5-4 *Supported Software Versions for Cisco 1000 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
IOS 12.1(27)	3.6.1	S
IOS 12.1(22)	3.6.1	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 1000 Series—Supported Topologies

Table 5-5 *Supported Topologies for Cisco 1000 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1
Framerelay	Framerelay	3.6.1
PPP/HDLC	PPP or HDLC	3.6.1
GRE Tunnel	GRE Tunnel	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco 1000 Series—Supported Technologies

The following technologies are supported by the Cisco 1000 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 1000 Series—Supported Service Events

Table 5-6 Supported Service Events for Cisco 1000 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.1	N
Secondary HSRP Interface Active/Inactive	3.6.1	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	Y
Interface Status Down/Up	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N

Cisco 1600 Series Routers

This section includes the following information about Cisco 1600 Series routers:

- [Cisco 1600 Series—Supported Software Versions, page 5-6](#)
- [Cisco 1600 Series—Supported Topologies, page 5-6](#)
- [Cisco 1600 Series—Supported Technologies, page 5-6](#)
- [Cisco 1600 Series—Supported Service Events, page 5-7](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 1600 Series Routers](#).

Cisco 1600 Series—Supported Software Versions

Table 5-7 Supported Software Versions for Cisco 1600 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.0(12)	3.6.1	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 1600 Series—Supported Topologies

Table 5-8 Supported Topologies for Cisco 1600 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1
Framerelay	Framerelay	3.6.1
PPP/HDLC	PPP or HDLC	3.6.1
GRE Tunnel	GRE Tunnel	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco 1600 Series—Supported Technologies

The following technologies are supported by the Cisco 1600 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)

Cisco 1600 Series—Supported Service Events

Table 5-9 *Supported Service Events for Cisco 1600 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.1	Y
Secondary HSRP Interface Active/Inactive	3.6.1	Y
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	Y
Interface Status Down/Up	3.6.1	Y
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N
BGP Neighbor Down	3.6.1	Y
Card Up/Down	3.6.1	Y

Cisco 1700 Series Modular Access Routers

This section includes the following information about Cisco 1700 Series routers:

- [Cisco 1700 Series—Supported Software Versions, page 5-8](#)
- [Cisco 1700 Series—Supported Topologies, page 5-8](#)
- [Cisco 1700 Series—Supported Modules, page 5-8](#)
- [Cisco 1700 Series—Supported Technologies, page 5-9](#)
- [Cisco 1700 Series—Supported Service Events, page 5-10](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 1700 Series Modular Access Routers](#).

Cisco 1700 Series—Supported Software Versions

Table 5-10 Supported Software Versions for Cisco 1700 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.1(3)XP3	3.6.1	S
12.4(11)T	3.6.2	S
12.3(14)T	3.6.2	S
12.3(14)T7	3.6.4	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 1700 Series—Supported Topologies

Table 5-11 Supported Topologies for Cisco 1700 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
GRE Tunnel	GRE Tunnel	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco 1700 Series—Supported Modules

Table 5-12 Supported Modules for Cisco 1700 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
WIC-1SHDSL-V3	3.6.0	1-port G.shdsl WIC with Four Wire Support (spare + system)	S
VWIC-2MFT-T1	3.6.0	2-Port RJ-48 Multiflex Trunk - T1	S
VWIC-2MFT-E1	3.6.0	2-port RJ-48 Multiflex Trunk - E1	S
VWIC-2MFT-T1-DI	3.6.0	2-Port RJ-48 Multiflex Trunk - T1 With Drop and Insert	S
VWIC-2MFT-E1-DI	3.6.0	2-Port RJ-48 Multiflex Trunk - E1 With Drop and Insert	S
WIC-1ENET	3.6.0	1-port ethernet WAN Interface card	S
MPC860	3.6.0	Power PC processor, such as in the Cisco 1700 Series	S

Table 5-12 **Supported Modules for Cisco 1700 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WIC-1DSU-T1	3.6.0	1-port T1/Fractional T1 DSU/CSU WAN Interface card	S
AIM-VPN/BP	3.6.0	DES/3DES VPN Encryption AIM-Base Performance	S
AIM-VPN/BPII	3.6.0	DES/3DES/AES and Layer 3 (IPPCP) Compression VPN Encryption AIM-Base Performance	S
AIM-VPN/EPII	3.6.0	DES/3DES/AES and Layer 3 (IPPCP) Compression VPN Encryption AIM-Enhanced Performance	S
WIC-1DSU-T1-V2	3.6.0	Updated one-port T1/fractional T1 DSU/CSU WIC	S
VWIC-1MFT-E1	3.6.0	1-Port RJ-48 Multiflex Trunk-E1	S
WIC-1ADSL	3.6.0	1-port ADSLoPOTS HWIC	S
WIC-1T	3.6.0	1-Port Serial WAN Interface Card	S
WIC-2A/S	3.6.0	2-Port Async/Sync Serial WAN Interface Card	S
WIC-2T	3.6.0	2-Port Serial WAN Interface Card	S
WIC-1ADSL-DG	3.6.2	1-port ADSLoPOTS WIC with Dying Gasp	S
WIC-1ADSL-I-DG	3.6.2	1-port ADSLoISDN Wan Interface Card	S
WIC-1B-U-V2	3.6.2	1-Port ISDN BRI NT-1 WIC	S
WIC-1SHDSL	3.6.2	One port G.shdsl WIC with 4-wire support	S

Cisco 1700 Series—Supported Technologies

The following technologies are supported by the Cisco 1700 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 1700 Series—Supported Service Events

Table 5-13 Supported Service Events for Cisco 1700 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Card Up/Down	3.6.1	Y

Cisco 1800 Series Integrated Services Routers

This section includes the following information about Cisco 1800 Series routers:

- [Cisco 1800 Series—Supported Software Versions, page 5-10](#)
- [Cisco 1800 Series—Supported Topologies, page 5-11](#)
- [Cisco 1800 Series—Supported Modules, page 5-11](#)
- [Cisco 1800 Series—Supported Technologies, page 5-12](#)
- [Cisco 1800 Series—Supported Service Events, page 5-13](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 1800 Series Integrated Services Routers](#).

Cisco 1800 Series—Supported Software Versions

Table 5-14 Supported Software Versions for Cisco 1800 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.3(14)T	3.6.2	S
12.4(11)T	3.6.2	S
12.4(3b)	3.6.2	V ¹
12.4(3)	3.6.3	S

Table 5-14 Supported Software Versions for Cisco 1800 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
12.3(8)T11	3.6.4	S ²
12.4(12)	3.6.4	S ³

¹Verified on a 1841²Scheme added at customer's request, not tested.³Scheme added at customer's request, not tested.⁴Scheme added at customer's request, not tested.⁵Unit tested on 1841 device IP 10.77.214.107⁶Scheme added at customer's request, not tested.⁷Scheme added at customer's request, not tested.⁸Scheme added at customer's request, not tested.**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 1800 Series—Supported Topologies

Table 5-15 Supported Topologies for Cisco 1800 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
GRE Tunnel	GRE Tunnel	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 1800 Series—Supported Modules

Table 5-16 Supported Modules for Cisco 1800 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
WIC-1T	3.6.0	1-Port Serial WIC	S
WIC-2T	3.6.0	2-port serial WIC	S
WIC-1DSU-T1-V2	3.6.0	1-port T1/Fractional-T1 CSU/DSU WIC	S

Table 5-16 **Supported Modules for Cisco 1800 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WIC-1ADSL	3.6.0	1-port asymmetric DSL (ADSL) over basic telephone service WIC	S
WIC-2AM	3.6.0	2-port analog modem WIC	S
VWIC-2MFT-T1-DI	3.6.0	2-port RJ-48 multiflex trunk-T1 with drop and insert data only	S
VWIC-2MFT-G703	3.6.0	2-port RJ-48 multiflex trunk-G.703 data only	S
VWIC-2MFT-E1-DI	3.6.0	2-port RJ-48 multiflex trunk-E1 with drop and insert data only	S
AIM-VPN-EPII-PLUS	3.6.0	Virtual Private Network (VPN) Module	V
C1841 MOTHERBOARD WITH 2 FAST ETHERNET	3.6.0	C1841 Motherboard with 2 Fast Ethernet	S
HWIC-16A	3.6.0	16-Port Async HWIC	S
HWIC-4A/S	3.6.0	4-Port Async/Sync Serial HWIC	S
HWIC-4T	3.6.0	4-Port Serial HWIC	S
HWIC-8A	3.6.0	8-Port Async HWIC	S
HWIC-8A/S-232	3.6.0	8-Port Async/Sync Serial HWIC, EIA-232	S
WIC-1ADSL-DG	3.6.0	1-port ADSLoPOTS WIC with Dying Gasp	S
WIC-1SHDSL-V3	3.6.0	One port G.shdsl WIC with 4-wire support	S
WIC-1T	3.6.0	1-Port Serial WAN Interface Card	S
WIC-2A/S	3.6.0	2-Port Async/Sync Serial WAN Interface Card	S
WIC-2T	3.6.0	2-Port Serial WAN Interface Card	S
WIC-1B-U-V2	3.6.2	1-Port ISDN BRI NT-1 WIC	S
WIC-1DSU-T1-V2	3.6.2	Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	S

Cisco 1800 Series—Supported Technologies

The following technologies are supported by the Cisco 1800 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 1800 Series—Supported Service Events

Table 5-17 Supported Service Events for Cisco 1800 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	Y
Secondary HSRP Interface Active/Inactive	3.6.0	Y
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	Y
CPU Over Utilized	3.6.0	Y
Memory Over Utilized	3.6.0	Y
Device Unsupported	3.6.0	Y
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
BGP Neighbor Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco 2500 Series Routers

This section includes the following information about Cisco 2500 Series routers:

- [Cisco 2500 Series—Supported Software Versions, page 5-14](#)
- [Cisco 2500 Series—Supported Topologies, page 5-14](#)
- [Cisco 2500 Series—Supported Modules, page 5-15](#)
- [Cisco 2500 Series—Supported Technologies, page 5-15](#)
- [Cisco 2500 Series—Supported Service Events, page 5-15](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 2500 Series Routers](#).

Cisco 2500 Series—Supported Software Versions

Table 5-18 *Supported Software Versions for Cisco 2500 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
11.2(18)	3.6.0	S
12.0(17a)	3.6.0	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 2500 Series—Supported Topologies

Table 5-19 *Supported Topologies for Cisco 2500 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 2500 Series—Supported Modules

Table 5-20 *Supported Modules for Cisco 2500 Series—Cisco ANA 3.6.5*

Module Name	ANA Version	Module Description	Certification Level
CPU-2500	3.6.0	Cisco 2500 CPU card	S

Cisco 2500 Series—Supported Technologies

The following technologies are supported by the Cisco 2500 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [VPN, page 5-105](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 2500 Series—Supported Service Events

Table 5-21 *Supported Service Events for Cisco 2500 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y

Table 5-21 Supported Service Events for Cisco 2500 Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
Broken LSP Discovered	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco 2600 Series Multiservice Platform Routers

This section includes the following information about Cisco 2600 Series routers:

- [Cisco 2600 Series—Supported Software Versions, page 5-16](#)
- [Cisco 2600 Series—Supported Topologies, page 5-17](#)
- [Cisco 2600 Series—Supported Modules, page 5-17](#)
- [Cisco 2600 Series—Supported Technologies, page 5-19](#)
- [Cisco 2600 Series—Supported Service Events, page 5-19](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 2600 Series Multiservice Platform Routers](#).

Cisco 2600 Series—Supported Software Versions

Table 5-22 Supported Software Versions for Cisco 2600 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
11.3(10)T	3.6.1	S
12.0(3)T3	3.6.1	S

Table 5-22 Supported Software Versions for Cisco 2600 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
12.2(15)T	3.6.1	S
12.2(17a)	3.6.1	S
12.2(8)T5	3.6.1	S
12.3(17a)	3.6.1	S
12.3(4)*	3.6.1	S
12.4(10)	3.6.1	S
12.3(15a)	3.6.2	S
12.3(3i)	3.6.4	S ¹

¹Scheme added at customer's request, not tested.

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 2600 Series—Supported Topologies

Table 5-23 Supported Topologies for Cisco 2600 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 2600 Series—Supported Modules

Table 5-24 Supported Modules for Cisco 2600 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
ATM-AIM	3.6.0	AIM(Advanced Integration Module) supporting ATM features for Cisco 2600, 2600XM, 2691, 3660, and 3700	S
WIC-1ADSL	3.6.0	1-port ADSLoPOTS WAN Interface Card (System)	S
VWIC-1MFT-T1	3.6.0	1-Port RJ-48 Multiflex Trunk-T1	S
VWIC-2MFT-T1	3.6.0	2-Port RJ-48 Multiflex Trunk-T1	S

Table 5-24 **Supported Modules for Cisco 2600 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
VWIC-2MFT-T1-DIR	3.6.0	2-Port RJ-48 Multiflex Trunk-T1 With Drop and Insert	S
VWIC-1MFT-E1	3.6.0	1-Port RJ-48 Multiflex Trunk-E1	S
VWIC-2MFT-E1	3.6.0	2-Port RJ-48 Multiflex Trunk-E1	S
VWIC-2MFT-E1-DI	3.6.0	2-Port RJ-48 Multiflex Trunk-E1 With Drop and Insert	S
NM-1T3/E3	3.6.0	One-port clear-channel T3/E3 network module	S
NM-1A-T3 AND NM-1A-E3	3.6.0	DS3/E3 ATM Network Modules for the Cisco 2600, 2800, 3600, 3700 and 3800 Series Routers	S
VIC-4FXS/DID	3.6.0	4-port FXS voice/fax interface card (Note	S
VIC2-2E/M	3.6.0	2-port E+M voice/fax interface card	S
VIC2-2FXS	3.6.0	2-port FXS voice/fax interface card	S
AIM-VOICE-30	3.6.0	AIM supporting voice/fax DSP features	S
VIC-2FXO	3.6.0	Two-port FXO voice/fax interface card [also see VIC-2FXO-M1]	S
NM-2FE2W	3.6.0	2 10/100 Ethernet 2 WAN card slot network module	S
NM-1FE2W	3.6.0	1 10/100 Ethernet 2 WAN card slot network module	S
NM-1FE1R2W	3.6.0	1 10/100 Ethernet 14/16 Token Ring 2 WAN card slot network module	S
NM-2W	3.6.0	2 WIC slot network module, (WAN I/F cards offered separately)	S
NM-1T3/E3(12)	3.6.0	1-port Clear Channel	S
NM-1CE1T1-PRI	3.6.0	1-port Channelized E1/T1/ISDN PRI network module	S
NM-2CE1T1-PRI	3.6.0	2-port Channelized E1/T1/ISDN PRI network module	S
NM-8AM-V2	3.6.0	8-port analog modem network module with V.92	S
NM-16AM-V2	3.6.0	16-port analog modem network module with V.92	S
NM-HDV2	3.6.0	IP Communications high-density digital voice network module	S
NM-CUE-EC	3.6.0	Cisco Unity Express Network Module Enhanced Capacity	S
NM-AIC-64(6)	3.6.0	Alarm monitoring and control network module; 64 contact points and 16 control points	S
NM-NAM	3.6.0	Network analysis module	S

Cisco 2600 Series—Supported Technologies

The following technologies are supported by the Cisco 2600 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [VPN, page 5-105](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 2600 Series—Supported Service Events

Table 5-25 *Supported Service Events for Cisco 2600 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	N
Interface Status Down/Up	3.6.1	N
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Card Up/Down	3.6.1	Y

Cisco 2800 Series Integrated Services Routers

This section includes the following information about Cisco 2800 Series routers:

- [Cisco 2800 Series—Supported Software Versions, page 5-20](#)
- [Cisco 2800 Series—Supported Topologies, page 5-21](#)
- [Cisco 2800 Series—Supported Modules, page 5-21](#)
- [Cisco 2800 Series—Supported Technologies, page 5-23](#)
- [Cisco 2800 Series—Supported Service Events, page 5-23](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 2800 Series Integrated Services Routers](#).

Cisco 2800 Series—Supported Software Versions

Table 5-26 **Supported Software Versions for Cisco 2800 Series—Cisco ANA 3.6.5**

Version Name	ANA Version	Certification Level
12.3(11)T5	3.6.2	S
12.3(11)T6	3.6.2	S
12.3(14)T	3.6.2	S
12.4(11)T	3.6.2	S
12.4(17)	3.6.3	S
12.3(14)T7	3.6.2	V ¹
12.4(1)	3.6.1	S
12.4(10)	3.6.1	S
12.4(12)	3.6.1	S
12.4(3)	3.6.1	S
12.4(5)	3.6.1	S
12.4(7)	3.6.1	S
12.4(8)	3.6.1	S
12.3(8)T11	3.6.4	S ²
12.4(13c)	3.6.4	S ⁷

¹Verified on a 2811

²Scheme added at customer's request, not tested.

⁷Scheme added at customer's request, not tested.

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 2800 Series—Supported Topologies

Table 5-27 *Supported Topologies for Cisco 2800 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
GRE Tunnel	GRE Tunnel	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 2800 Series—Supported Modules

Table 5-28 *Supported Modules for Cisco 2800 Series—Cisco ANA 3.6.5*

Module Name	ANA Version	Module Description	Certification Level
NM-1T3E3	3.6.0	1-port clear-channel T3/E3 network module	S
NM-8AM-V2	3.6.0	8-port analog modem network module with v.92	S
NM-16AM-V2	3.6.0	16-port analog modem network module with v.92	S
NM-1CE1T1-PRI	3.6.0	1-port Channelized E1/T1/ISDN PRI network module	S
NM-2CE1T1-PRI	3.6.0	2-port Channelized E1/T1/ISDN PRI network module	S
NM-HD-2V	3.6.0	2-slot IP Communications voice and fax network module	S
NM-HDV2	3.6.0	IP Communications high-density voice and fax network module	S
NM-CUE-EC	3.6.0	Cisco Unity Express Voice-Mail Network Module extended capacity	S
NM-NAM	3.6.0	network analysis module	S
HWIC-1FE	3.6.0	1-port Fast Ethernet HWIC	S
HWIC-1GE-SFP	3.6.0	Cisco Gigabit Ethernet High-Speed Interface Card	S
HWIC-4T	3.6.0	4-Port serial HWIC	S
HWIC-16A	3.6.0	16-Port Async HWIC	S
HWIC-ADSL-BST	3.6.0	2-port HWIC with 1-port ADSLoPOTS and 1-port ISDN BRI-S/T	S
HWIC-2SHDSL	3.6.0	2-port G.SHDSL HWIC with 2-wire and 4-wire support	S
HWIC-4SHDSL	3.6.0	4-port G.SHDSL HWIC with 2-wire, 4-wire, and 8-wire support	S
WIC-1ADSL	3.6.0	1-port asymmetric DSL (ADSL) over POTS service WIC	S

Table 5-28 Supported Modules for Cisco 2800 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
WIC-1SHDSL-V3	3.6.0	1-port G.SHDSL WIC with 4-wire support	S
VWIC2-1MFT-T1E1	3.6.0	1-Port T1/E1 Voice/WAN with Drop + Insert	S
VWIC-2MFT-T1-DI	3.6.0	2-port RJ-48 multiflex trunk-T1 with drop and insert	S
VWIC-2MFT-E1-DI	3.6.0	2-port RJ-48 multiflex trunk-E1 with drop and insert	S
VWIC-2MFT-G703	3.6.0	2-port RJ-48 multiflex trunk-G.703	S
VIC2-2FXS	3.6.0	2-port VIC-FXS	S
VIC2-2BRI-NTTE	3.6.0	2-port VIC card-BRI (NT and TE)	S
WIC-1AM-V2	3.6.0	1-port analog modem WIC (updated version)	S
WIC-2AM-V2	3.6.0	2-port analog modem WIC (updated version)	S
HWIC-1ADSLI	3.6.0	1-port ADSL over ISDN HWIC	S
HWIC-4ESW	3.6.0	4-port Cisco EtherSwitch 10BASE-T/100BASE-TX autosensing HWIC	S
EM-4BRI-NTTE	3.6.0	4-port BRI voice and fax expansion module	S
HWIC-4AS	3.6.0	4-Port Async/Sync Serial HWIC	S
HWIC-8A	3.6.0	8-Port Async HWIC	S
HWIC-8A/S-232	3.6.0	8-Port Async/Sync Serial HWIC, EIA-232	S
NM-16A	3.6.0	16-Port Async HWIC	S
NM-1A-T3	3.6.0	1-Port DS3 ATM Network Module	S
NM-32A	3.6.0	32 port Asynchronous Module	S
NM-4A/S	3.6.0	4-Port Async/Sync Serial Network Module	S
NM-4B-U	3.6.0	4-Port ISDN-BRI with NT-1 Network Module	S
NM-4T	3.6.0	4-Port Serial Network Module	S
NM-8B-U	3.6.0	8-Port ISDN-BRI with NT-1 Network Module	S
WIC-1T	3.6.0	1-Port Serial WAN Interface Card	S
WIC-2AS	3.6.0	2-Port Async/Sync Serial WAN Interface Card	S
WIC-2T	3.6.0	2-Port Serial WAN Interface Card	S
NM-16AS	3.6.2	16-Port Async/Sync Serial Network Module	S
NM-1A-E3	3.6.2	1-Port E3 ATM Network Module	S
NM-1HSSI	3.6.2	Single port HSSI network module	S
NM-4B-ST	3.6.2	4-Port ISDN-BRI Network Module	S
NM-8B-ST	3.6.2	8-Port ISDN-BRI Network Module	S
WIC-1ADSL-DG	3.6.2	1-port ADSLoPOTS WIC with Dying Gasp	S
WIC-1ADSL-I-DG	3.6.2	1-port ADSLoISDN Wan Interface Card	S
WIC-1B-U-V2	3.6.2	1-Port ISDN BRI NT-1 WIC	S
WIC-1DSU-T1-V2	3.6.2	Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	S
WIC-1SHDSL	3.6.2	One port G.shdsl WIC with 4-wire support	S

Cisco 2800 Series—Supported Technologies

The following technologies are supported by the Cisco 2800 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 2800 Series—Supported Service Events

Table 5-29 *Supported Service Events for Cisco 2800 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	Y
Interface Status Down/Up	3.6.1	Y
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Card Up/Down	3.6.1	Y

Cisco 3600 Series Multiservice Platform Routers

This section includes the following information about Cisco 3600 Series routers:

- [Cisco 3600 Series—Supported Software Versions, page 5-24](#)
- [Cisco 3600 Series—Supported Topologies, page 5-25](#)
- [Cisco 3600 Series—Supported Modules, page 5-25](#)
- [Cisco 3600 Series—Supported Technologies, page 5-25](#)
- [Cisco 3600 Series—Supported Service Events, page 5-26](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 3600 Series Multiservice Platform Routers](#).

Cisco 3600 Series—Supported Software Versions

Table 5-30 Supported Software Versions for Cisco 3600 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.0(0.20)T	3.6.0	S
IOS 12.0(3)T3	3.6.0	S
IOS 12.0(4)T	3.6.0	S
IOS 12.0(5)	3.6.0	S
IOS 12.0(5)T1	3.6.0	S
IOS 12.0(6.5)T3	3.6.0	S
IOS 12.0(7)XK1	3.6.0	S
IOS 12.1(20)	3.6.0	S
IOS 12.2(12)	3.6.0	S
IOS 12.2(4)T1	3.6.0	S
IOS 12.2(8)T5	3.6.0	S
IOS 12.2(27)	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 3600 Series—Supported Topologies

Table 5-31 Supported Topologies for Cisco 3600 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 3600 Series—Supported Modules

Table 5-32 Supported Modules for Cisco 3600 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
PM-1E	3.6.0	One Port Ethernet	S
PM-C3600-1FE-TX	3.6.0	One port Fastethernet TX	S
NM-2FE-2W	3.6.0	FastEthernet/WAN	S
WIC-SERIAL-1T	3.6.0	WAN Interface Card - Serial (1T)	S
PM-4E	3.6.0	Four Port Ethernet	S
CPU-3600	3.6.0	Cisco 3600 CPU	S
PM-2CE1-UNBALANCED	3.6.0	Two Port Channelized E1/PRI (75 ohm, unbalanced)	S

Cisco 3600 Series—Supported Technologies

The following technologies are supported by the Cisco 3600 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
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- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)

- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 3600 Series—Supported Service Events

Table 5-33 *Supported Service Events for Cisco 3600 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco 3700 Series Multiservice Access Routers

This section includes the following information about Cisco 3700 Series routers:

- [Cisco 3700 Series—Supported Software Versions, page 5-27](#)
- [Cisco 3700 Series—Supported Topologies, page 5-27](#)
- [Cisco 3700 Series—Supported Modules, page 5-28](#)
- [Cisco 3700 Series—Supported Technologies, page 5-28](#)
- [Cisco 3700 Series—Supported Service Events, page 5-29](#)

**Note**

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 3700 Series Multiservice Access Routers](#).

Cisco 3700 Series—Supported Software Versions

Table 5-34 **Supported Software Versions for Cisco 3700 Series—Cisco ANA 3.6.5**

Version Name	ANA Version	Certification Level
12.4(9)T	3.6.0	S
12.3(15b)	3.6.2	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 3700 Series—Supported Topologies

Table 5-35 **Supported Topologies for Cisco 3700 Series—Cisco ANA 3.6.5**

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 3700 Series—Supported Modules

Table 5-36 *Supported Modules for Cisco 3700 Series—Cisco ANA 3.6.5*

Module Name	ANA Version	Module Description	Certification Level
NM-16ESW	3.6.0	16 port 10/100 EtherSwitch NM	S
NM-1FE2W	3.6.0	1 10/100 Ethernet 2 WAN Card Slot Network Module	S
NM-2FE2W	3.6.0	2 10/100 Ethernet 2 WAN Card Slot Network Module	S
NM-2W	3.6.0	2 WAN Card Slot Network Module(no LAN)	S
NM-1T3/E3	3.6.0	1-Port Clear-channel T3/E3 Network Module	S
NM-1HSSI	3.6.0	Single port HSSI network module	S
NM-1CE1T1-PRI	3.6.0	1-Port Channelized T1 / E1 Modules with PRI Network Modules	S
NM-2CE1T1-PRI	3.6.0	2-Port Channelized T1 / E1 Modules with PRI Network Modules	S
VIC-2E/M	3.6.0	Two-port Voice Interface Card - EandM	S
VIC-2FXO	3.6.0	Two-port Voice Interface Card - FXO	S
VIC-2FXS	3.6.0	Two-port Voice Interface Card - FXS	S
VWIC-2MFT-G703	3.6.0	2-Port RJ-48 Multiflex Trunk - G.703	S
VWIC-2MFT-T1	3.6.0	2-Port RJ-48 Multiflex Trunk - T1	S
VWIC-2MFT-E1	3.6.0	2-Port RJ-48 Multiflex Trunk - E1	S
WIC-2AM	3.6.0	Two-port Analog Modem WAN Interface Card	S
WIC-1ADSL-I-DG	3.6.0	1-Port ADSLoISDN WAN Interface Card	S

Cisco 3700 Series—Supported Technologies

The following technologies are supported by the Cisco 3700 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)

- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 3700 Series—Supported Service Events

Table 5-37 *Supported Service Events for Cisco 3700 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	Y
Secondary HSRP Interface Active/Inactive	3.6.0	Y
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	Y
CPU Over Utilized	3.6.0	Y
Memory Over Utilized	3.6.0	Y
Device Unsupported	3.6.0	Y
Module Unsupported	3.6.0	Y
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	Y
Broken LSP Discovered	3.6.0	Y
MPLS Black Hole	3.6.0	Y
Layer 2 Tunnel Down	3.6.0	Y
MPLS TE Tunnel Down/Flapping	3.6.0	Y
BGP Neighbor Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco 3800 Series Integrated Services Routers

This section includes the following information about Cisco 3800 Series routers:

- [Cisco 3800 Series—Supported Software Versions, page 5-30](#)
- [Cisco 3800 Series—Supported Topologies, page 5-30](#)
- [Cisco 3800 Series—Supported Modules, page 5-31](#)
- [Cisco 3800 Series—Supported Technologies, page 5-32](#)
- [Cisco 3800 Series—Supported Service Events, page 5-32](#)

**Note**

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 3800 Series Integrated Services Routers](#).

Cisco 3800 Series—Supported Software Versions

Table 5-38 *Supported Software Versions for Cisco 3800 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
IOS 12.3(14)T	3.6.2	S
IOS 12.3(14)T7	3.6.2	S
IOS 12.4(11)T	3.6.2	V

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 3800 Series—Supported Topologies

Table 5-39 *Supported Topologies for Cisco 3800 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
PWE3 (Martini)	Tunnel	3.6.0
GRE Tunnel	GRE Tunnel	3.6.0
VPN (VRF)	VPN	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 3800 Series—Supported Modules

Table 5-40 **Supported Modules for Cisco 3800 Series—Cisco ANA 3.6.5**

Module Name	ANA Version	Module Description	Certification Level
AIM-VPN/EPII-PLUS	3.6.1	DES/3DES/AES VPN Encryption/Compression	S
HWIC-16A	3.6.1	16-Port Async HWIC	S
HWIC-1GE-SFP	3.6.1	GigE High Speed WIC With One SFP Slot	S
HWIC-4A/S	3.6.1	4-Port Async/Sync Serial HWIC	S
HWIC-4T	3.6.1	4-Port Serial HWIC	S
HWIC-8A	3.6.1	8-Port Async HWIC	S
HWIC-8A/S-232	3.6.1	8-Port Async/Sync Serial HWIC, EIA-232	S
NM-16A	3.6.1	16 port Asynchronous Module	S
NM-16A/S	3.6.2	16-Port Async/Sync Serial Network Module	S
NM-1A-E3	3.6.2	1-Port E3 ATM Network Module	S
NM-1A-T3	3.6.1	1-Port DS3 ATM Network Module	S
NM-1CE1T1-PRI	3.6.1	1-Port Channelized E1/T1/ISDN-PRI Network Module	S
NM-1FE1R2W	3.6.1	1 10/100 Ethernet 1 4/16 Token-Ring 2 WAN Card Slot NM	S
NM-1FE2W	3.6.1	Network Module with One-Fast Ethernet and Two-WIC slots	S
NM-1GE	3.6.2	1 Port GE Network Module	S
NM-1HSSI	3.6.1	Single port HSSI network module	S
NM-1T3/E3	3.6.1	One port T3/E3 network module	S
NM-2CE1T1-PRI	3.6.1	2-Port Channelized E1/T1/ISDN-PRI Network Module	S
NM-2W	3.6.1	2 WAN Card Slot Network Module(no LAN)	S
NM-32A	3.6.1	32 port Asynchronous Module	S
NM-4A/S	3.6.1	4-Port Async/Sync Serial Network Module	S
NM-4B-S/T	3.6.2	4-Port ISDN-BRI Network Module	S
NM-4B-U	3.6.1	4-Port ISDN-BRI with NT-1 Network Module	S
NM-4T	3.6.1	4-Port Serial Network Module	S
NM-8B-S/T	3.6.2	8-Port ISDN-BRI Network Module	S
NM-8B-U	3.6.1	8-Port ISDN-BRI with NT-1 Network Module	S
WIC-1ADSL	3.6.1	1-port ADSL WAN Interface Card	S
WIC-1ADSL-DG	3.6.2	1-port ADSLoPOTS WIC with Dying Gasp	S
WIC-1ADSL-I-DG	3.6.2	1-port ADSLoISDN Wan Interface Card	S
WIC-1B-U-V2	3.6.2	1-Port ISDN BRI NT-1 WIC	S
WIC-1DSU-T1-V2	3.6.2	Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	S
WIC-1SHDSL	3.6.2	1-port G.shdsl WIC (two wire only)	S
WIC-1SHDSL-V2	3.6.1	1-Port G.SHDSL WIC with Four Wire Suppor	S
WIC-1T	3.6.1	1-Port Serial WAN Interface Card	S

Table 5-40 **Supported Modules for Cisco 3800 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WIC-2A/S	3.6.1	2-Port Async/Sync Serial WAN Interface Card	S
WIC-2T	3.6.1	2-Port Serial WAN Interface Card	S

Cisco 3800 Series—Supported Technologies

The following technologies are supported by the Cisco 3800 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)

Cisco 3800 Series—Supported Service Events

Table 5-41 **Supported Service Events for Cisco 3800 Series—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N

Table 5-41 Supported Service Events for Cisco 3800 Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
BGP Neighbor Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco 7200 Series Routers

This section includes the following information about Cisco 7200 Series routers:

- [Cisco 7200 Series—Supported Software Versions, page 5-33](#)
- [Cisco 7200 Series—Supported Topologies, page 5-35](#)
- [Cisco 7200 Series—Supported Modules, page 5-35](#)
- [Cisco 7200 Series—Supported Technologies, page 5-38](#)
- [Cisco 7200 Series—Supported Service Events, page 5-38](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 7200 Series Routers](#).

Cisco 7200 Series—Supported Software Versions

Table 5-42 Supported Software Versions for Cisco 7200 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.0(32)S6	3.6.0	S
IOS 12.1(10)E	3.6.0	S
IOS 12.1(19)E6	3.6.0	S
IOS 12.1(1a)	3.6.0	S
IOS 12.2(12)	3.6.0	V
IOS 12.2(15)B	3.6.0	V
IOS 12.2(15)T5	3.6.0	V
IOS 12.2(18.2)	3.6.0	V
12.2(31)SB3x	3.6.1	S
IOS 12.2(33)SRA	3.6.0	V

Table 5-42 Supported Software Versions for Cisco 7200 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
IOS 12.3(10)	3.6.0	V
IOS 12.3(12.10)	3.6.0	V
IOS 12.3(15a)	3.6.0	V
IOS 12.3(3)B1	3.6.0	V
IOS 12.3(7)XI7a	3.6.0	V
IOS 11.3(7)T	3.6.1	V
IOS 12.0(22)S5	3.6.1	V
IOS 12.0(23)S3.0619	3.6.1	V
IOS 12.0(23)S4	3.6.1	V
IOS 12.0(23)S6	3.6.1	V
IOS 12.0(23)S6.0412	3.6.1	V
IOS 12.0(24)S3	3.6.1	V
IOS 12.0(25)S2	3.6.1	V
IOS 12.0(26)S4	3.6.1	V
IOS 12.0(26)S5	3.6.1	V
IOS 12.0(26)S6	3.6.1	V
IOS 12.0(27)S1	3.6.1	V
IOS 12.4(11)T1	3.6.1	V
IOS 12.0(21)s7	3.6.2	S
IOS 12.2(18)s3	3.6.2	S
IOS 12.2(25)s2	3.6.2	S
IOS 12.2(25)s6	3.6.2	S
IOS 12.2(25)s9	3.6.2	S
IOS 12.3(10b)	3.6.2	S
IOS 12.3(10c)	3.6.2	S
IOS 12.3(10d)	3.6.2	S
IOS 12.3(20)	3.6.2	S
IOS 12.3(21)	3.6.2	S
IOS 12.3(6e)	3.6.2	S
IOS 12.3(6f)	3.6.2	S
IOS 12.3(17)	3.6.2	S
IOS 12.2(33)SRC	3.6.2	S
IOS 12.2(27)SBC2	3.6.2	S
IOS 12.3(17a)	3.6.2	S
IOS 12.2(18)S12	3.6.2	V

Table 5-42 Supported Software Versions for Cisco 7200 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
IOS 12.0(33)S	3.6.2	S
IOS 12.0(33)S1	3.6.2	S
IOS 12.2(31)SB10	3.6.3	S
IOS 12.3(26)	3.6.4	S
IOS 12.2(31)SB12	3.6.4	S
IOS 12.2(31)SB	3.6.4	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 7200 Series—Supported Topologies

Table 5-43 Supported Topologies for Cisco 7200 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 7200 Series—Supported Modules

Table 5-44 Supported Modules for Cisco 7200 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
PA-FE-TX	3.6.0	1-Port Fast Ethernet 100BaseTx Port Adapter	S
PA-4R-DTR	3.6.0	4-port dedicated Token Ring, 4/16 Mbps, half duplex(HDX) or full duplex (FDX)	S
PA-2T3+	3.6.0	Two-port clear-channel DS3 port adap	S
PA-4R-DTR	3.6.0	4-port Token Ring Port Adapter	S
PA-8E	3.6.0	8-Port 10BaseT Ethernet Port Adapter	S

Table 5-44 **Supported Modules for Cisco 7200 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
PA-4E	3.6.0	4-Port 10BaseT Ethernet Port Adapter	S
NPE-100	3.6.0	Cisco 7200 Series Network Processing Engine 100	S
NSE-1	3.6.0	Cisco 7200 Series Network Services Engine, NSE-1	S
NPE-150	3.6.0	Cisco 7200 Series Network Processing Engine 150	S
NPE-200	3.6.0	Network Processing Engine NPE-200	S
NPE-300	3.6.0	Network Processing Engine NPE-300	S
NPE-225	3.6.0	Cisco 7200 Network Processing Engine NPE-225	S
C7200-I/O-GE+E	3.6.0	Cisco 7200 Series 1-Port Gigabit Ethernet and 1-Port Ethernet Input/Output Controller	S
C7200-I/O-2FE/E	3.6.0	Cisco 7200 Series 2-Port 10/100 Auto-Sensing Fast Ethernet Input/Output Controller	S
ATM WAN OC3+ (MM) /PA-A1	3.6.0	ATM WAN OC3+ (MM) Port adapter, 1 port. Port adapter	S
C7200-IO	3.6.0	I/O controller with no Ethernet port	S
NPE-400	3.6.0	Cisco 7200VXR Network Processing Engine NPE-400, including 256 MB SDRAM	S
NPE-G1	3.6.0	Cisco 7200 Series NPE-G1 including 256 MB default DRAM and 64 MB default flash memory	S
PA-MC-8E1	3.6.0	8-port MultiChannel E1 Port Adapter	S
PA-MC-E3	3.6.0	1-port MultiChannel E3 Port Adapter	S
PA-MC-2T	3.6.0	2-port multichannel T1 with integrated channel service units (CSUs)/DSUs	S
PA-2FE-TX	3.6.0	2-Port Fast Ethernet 100Base TX Port Adapter	S
PA-T3	3.6.0	One-port clear-channel DS3 port adapter	S
PA-POS-OC3SMI	3.6.0	Single-Mode Intermediate Reach PoS, OC3 Port Adapter	S
PA-POS-OC3MM	3.6.0	MultiMode PoS, OC3 Port Adapter	S
PA-POS-OC3SML	3.6.0	Single-Mode Long Reach PoS, OC3 Port Adapter	S
PA-MC-2T	3.6.0	Two-port enhanced multichannel T3 port adapter	S
PA-A6-OC3SMI	3.6.0	1-Port Enhanced ATM OC3c/STM1 Singlemode (IR) Port Adapter	S
PA-FE-FX	3.6.0	1-Port Fast Ethernet 100BaseFx Port Adapter	S
PA-MCX-8TE1	3.6.0	8 port multichannel T1/E1 8PRI port adapter	S
PA-MC-2E1/120	3.6.0	2-Port Multichannel E1/PRI Port Adapter	S
PA-MC-T3	3.6.0	Single port enhanced multichannel T3 port adapter	S
CX-FEIP-1FX	3.6.0	1-port fast ethernet interface processor (100TX)	S
PA-A3-OC3SML	3.6.0	Single port ATM OC3c/STM1 Single Mode (LR) Port Adapter	S
PA-A3-OC3SMI	3.6.0	Single port ATM OC3c/STM1 Single Mode (IR) Port Adapter	S
PA-A3-OC3MM	3.6.0	Single port ATM OC3c/STM1 Multi Mode Port Adapter	S

Table 5-44 **Supported Modules for Cisco 7200 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
OSM-1OC48-POS-SI	3.6.0	1-port OC-48/STM-16 SONET/SDH enhanced OSM, single-mode, intermediate-reach with 4 GE	S
WS-X6582-2PA	3.6.0	Enhanced FlexWAN Module, Fabric-enabled	S
WS-X6582-2PA	3.6.0	FlexWAN Module	S
PA-GE	3.6.0	Gigabit Ethernet Port Adapter	S
PA-MC-8TE1	3.6.0	8 port multichannel T1/E1 8PRI port adapter	S
NPE-G2	3.6.0	7200 series NPE-G2 engine with 3 GE/FE/E ports	S
PA-MCX-4TE1	3.6.0	4 port MIX-enabled multichannel T1/E1 with CSU/DSU	S
PA-8T1	3.6.1	8-port channelized T1	S
PA-CHSTM1	3.6.1	4 port channelized STM-1 card	S
PA-MC-STM1-SMI	3.6.1	1 port multichannel STM-1 single mode port adapter Spare	S
PA-MC-T3-EC	3.6.1	Enhanced 1 port multichannel PA	S
PA-POS-2OC3	3.6.1	2 Port Packet/SONET OC3c/STM1 Port Adapter	S
SA-VAM	3.6.1	VPN Acceleration Module	S
PA-H	3.6.1	1-Port HSSI Port Adapter, Spare	S
C7200-I/O-FE	3.6.1	7200 I/O FE Controller.	S
PA-A3-T3	3.6.1	1-Port ATM Enhanced DS3 Port Adapter	S
PA-A3-E3	3.6.1	1-Port ATM Enhanced E3 Port Adapter	S
WS-G5487	3.6.1	1000Base-ZX extended reach GBIC(singlemode)	S
WS-G5486	3.6.1	1000Base-ZX extended reach GBIC(singlemode)	S
WS-G5484	3.6.1	1000Base-ZX extended reach GBIC(singlemode)	S
VSA	3.6.1	VPN Service Adapter	S
PA-MC-2T3-EC	3.6.1	2 port multichannel T3 port adapter	S
PA-A6-OC3MM	3.6.1	1 Port Enh ATM OC3c/STM1 Multimode Port Adapter	S
VAM2	3.6.2	VPN Acceleration Module 2	S
PA-A6-T3	3.6.2	1Port Enh ATM DS3 Port Adapter	S
SA-VAM2	3.6.2	AES wide key crypto card	S
PA-POS-OC3	3.6.4	1-Port Packet/SONET OC3c/STM1 Port Adapter	S
7201	3.6.4	Cisco 7201 (c7201) processor	S
PWR-7200-DC	3.6.4	Cisco 7200 DC power supply	S

Cisco 7200 Series—Supported Technologies

The following technologies are supported by the Cisco 7200 Series in Cisco ANA 3.6.5:

- [IP](#), page 5-89
- [Routing Protocols](#), page 5-91
- [Ethernet \(IEEE 802.3\)](#), page 5-92
- [ATM](#), page 5-95
- [Frame Relay](#), page 5-97
- [Point to Point](#), page 5-99
- [Physical Technologies](#), page 5-101
- [MPLS](#), page 5-101
- [MPLS-TE](#), page 5-103
- [VPN](#), page 5-105
- [PWE3](#), page 5-106
- [ACL](#), page 5-107
- [Physical Equipment](#), page 5-109
- [Base Logical Components](#), page 5-110
- [Common](#), page 5-111
- [Additional Technologies](#), page 5-112

Cisco 7200 Series—Supported Service Events

Table 5-45 *Supported Service Events for Cisco 7200 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N

Table 5-45 Supported Service Events for Cisco 7200 Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco 7400 Series Routers

This section includes the following information about Cisco 7400 Series routers:

- [Cisco 7400 Series—Supported Software Versions, page 5-39](#)
- [Cisco 7400 Series—Supported Topologies, page 5-41](#)
- [Cisco 7400 Series—Supported Modules, page 5-41](#)
- [Cisco 7400 Series—Supported Technologies, page 5-42](#)
- [Cisco 7400 Series—Supported Service Events, page 5-42](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 7400 Series Routers](#).

Cisco 7400 Series—Supported Software Versions

Table 5-46 Supported Software Versions for Cisco 7400 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.0(32)S6	3.6.0	S
IOS 12.1(10)E	3.6.0	S
IOS 12.1(19)E6	3.6.0	S
IOS 12.1(1a)	3.6.0	S
IOS 12.2(12)	3.6.0	S

Table 5-46 Supported Software Versions for Cisco 7400 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
IOS 12.2(15)B	3.6.0	S
IOS 12.2(15)T5	3.6.0	S
IOS 12.2(18.2)	3.6.0	S
IOS 12.2(31)SB3x	3.6.1	S
IOS 12.2(34)	3.6.0	S
IOS 12.3(10)	3.6.0	S
IOS 12.3(12.10)	3.6.0	S
IOS 12.3(15a)	3.6.0	S
IOS 12.3(3)B1	3.6.0	S
IOS 12.3(7)XI7a	3.6.0	S
IOS 12.0(22)S5	3.6.1	S
IOS 12.0(23)S3.0619	3.6.1	S
IOS 12.0(23)S4	3.6.1	S
IOS 12.0(23)S6	3.6.1	S
IOS 12.0(23)S6.0412	3.6.1	S
IOS 12.0(24)S3	3.6.1	S
IOS 12.0(25)S2	3.6.1	S
IOS 12.0(26)S4	3.6.1	S
IOS 12.0(26)S5	3.6.1	S
IOS 11.3(7)T	3.6.1	S
IOS 12.0(26)S6	3.6.1	S
IOS 12.0(27)S1	3.6.1	S
IOS 12.4(11)T1	3.6.1	S
IOS 12.2(33)SRA	3.6.2	S
IOS 12.2(28)SB	3.6.2	S
IOS 12.3(14)	3.6.2	S
IOS 12.0(33)S	3.6.2	S
IOS 12.0(33)S1	3.6.2	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 7400 Series—Supported Topologies

Table 5-47 Supported Topologies for Cisco 7400 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
BGP	BGP	3.6
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 7400 Series—Supported Modules

Table 5-48 Supported Modules for Cisco 7400 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
PA-FE-TX	3.6.0	1-Port Fast Ethernet 100BaseTx Port Adapter	S
PA-4R-DTR	3.6.0	4-port dedicated Token Ring, 4/16 Mbps, half duplex(HDX) or full duplex (FDX)	S
PA-2T3	3.6.0	Two-port clear-channel DS3 port adap	S
PA-4R-DTR	3.6.0	4-port Token Ring Port Adapter	S
PA-8E	3.6.0	8-Port 10BaseT Ethernet Port Adapter	S
PA-4E	3.6.0	4-Port 10BaseT Ethernet Port Adapter	S
PA-MC-8E1	3.6.0	8-port MultiChannel E1 Port Adapter	S
PA-MC-E3	3.6.0	1-port MultiChannel E3 Port Adapter	S
PA-MC-2T	3.6.0	2-port multichannel T1 with integrated channel service units (CSUs)/DSUs	S
PA-2FE-TX	3.6.0	2-Port Fast Ethernet 100Base TX Port Adapter	S
PA-T3	3.6.0	One-port clear-channel DS3 port adapter	S
PA-POS-OC3SMI	3.6.0	Single-Mode Intermediate Reach PoS, OC3 Port Adapter	S
PA-POS-OC3MM	3.6.0	MultiMode PoS, OC3 Port Adapter	S
PA-POS-OC3SML	3.6.0	Single-Mode Long Reach PoS, OC3 Port Adapter	S
PA-FE-FX	3.6.0	1-Port Fast Ethernet 100BaseFx Port Adapter	S
PA-MC-8TE1	3.6.0	8 port multichannel T1/E1 8PRI port adapter	S
PA-MC-2E1/120	3.6.0	2-Port Multichannel E1/PRI Port Adapter	S
PA-MC-T3	3.6.0	Single port enhanced multichannel T3 port adapter	S
PA-A3-OC3SML	3.6.0	Single port ATM OC3c/STM1 Single Mode (LR) Port Adapter	S
PA-A3-OC3SMI	3.6.0	Single port ATM OC3c/STM1 Single Mode (IR) Port Adapter	S

Table 5-48 **Supported Modules for Cisco 7400 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
PA-A3-OC3MM	3.6.0	Single port ATM OC3c/STM1 Multi Mode Port Adapter	S
PA-GE	3.6.0	Gigabit Ethernet Port Adapter	S

Cisco 7400 Series—Supported Technologies

The following technologies are supported by the Cisco 7400 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 7400 Series—Supported Service Events

Table 5-49 **Supported Service Events for Cisco 7400 Series—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N

Table 5-49 Supported Service Events for Cisco 7400 Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco 7600 Series Routers

This section includes the following information about Cisco 7600 Series routers:

- [Cisco 7600 Series—Supported Software Versions, page 5-44](#)
- [Cisco 7600 Series—Supported Topologies, page 5-45](#)
- [Cisco 7600 Series—Supported Modules, page 5-45](#)
- [Cisco 7600 Series—Supported Technologies, page 5-50](#)
- [Cisco 7600 Series—Supported Service Events, page 5-51](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 7600 Series Routers](#).

Cisco 7600 Series—Supported Software Versions

Table 5-50 *Supported Software Versions for Cisco 7600 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
IOS 12.1(20)E3	3.6.1	S
IOS 12.2(18)SXD	3.6.0	V
IOS 12.2(18)SXD2	3.6.1	S
IOS 12.2(18)SXD5	3.6.0	V
IOS 12.2(18)SXE	3.6.0	V
IOS 12.2(33)SRA	3.6.0	V
IOS 12.2(33)SRA2	3.6.0	V
IOS 12.2(33)SRB	3.6.0	V ¹
IOS 12.2(18)SXE*	3.6.0	S
IOS 12.2(18)SXF*	3.6.0	S
IOS 12.2(33)SRB1	3.6.1	S ²
IOS 12.1(13)E6	3.6.1	S
IOS 12.2(18)SXF7	3.6.2	S
IOS 12.2(33)SRC1	3.6.3	S
IOS 12.2(33)SRB3	3.6.3	S
IOS 12.2(33)SRB*	3.6.3	S
IOS 12.2(18)SXE6b	3.6.0	V
IOS 12.2(33)SRC	3.6.2	S
IOS 12.2(33)SRB2	3.6.2	S
IOS 12.2(33)SRA6	3.6.3	S
12.2(33)SRB4	3.6.4	S
12.2(33)SRD1	3.6.4	S
12.2(33)SRC2	3.6.4	S
12.2(33)SXH2a	3.6.5	S

¹12.2(33)SRB Does not support Cisco 7603-S and Cisco 7609-S, as it gives an incorrect sysoid for both devices.

²12.2(33)SRB1 Does not support Cisco 7603-S and Cisco 7609-S, as it gives an incorrect sysoid for both devices.



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 7600 Series—Supported Topologies

Table 5-51 Supported Topologies for Cisco 7600 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 7600 Series—Supported Modules

Table 5-52 Supported Modules for Cisco 7600 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
7600-ES20	3.6.1	Cisco 7600 Series Ethernet Services Card	S
7600-ES20-10G3C	3.6.1	Cisco 7600 ES20 line card, 2x10GE XFP with DFC 3C	S
7600-ES20-10G3CXL	3.6.1	Cisco 7600 ES20 line card, 2x10GE XFP with DFC 3CXL	S
7600-ES20-GE3C	3.6.1	Cisco 7600 ES20 line card, 20xGE SFP with DFC 3C	S
7600-ES20-GE3CXL	3.6.1	Cisco 7600 ES20 line card, 20xGE SFP with DFC 3CXL	S
7600-ES20-PROC	3.6.1	7600 ES20 PROC FRU	S
7600-MSFC4	3.6.1	c7600 MSFC4 Daughterboard	S
7600-SIP-200	3.6.0	SPA Interface Processor-200	S
7600-SIP-400	3.6.0	SPA Interface Processor-400	S
7600-SIP-600	3.6.0	SPA Interface Processor-600	S
OSM-12CT3T1	3.6.0	12-port channelized/unchannelized CT3-T1	S
OSM-1CHOC12T3-SI	3.6.0	1-port channelized OC-12, SM-IR	S
OSM-1OC48-POS-SI+	3.6.0	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-IR	S
OSM-1OC48-POS-SL+	3.6.0	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-LR	S
OSM-1OC48-POS-SS+	3.6.0	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-SR	S
OSM-2+4GE-WAN+	3.6.0	4-port Gigabit Ethernet WAN (GBIC) with two Layer 2 LAN ports; CEF256	S
OSM-2OC12-ATM-MM+	3.6.0	Enhanced 2-port OC-12/STM-4 ATM OSM, MM	S
OSM-2OC12-ATM-SI+	3.6.0	Enhanced 2-port OC-12/STM-4 ATM OSM, SM-IR	S
OSM-2OC12-POS-SI+	3.6.0	Enhanced 2-port OC-12c/STM-4c POS, SM-IR; CEF256	S

Table 5-52 Supported Modules for Cisco 7600 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
OSM-4OC12-POS-SI+	3.6.0	Enhanced 4-port OC-12c/STM-4c POS, SM-IR; CEF256	S
OSM-4OC3-POS-SI+	3.6.0	Enhanced 4-port OC-3c/STM-1c POS, SM-IR;	S
PA-1FE-TX, -FX	3.6.0	1-port Fast Ethernet port adapter	S
PA-2FE-TX, -FX	3.6.0	2-port Fast Ethernet port adapter	S
PA-4T+	3.6.0	T1/E1 port adapters	S
PA-A3-E3	3.6.0	ATM with traffic shaping port adapters	S
PA-A3-T3	3.6.0	ATM with traffic shaping port adapters	S
PA-MC-4T1	3.6.0	T1/E1 port adapters	S
PA-MC-8T1	3.6.0	T1/E1 port adapters	S
PA-MC-STM-1	3.6.0	Multichannel STM-1 port adapters	S
PA-POS-2OC3	3.6.0	2-port POS OC3c/STM1 port adapter	S
SFP-OC3-IR1	3.6.0	Intermediate range, single-mode fiber	S
SFP-OC3-LR1	3.6.0	Long range, single-mode fiber	S
SFP-OC3-MM	3.6.0	Short range, multimode fiber	S
SPA-10X1GE	3.6.0	10-port Gigabit Ethernet SPA, SFP Optics	S
SPA-10X1GE-V2	3.6.0	10-port Gigabit Ethernet SPA, SFP Optics	S
SPA-1XCHSTM1/OC3	3.6.0	1-port Channelized STM1/OC3 to DS0 SPA	S
SPA-1XOC12-ATM	3.6.0	1-Port OC-12c/STM-4c ATM SPA	S
SPA-1XOC12-POS	3.6.0	1-port OC-12c/STM-4c POS SPA	S
SPA-1XOC48-ATM	3.6.0	1 port OC-48c/STM-16 ATM SPA	S
SPA-1XTENGE-XFP	3.6.0	1-port 10 Gigabit Ethernet SPA, LANPHY XFP Optics	S
SPA-24CHT1-CE-ATM	3.6.0	24-Port Channelized T1/E1/J1 ATM CEoP SPA	S
SPA-2X1GE	3.6.0	2-port Gigabit Ethernet SPA, SFP Optics	S
SPA-2X1GE-V2	3.6.0	2-port Gigabit Ethernet SPA, SFP Optics	S
SPA-2XCT3/DS0	3.6.0	2-port Channelized T3 to DS0 SPA	S
SPA-2XOC3-ATM	3.6.0	2-port OC-3c/STM-1c ATM SPA	S
SPA-2XOC3-POS	3.6.0	2-port OC-3c/STM-1c POS SPA	S
SPA-2XOC48POS/RPR	3.6.1	1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	S
SPA-2XOC48POS/RPR	3.6.0	2 port OC-48 POS/RPR SPA with SFP Optics	S
SPA-2XT3/E3	3.6.0	2-port Clear Channel T3/E3 SPA	S
SPA-4X1FE-TX-V2	3.6.0	4-port 10/100 Ethernet SPA TX	S
SPA-4XCT3/DS0	3.6.0	4-port Channelized T3 to DS0 SPA	S
SPA-4XOC3-ATM	3.6.0	4-port OC-3c/STM-1c ATM SPA	S
SPA-4XOC3-POS	3.6.0	4-port OC-3c/STM-1c POS SPA	S
SPA-4XOC48POS/RPR	3.6.0	4-port OC-48c/STM-16 POS/DPT/RPR SPA	S

Table 5-52 Supported Modules for Cisco 7600 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
SPA-4XT3/E3	3.6.0	4-port Clear Channel T3/E3 SPA	S
SPA-5X1GE	3.6.0	5-port Gigabit Ethernet SPA, SFP Optics	S
SPA-8X1FE-TX-V2	3.6.0	8-port 10/100 Ethernet SPA TX	S
SPA-8XCHT1E1	3.6.0	8-Port Channelized T1/E1 SPA	S
SPA-OC192POS-LR	3.6.0	1-port OC-192c/STM-64 POS/RPR SPA, SM-LR	S
SPA-OC192POS-XFP	3.6.0	1-port OC-192c/STM-64 POS/RPR SPA, XFP Optics	S
WS-C6509-E-FAN	3.6.0	High-capacity fan tray	S
WS-C6509-NEB-A	3.6.1	Enhanced 9-slot vertically oriented chassis	S
WS-CAC-6000W	3.6.0	6000W AC power supply	S
WS-F6700-DFC3BXL	3.6.0	Distributed Forwarding Card 3BXL (DFC3BXL) for use on CEF720 modules	S
WS-F6700-DFC3C	3.6.0	Distributed Forwarding Card 3C (DFC3C) for use on CEF720 modules	S
WS-F6700-DFC3CXL	3.6.0	Distributed Forwarding Card 3CXL (DFC3CXL) for use on CEF720 modules	S
WS-F6K-FE48X2-AF	3.6.0	IEEE 802.3af PoE daughtercard	S
WS-F6K-GE48-AF	3.6.0	IEEE 802.3af PoE daughtercard	S
WS-F6K-MSFC2	3.6.1	Multilevel Switching Feature Card Version 2 for Catalyst 6000 that is treated as a standalone system by the NMS	S
WS-F6K-PFC2	3.6.1	Catalyst 6500 L3 switching engine II	S
WS-F6K-PFC3BXL	3.6.0	Policy Feature Card 3BXL (PFC3BXL)	V
WS-F6K-PFC3CXL	3.6.0	Policy Feature Card 3CXL (PFC3CXL)	S
WS-F6K-VPWR	3.6.0	PoE Daughtercard	S
WS-F6K-VPWR-GE	3.6.0	PoE Daughtercard	S
WS-G6483	3.6.0	10GBASE-ER serial 1550 nm extended-reach OIM	S
WS-G6488	3.6.0	10GBASE-LR serial 1310 nm long-reach OIM	S
WS-SUP32-10GE-3B	3.6.0	Supervisor Engine 32	S
WS-SUP32-GE-3B	3.6.0	Supervisor Engine 32	S
WS-SUP720-3B	3.6.0	Supervisor Engine 720 with PFC3B	V
WS-SUP720-3BXL	3.6.0	Supervisor Engine 720 with PFC3BXL	V
WS-SVC-IDS2-BUN-K9	3.6.1	Cisco Catalyst 6500 Series Intrusion Detection System (IDS2) Service Module	S
WS-SVC-MWAM-1	3.6.0	Multi-Processor WAN Application Module	S
WS-SVC-NAM-1	3.6.0	Network Analysis module 1	S
WS-SVC-NAM-2	3.6.0	Network Analysis module 2	S
WS-X6148A-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6148A-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S

Table 5-52 Supported Modules for Cisco 7600 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
WS-X6148-FE-SFP	3.6.0	48 port 100BASE-FX Fast Ethernet Switching Module	S
WS-X6148-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6148-RJ-21	3.6.0	48 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6148-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6148X2-RJ-45	3.6.0	96 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6196-RJ-21	3.6.0	96 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6248A-TEL	3.6.0	48 port 10/100TX RJ-21 Enhanced Ethernet/Fast Ethernet Switching Module	S
WS-X6248-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6248-TEL	3.6.0	48 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6316-GE-TX	3.6.0	16-port Gigabit Ethernet RJ-45	S
WS-X6324-100FX-SM	3.6.0	24 port 100FX SingleMode Fast Ethernet Switching Module	S
WS-X6348-RJ-21	3.6.0	6500 48 port 10/100BaseTX (RJ-21)	S
WS-X6348-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6408A-GBIC	3.6.0	8-port Gigabit Ethernet GBIC Enhanced QoS Module	S
WS-X6408-GBIC	3.6.0	8-port Gigabit Ethernet GBIC	S
WS-X6416-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
WS-X6502-10GE	3.6.0	1-port 10-Gigabit Ethernet	S
WS-X6516A-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
WS-X6516-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
WS-X6516-GE-TX	3.6.0	16 port 10/100/1000 Base-T Ethernet Switching Module	S
WS-X6548-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6548-RJ-21	3.6.0	48 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6548-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6582-2PA	3.6.0	Enhanced FlexWAN Module;	S
WS-X6700-CFC	3.6.0	Centralized Forwarding Card	S
WS-X6704-10GE	3.6.0	4-port 10-Gigabit Ethernet	S
WS-X6724-SFP	3.6.0	24-port Gigabit Ethernet SFP	S
WS-X6748-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6748-SFP	3.6.0	48-port Gigabit Ethernet SFP	S
WS-X6816-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
XENPAK-10GB-ER	3.6.0	10GBASE-ER Serial 1550-nm extended-reach, single-mode fiber (SMF), dispersion-shifted fiber (DSF)	S
XENPAK-10GB-SR	3.6.0	10GBASE-SR Serial 850-nm short-reach multimode fiber (MMF)	S
WS-6700-DFC3B	3.6.1	Catalyst 6500 Distributed forwarding card 3B	S
WS-6700-DFC3BXL	3.6.1	Catalyst 6500 Distributed forwarding card 3B XL	S

Table 5-52 Supported Modules for Cisco 7600 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
WS-X6148FE-SFP	3.6.1	Catalyst 6500 48 port 100Base-X SFP module	S
WS-X6K-S1A-MSFC2	3.6.1	Catalyst 6000 Supervisor Engine 1A, 2 Gigabit Ethernet, plus MSFC2 and policy feature card (PFC)	S
WS-X6K-SUP2-2GE	3.6.1	Supervisor 2 with 2 Gigabit Ethernet ports	S
WS-F6700-DFC3A	3.6.1	Distributed Forwarding Card 3	S
CEVFAN	3.6.1	Fan	S
DFC-3C	3.6.1	Distributed Forwarding Card 3C	S
PA-2CE/PRI	3.6.1	Not Found	S
PA-MC-2E1/120	3.6.1	2 port multichannel E1 port adapter with G.703 120ohm interf	S
PA-MC-8TE1	3.6.1	8 port multichannel T1/E1 8PRI port adapter	S
PFC-3CXL	3.6.1	Policy Feature Card 3Cxl (PFC3CXL)	S
RSP720-3C-GE	3.6.1	route Switch Processor 720 with PFC3C	S
RSP720-3CXL-GE	3.6.1	Route Switch Processor 720 with PFC3CXL:	S
WS-X6K-S2-MSFC2	3.6.1	Catalyst 6500 Supervisor Engine-2, 2GE, plus MSFC-2 / PFC-2	S
SFP-OC3-SR	3.6.1	OC3/STM1 SFP, Single-mode fiber, Short Reach	S
SPA-2X1GE-V2	3.6.2	2-Port Gigabit Ethernet Shared Port Adapter.	S
SPA-5X1GE-V2	3.6.2	5-Port Gigabit Ethernet Shared Port Adapter	S
SPA-CHOC3-CE-ATM	3.6.2	1-Port Channelized STM-1/OC-3 Shared Port Adapters	S
WS-F6700-DFC-3C	3.6.2	WS-F6700 Daughter Feature Card 3C	S
WS-F6700-DFC-3CXL	3.6.2	WS-F6700 Daughter Feature Card 3CXL	S
4000W-DC	3.6.2	4000W DC PS for 7609/7613Chassis	S
6000W-DC	3.6.2	6000W DC PS	S
MSFC4	3.6.2	Multilayer Switch Feature Card	S
PFC-3C	3.6.2	Policy Feature Card 3C	S
PWR-2700-DC/4	3.6.2	2700W DC Power Supply for Cisco 7604	S
PWR-2700-DC	3.6.2	2700W DC power supply for CISCO7606	S
WS-SVC-ADM-1-K9	3.6.3	Catalyst 6500 Cisco Anomaly Detection Module	S
WS-SVC-AGM-1-K9	3.6.3	Catalyst 6500 Cisco Anomaly Guard Module	S
PWR-2700-AC	3.6.3	2700W DC power supply	S
WS-SVC-FWM-1-K9	3.6.0	Firewall blade for 6500 and 7600, VFW License Separate	S
XENPAK-10GB-LR+	3.6.1	10GBASE-LR XENPAK Module	S
WS-F6700-CFC	3.6.0	Catalyst 6500 Central Fwd Card for WS-X67xx modules	S
7600-SSC-400	3.6.3	Cisco 7600 / Catalyst 6500 Services SPA Carrier Card-400 Rev. 2.0	S
ACE20-MOD-K9	3.6.3	Application Control Engine 20 Hardware	S
FAN-MOD-9SHS	3.6.4	High-speed fan module	S
PWR-6000-DC	3.6.4	6000W DC Power Supply	S

Table 5-52 **Supported Modules for Cisco 7600 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
GLC-LH-SM	3.6.5	Short Wave fiber Gigabit Ethernet	S
SFP-GE-L	3.6.5	1000BASE-LH/LX pluggable transceiver	S
XFP-10GLR-OC192SR	3.6.4	OC192 XFP Single Mode Long Reach 2 (80km)	S
7600-ES40-GE3CXL	3.6.4	7600 ES+ Line Card, 40xGE SFP with DFC 3CXL	S
RSP720-3CXL	3.6.4	Catalyst 6500 Supervisor Module 720 base board	S
WS-CAC-3000W	3.6.4	Catalyst 6500 3000W AC power supply	S
WS-CAC-4000W-INT	3.6.4	4000W AC PowerSupply, International (cable included)	S
WS-CAC-4000W-US	3.6.4	4000Watt AC Power Supply for US (cable attached)	S
WS-CAC-6000W	3.6.4	Cat6500 6000W AC Power Supply	S
WS-CDC-2500W	3.6.4	Catalyst 6000 2500W DC Power Supply	S

Cisco 7600 Series—Supported Technologies

The following technologies are supported by the Cisco 7600 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [BFD, page 5-112](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 7600 Series—Supported Service Events

Table 5-53 Supported Service Events for Cisco 7600 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y
Adaptive Polling	3.6.0	N
BGP link down	3.6.0	Y
LDP neighbor loss	3.6.0	Y
MPLS interface removed	3.6.0	Y

Cisco 10000 Series Routers

This section includes the following information about Cisco 10000 Series routers:

- [Cisco 10000 Series—Supported Software Versions, page 5-52](#)
- [Cisco 10000 Series—Supported Topologies, page 5-53](#)
- [Cisco 10000 Series—Supported Modules, page 5-53](#)
- [Cisco 10000 Series—Supported Technologies, page 5-54](#)
- [Cisco 10000 Series—Supported Service Events, page 5-54](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 10000 Series Routers](#).

Cisco 10000 Series—Supported Software Versions

Table 5-54 **Supported Software Versions for Cisco 10000 Series—Cisco ANA 3.6.5**

Version Name	ANA Version	Certification Level
IOS 12.2(31)SB	3.6.1	S
IOS 12.3(7)XI7	3.6.1	S
IOS 12.0(20)	3.6.1	S
IOS 12.2(24)S	3.6.1	S
IOS 12.2(24)S4	3.6.1	S
IOS 12.0(23)S*	3.5.2	V
IOS 12.0(22)S5	3.5.2	V
IOS 12.2(18.2)	3.5.2	V
IOS 12.1(10)E	3.5.2	V
IOS 12.0(23)S2	3.6.1	S
IOS 12.2(28)SB3	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 10000 Series—Supported Topologies

Table 5-55 Supported Topologies for Cisco 10000 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco 10000 Series—Supported Modules

Table 5-56 Supported Modules for Cisco 10000 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
ESR-4OC3-ATM-SM	3.6.0	4-port OC-3/STM-1 ATM, single mode	S
ESR-1GE	3.6.0	1-port Gigabit Ethernet	S
ESR-HH-1GE	3.6.0	1-port Gigabit Ethernet half-height	S
ESR-HH-8FE-TX	3.6.0	8-port Fast Ethernet half-height	S
ESR-1OC-12-ATM	3.6.0	1-port OC-12 ATM	S
ESR-24CT1/E1	3.6.0	24-port channelized E1/T1	S
ESR-6OC3/P-SMI	3.6.0	6-port OC-3c/STS-3c/STM-1 POS/SDH, single mode,intermediate reach	S
ESR-6CT3	3.6.0	6-port channelized T3	S
ESR-1OC-12/P-SMI	3.6.0	1-port OC-12/STS-12c/STM-4 OS/SDH, single mode,intermediate reach	S
ESR-PRE1	3.6.1	Cisco 10K Performance Routing Engine-1	S
ESR-PRE2	3.6.1	Cisco 10K Performance Routing Engine-2	S
ESR-PRE3	3.6.1	Cisco 10K Performance Routing Engine-3	S
ESR-1COC12-SMI	3.6.1	Cisco 10K 1 port channelized OC12	S
ESR-8E3/DS3	3.6.2	8 port clear channel E3/DS3 Line Card	S

Cisco 10000 Series—Supported Technologies

The following technologies are supported by the Cisco 10000 Series in Cisco ANA 3.6.5:

- [IP](#), page 5-89
- [Routing Protocols](#), page 5-91
- [Ethernet \(IEEE 802.3\)](#), page 5-92
- [ATM](#), page 5-95
- [Frame Relay](#), page 5-97
- [Point to Point](#), page 5-99
- [Physical Technologies](#), page 5-101
- [MPLS](#), page 5-101
- [MPLS-TE](#), page 5-103
- [VPN](#), page 5-105
- [PWE3](#), page 5-106
- [ACL](#), page 5-107
- [Physical Equipment](#), page 5-109
- [Base Logical Components](#), page 5-110
- [Common](#), page 5-111
- [Additional Technologies](#), page 5-112

Cisco 10000 Series—Supported Service Events

Table 5-57 *Supported Service Events for Cisco 10000 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N

Table 5-57 Supported Service Events for Cisco 10000 Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco 12000 Series Routers

This section includes the following information about Cisco 12000 Series routers:

- [Cisco 12000 Series—Supported Software Versions, page 5-55](#)
- [Cisco 12000 Series—Supported Topologies, page 5-56](#)
- [Cisco 12000 Series—Supported Modules, page 5-57](#)
- [Cisco 12000 Series—Supported Technologies, page 5-62](#)
- [Cisco 12000 Series—Supported Service Events, page 5-62](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco 12000 Series Routers](#).

Cisco 12000 Series—Supported Software Versions

Table 5-58 Supported Software Versions for Cisco 12000 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.0(23)S3	3.6.0	V
IOS 12.0(26)S	3.6.0	V
IOS 12.0(26)S1	3.6.0	V
IOS 12.0(26)S2	3.6.0	V
IOS 12.0(26)S3	3.6.0	V

Table 5-58 Supported Software Versions for Cisco 12000 Series—Cisco ANA 3.6.5 (Continued)

Version Name	ANA Version	Certification Level
IOS 12.0(26)S4	3.6.0	V
IOS 12.0(26)S5	3.6.0	V
IOS 12.0(26)S6	3.6.0	V
IOS 12.0(31)S	3.6.0	V
IOS 12.0(31)S3	3.6.0	V
IOS 12.0(32)SY	3.6.0	V
IOS 12.0(32)SY2	3.6.0	V
IOS 12.0(27*)	3.6.0	S
IOS 12.0(28*)	3.6.0	S
IOS 12.0(30*)	3.6.0	S
IOS 12.0(31*)	3.6.0	S
IOS 12.0(32*)	3.6.0	S
IOS 12.0(32)SY3	3.6.2	S
IOS 12.0(32)SY5	3.6.3	S
IOS 12.0(33)S	3.6.3	S
IOS 12.0(32)S10	3.6.3	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 12000 Series—Supported Topologies

Table 5-59 Supported Topologies for Cisco 12000 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
GRE Tunnel	GRE Tunnel	3.6.0
VPN (VRF)	VPN	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 12000 Series—Supported Modules

Table 5-60 **Supported Modules for Cisco 12000 Series—Cisco ANA 3.6.5**

Module Name	ANA Version	Module Description	Certification Level
12000-SIP-401	3.6.0	Cisco 12000 Series SPA Interface Processor-401	S
12000-SIP-501	3.6.1	Cisco 12000 Series SPA Interface Processor-501	S
12000-SIP-600	3.6.1	Cisco 12000 Series SPA Interface Processor-600	S
12000-SIP-601	3.6.1	Cisco 12000 Series SPA Interface Processor-601	S
12DS3-SMB	3.6.0	24 Port Copper DS3 Interface Line Card	S
16OC3X/POS-IR-LC-B.	3.6.1	GSR 16-Port OC3/POS MM/I Eng3 Release B = 16OC3X/POS-IR-LC-B	S
16OC3X/POS-I-LC-B 16OC3X/POS-M-MJ-B	3.6.1	GSR16-Port OC3/POS MM/I Eng3 Release B	S
16-OC3X/POS-IR-LC	3.6.0	16-Port Packet-Over-SONET OC-3/STM-1 with Extended Feature Set Line Card (concatenated)	S
1X10GE-ER-SC	3.6.1	1 Port 10Giga Ethernet Line Card	S
1X10GE-LR-SC	3.6.1	1 Port 10Giga Ethernet Line Card	S
3GE-GBIC-SC	3.6.0	4 Port Gigabit Ethernet Line Card (trident)	S
4GE-SFP-LC	3.6.1	4 port-GE line card for Cisco 12000	S
4OC12/POS-IR-SC-B	3.6.0	Enhanced 4 port OC-12 Intermediate Reach Line Card	S
4OC12X/POS-I-SC-B	3.6.0	4 Port OC12 SM Intermediate Reach POS	S
4OC12X/POS-I-SC-B	3.6.1	4 PORT OC12 POS B	S
4OC12X/POS-M-SC-B	3.6.0	5 port (Quad) OC-12 POS Card, Single Mode, Short Reach	S
4OC3/ATM-IR-SC	3.6.1	4 port OC3/STM1 ATM line MM/IR card	S
4OC3/ATM-MM-SC	3.6.1	4 port OC3/STM1 ATM line MM/IR card	S
4OC3X/POS-IR-LC-B	3.6.1	GSR 4-port OC3/POS IR Eng3 release B	S
4OC3X/POS-LR-LC-B	3.6.1	GSR 4-port OC3/POS IR Eng3 release B	S
4OC3X/POS-MM-MJ-B	3.6.1	GSR 4-port OC3/POS IR Eng3 release B	S
4OC48E/POS-LR-SC	3.6.0	5 Port (Quad) Enhanced OC-48 Long Reach FC Connector Line Card	S
4OC48E/POS-SR-SC	3.6.0	5 Port (Quad) Enhanced OC-48 Short Reach SC Connector Line Card	S
4XOC48POS/RPR	3.6.1	4-port OC48/STM16 POS/RPR Shared Port Adapter = SPA-4XOC48POS/RPR	S
6CT3-SMB	3.6.0	18 Port Copper DS3 Interface Line Card	S
8FE-FX-SC	3.6.0	8-Port Fast Ethernet Line Card	S
8FE-TX-RJ45	3.6.0	8-Port Fast Ethernet Line Card	S
8FE-TX-RJ45-B	3.6.1	8-port 100baseTX, RJ45 connector type, version B	S
8OC3X/POS-IR-LC-B	3.6.1	GSR 8-Port OC3/POS MM/IR Eng3 Release B	S

Table 5-60 Supported Modules for Cisco 12000 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
8OC3X/POS-MM-MJ-B	3.6.1	GSR 8-Port OC3/POS MM/IR Eng3 Release B	S
8X1FE-V2	3.6.1	8-port Fast Ethernet Shared Port Adapter V2 = SPA-8X1FE-V2	S
BUS_BOARD	3.6.1	GSR16 BUS BOARD (16) =	S
CHOC12/DS1-IR-SC	3.6.0	Cisco 12000 Series 1-Port Channelized OC-12c/STM-4	S
COPPER-12DS3	3.6.0	12 Port Copper DS3 Interface Line Card	S
COPPER-6DS3	3.6.0	6 Port Copper DS3 Interface Line Card	S
CRS-16-ALARM	3.6.1	Cisco CRS-1 Series 16 Slots Alarm Board = CRS-16-ALARM	S
GSR10-AC-PDU	3.6.0	Cisco 12410 AC Power Distribution Unit (spare)	S
GSR10-ADVNCDCSC	3.6.1	12010 Advanced Clock Scheduler Card	S
GSR10-ADVNCDSFC	3.6.1	12010 Advanced Switch Fabric Card	S
GSR10-ALRM	3.6.1	12410, 12010 Alarm Card	S
GSR10-CSC	3.6.1	12410 Clock Scheduler Card	S
GSR10-SFC	3.6.1	Cisco 12410 Switch Fabric Card	S
GSR16/320-CSC	3.6.1	12416 Clock Scheduler Card	S
GSR16/320-SFC	3.6.1	12416 Switch Fabric Card	S
GSR16/80-CSC	3.6.1	Cisco 12016 80 Gbps GSR Scheduler/Fabric	S
GSR16/80-SFC	3.6.1	Cisco 12016 80 GbpsGSR Switch Fabric	S
GSR16-ALRM	3.6.0	Cisco 12016 GSR Alarm Card	S
GSR16-BLOWER	3.6.1	Cisco 12016, 12416 Blower	S
GSR-3GE	3.6.0	3 Port Gigabit Ethernet Line Card (trident)	S
GSR6-ADVNCDCSC	3.6.1	12006 Advanced Clock Scheduler Card	S
GSR6-ALRM	3.6.1	12406, 12006 Alarm Card	S
GSR6-BLOWER	3.6.1	12406, 12006 Blower	S
GSR6-CSC	3.6.1	Cisco 12406 Clock Scheduler Card	S
GSR6-SFC	3.6.1	Cisco 12406 Switch Fabric Card	S
GSR8-CSC/ALRM	3.6.1	Cisco 12008 GSR Scheduler/Fabric/Alarm	S
GSR-8FE-FX	3.6.0	8 port Fast Ethernet card with Fiber Interface	S
GSR8-SFC	3.6.1	Switch Fabric	S
GSR-ALARM10	3.6.0	GSR Alarm module	S
GSR-ALARM16	3.6.0	GSR-Alarm	S
GSR-ALARM6	3.6.0	GSR Alarm module	S
GSR-BUS-BOARD16	3.6.0	GSR Bus Board for Power distribution	S
GSR-CLOCK-OC192	3.6.0	GSR Clock Scheduler	S
GSR-CSC	3.6.0	GSR Clock Scheduler Card	S
GSR-CSC12410	3.6.0	GSR 12410 Clock scheduler	S

Table 5-60 Supported Modules for Cisco 12000 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
GSR-CSC16	3.6.0	Scheduler/Fabric Card	S
GSR-CSC16-OC192	3.6.0	GSR 12406 Clock Scheduler Card	S
GSR-CSC16-OC192	3.6.0	GSR 12016 OC192 Clock Scheduler Card	S
GSR-CSC6	3.6.0	GSR Clock Scheduler	S
GSR-E48-ATM-4OC12-M-M-SR-SC	3.6.0	GSR Edge Engine 48, ATM, 4 port OC12/STM4Multi Mode Short Reach Line Card	S
GSR-E48-ATM-4OC12-SM-IR-SC	3.6.0	GSR Edge Engine 48, ATM, 4 ports OC12/STM4 Single Mode Intermediate Reach Line Card	S
GSR-E48-POS-16OC3-SM-IR-LC	3.6.0	16 Port OC3 SM Intermediate Reach POS	S
GSR-E48-POS-OC48-SM-LR-SC	3.6.0	GSR 12406 Switch Fabric Card	S
GSR-E48-POS-OC48-SM-SR-SC	3.6.0	GSR, Edge Engine 48 Port OC-48 SRP Single Mode Long Reach Line Card	S
GSR-E48-POS-QOC12-SM-IR-SC	3.6.0	4 Port OC12 SM Intermediate Reach POS	S
GSR-E-OC192-SM-SR-SC	3.6.0	Enhanced 1 Port OC 192 Short Reach 2 FC Connector Line Card.	S
GSR-E-QOC48-SM-LR-SC	3.6.0	4 Port Enhanced OC 48 Short Reach SC Connector Line Card	S
GSR-E-QOC48-SM-SR-SC	3.6.0	4 Port Enhanced OC 48 Short Reach SC Connector Line Card	S
GSR-GEFE	3.6.0	GSR General Fan	S
GSR-PA-3GE	3.6.0	GSR 3 port Port Adapter	S
GSR-RP	3.6.0	GSR RoMman Recovery	S
GSR-SFC	3.6.0	GSR Switch Fabric Card	S
GSR-SFC12410	3.6.0	GSR 12410 Switch Fabric Card	S
GSR-SFC16	3.6.0	Switch Fabric Card	S
GSR-SFC16-OC192	3.6.0	GSR 12406 Switch Fabric Card	S
GSR-SFC6	3.6.0	GSR Switch Fabric Card	S
OC12/SRP-IR-SC-B	3.6.0	2 Port OC-12 Single Mode SRP Intermediate Reach Line Card	S
OC12/SRP-MM-SC-B	3.6.0	2 Port OC-12 Multi Mode SRP Line Card	S
OC-48E/POS-SR-SC-B	3.6.0	2 Port Packet Over Sonet OC-48, Single Mode, Short Reach, SC Connector Card	S
OC48X/POS-LR-SC	3.6.0	One-Port OC-48c/STM-16c POS/SDH ISE Line Card, Long Reach	S
OC48X/POS-SR-SC	3.6.0	One-Port OC-48c/STM-16c POS/SDH ISE Line Card, Short Reach	S
POS-EN-OC48-LR-SC	3.6.0	Enhanced OC-48 Long Reach SC Connector Line Card	S
POS-EN-OC48-SR-SC	3.6.0	Enhanced OC-48 Short Reach SC Connector Line Card	S
POS-EN-QOC12-IR	3.6.0	Enhanced 4 port OC-12 Intermediate Reach Line Card	S
POS-EN-QOC48-SM-LR-F C	3.6.0	4 Port (Quad) Enhanced OC-48 Long Reach FC Connector Line Card	S

Table 5-60 Supported Modules for Cisco 12000 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
POS-EN-QOC48-SM-LR-SC	3.6.0	4 Port (Quad) Enhanced OC-48 Long Reach SC Connector Line Card	S
POS-EN-QOC48-SM-SR-SC	3.6.0	4 Port (Quad) Enhanced OC-48 Short Reach SC Connector Line Card	S
POS-OC48-SM-SR-SC	3.6.0	1 Port Packet Over Sonet OC-48, Single Mode, Short Reach, SC Connector Card	S
POS-QOC12-MM-SR	3.6.0	4 port (Quad) OC-12 POS Card, Single Mode, Short Reach	S
PRP-1	3.6.0	Performance Route Processor-1	S
PRP-2	3.6.0	Cisco XR 12000 and 12000 Series Performance Router Processor-2	S
PRP-3	3.6.0	Performance Route Processor-3	S
PRP-4	3.6.0	Cisco XR 12000 and 12000 Series Performance Router Processor-4	S
SFP-OC48-IR1	3.6.1	OC-48c/STM-16c	S
SFP-OC48-LR2	3.6.1	OC-48c/STM-16c SFP, Long Reach (80km)	S
SPA-10X1GE	3.6.1	10-port 1 GbE Shared Port Adapter	S
SPA-1X10GE-L-V2	3.6.0	Cisco 1-Port 10GE LAN-PHY Shared Port Adapter	S
SPA-1XOC192POS-VSR	3.6.1	1-port OC192/STM64 POS VSR Optics Shared Port Adapter	S
SPA-1XOC48POS/RPR	3.6.0	Port OC-48c/STM-16c POS/RPR Shared Port Adapter	S
SPA-1XTENGE-XFP	3.6.0	1-port 10Gigabit Ethernet Shared Port Adapter XFP based	S
SPA-1XTENGE-XFP-V2	3.6.0	1-port 10GbE Shared Port Adapter XFP based V2	S
SPA-24CHT1-CE-ATM	3.6.1	24-Port Channelized T1/E1/J1 ATM CEoP SPA	S
SPA-2X1GE	3.6.0	2 ports Gigabit Ethernet Shared Port Adapters	S
SPA-2X1GE-V2	3.6.1	2 ports Gigabit Ethernet Shared Port Adapters	S
SPA-2XCT3/DS0	3.6.1	2-port Channelized T3 to DS0 Shared Port Adapter	S
SPA-2XOC12-POS	3.6.0	2-Port OC-3c/STM-1 and OC-12c/STM-4 POS SPA	S
SPA-2XOC48POS/RPR	3.6.0	2-port OC48/STM16 POS/RPR Shared Port Adapters	S
SPA-2XT3/E3	3.6.1	2-port Clear Channel T3/E3 Shared Port Adapter	S
SPA-4XCT3/DS0	3.6.0	4-port Channelized T3 to DS0 Shared Port Adapter	S
SPA-4XOC12-POS	3.6.0	4-port OC-12/STM-4 POS Shared Port Adapters	S
SPA-4XT3/E3	3.6.1	4-port Clear Channel T3/E3 Shared Port Adapter	S
SPA-5X1GE	3.6.0	5-Port Gigabit Ethernet SPA	S
SPA-5X1GE-V2	3.6.0	5-Port Gigabit Ethernet SPA	S
SPA-8X1FE-TX-V2	3.6.0	8-port 10/100 Ethernet SPA TX (Fugu ASIC)	S
SPA-8X1GE	3.6.0	8-port Gigabit Ethernet Shared Port Adapter_V2	S
SPA-8X1GE-V2	3.6.2	8-port 1GbE SPA (Fugu ASIC)	S
SPA-8XCHT1/E1	3.6.1	8-port Channelized T1/E1 to DS0 Shared Port Adapter	S
SPA-8XFE-TX	3.6.0	8-port 10/100 Ethernet SPA with RJ-45	S

Table 5-60 Supported Modules for Cisco 12000 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
SPA-8XOC12-POS	3.6.0	8-Port OC-12c/STM-4 Multirate POS SPA	S
SPA-OC192POS-LR	3.6.0	1-port OC192/STM64 POS/RPR SMLR Optics	S
SPA-OC192POS-VSR	3.6.1	1-port OC192/STM64 POS/RPR VSR Optics	S
SPA-OC192POS-XFP	3.6.0	1-port OC192/STM64 POS/RPR XFP Optics Shared Port Adapter with XFP-10GLR-OC192SR	S
SPA-OC192RPR-XFP	3.6.0	1-port OC192/STM64 POS/RPR XFP Optics Shared Port Adapter = SPA-OC192RPR-XFP	S
SRP-OC12-MM	3.6.0	1 Port OC-12 Multi Mode SRP Line Card	S
SRP-OC12-SM-IR	3.6.0	1 Port OC-12 Single Mode SRP Intermediate Reach Line Card	S
SSRP-OC48-SM-LR	3.6.0	1 Port OC-48 SRP Single Mode Long Reach Line Card	S
SSRP-OC48-SM-SR	3.6.0	1 Port OC-48 SRP Single Mode Short Reach Line Card	S
12000/4-BLOWER	3.6.2	GSR 12404 Fan tray - cevFan12404FanTray7	S
GSR4/80-AC	3.6.2	GSR 12404 AC Power Supply - cevPowerSupply12404AC	S
4OC3X/ATM-IR-SC	3.6.1	4-port OC3/STM1 ATM Single Mode, intermediate reach ISE Line Card with SC connector	S
SPA-1XCHOC48/DS3	3.6.2	1-Port Channelized STM-16/OC-48 SPA.	S
SPA-1XCHSTM1/OC3	3.6.1	1-port Channelized STM-1/OC-3c to DS0 Shared Port Adapter.	S
SPA-1XOC12-ATM-V2	3.6.2	1-port OC12c SFP Optics ATM Shared Port Adapter	S
SPA-1XOC3-ATM-V2	3.6.2	1-port OC3c SFP Optics ATM Shared Port Adapter	S
SPA-2CHT3-CE-ATM	3.6.2	2-port Channelized T3/E3 ATM + Circuit Emulation Shared Port Adapter	S
SPA-3XOC3-ATM-V2	3.6.2	1-port OC3c SFP Optics ATM Shared Port Adapter	S
XR-PRP-2	3.6.1	Cisco XR 12000 and 12000 Series Performance Router Processor-2	S
SPA-4XOC3-POS-V2	3.6.0	4-port OC-3c/STM1c POS Shared Port Adapter	S
12404E/80	3.6.3	GSR 12404 Enhanced Clock Scheduler Card	S
12004E/20	3.6.3	Cisco 12004/12404 Enhanced Collapsed Fabric/Alarm card	S
12000/16-DC-PEM	3.6.3	Cisco 12000 16-slot Enhanced DC PEM	S
12000/16-AC-PEM	3.6.3	Cisco 12000 16-slot Enhanced AC PEM	S
12000/16-AC-PEM	3.6.4	GSR16 AC POWER SUPPLY	S
12000/4-DC-PEM	3.6.4	Cisco 12000 4-slot DC PEM	S
12000/6-AC-PEM	3.6.4	Cisco 12000 6-slot Enhanced AC PEM	S
12000/6-DC-PEM	3.6.4	Cisco 12000 6-slot Enhanced DC PEM	S
12000/16-AC-PEM	3.6.4	Cisco 12000 16-slot Enhanced AC PEM	S
12000/16-DC-PEM	3.6.4	Cisco 12000 16-slot Enhanced DC PEM	S

Cisco 12000 Series—Supported Technologies

The following technologies are supported by the Cisco 12000 Series in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco 12000 Series—Supported Service Events

Table 5-61 *Supported Service Events for Cisco 12000 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N

Table 5-61 Supported Service Events for Cisco 12000 Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco XR 12000 Series Routers

This section includes the following information about Cisco XR 12000 Series routers:

- [Cisco XR 12000 Series—Supported Software Versions, page 5-63](#)
- [Cisco XR 12000 Series—Supported Topologies, page 5-64](#)
- [Cisco XR 12000 Series—Supported Modules, page 5-64](#)
- [Cisco XR 12000 Series—Supported Technologies, page 5-70](#)
- [Cisco XR 12000 Series—Supported Service Events, page 5-71](#)
- [Cisco XR 12000 Series—Additional Information, page 5-72](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco XR 12000 Series Routers](#).

Cisco XR 12000 Series—Supported Software Versions

Table 5-62 Supported Software Versions for Cisco XR 12000 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOX 3.4.0	3.6.0	V
IOX 3.4.1	3.6.0	V
IOX 3.4.3	3.6.3	V
IOX 3.5.0	3.6.1	S

Table 5-62 Supported Software Versions for Cisco XR 12000 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOX 3.5.1	3.6.1	V
IOX 3.6.0	3.6.3	V
IOX 3.6.1	3.6.3	V
IOX 3.7.0	3.6.4	V
IOX 3.7.1	3.6.4	V
IOX 3.6.2	3.6.5	V

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco XR 12000 Series—Supported Topologies

Table 5-63 Supported Topologies for Cisco XR 12000 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
PWE3 (Martini)	Tunnel	3.6.0
VPN (VRF)	VPN	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco XR 12000 Series—Supported Modules

Table 5-64 Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
1X10GE-ER-SC	3.6.1	1 Port 10Giga Ethernet Line Card	S
1X10GE-LR-SC	3.6.1	1 Port 10Giga Ethernet Line Card	S
4OC12X/POS-I-SC-B	3.6.1	4 PORT OC12 POS B	S
8FE-TX-RJ45-B	3.6.1	8-port 100baseTX, RJ45 connector type, version B	S
SFP-OC48-IR1	3.6.1	OC-48c/STM-16c	S
SFP-OC48-LR2	3.6.1	OC-48c/STM-16c SFP, Long Reach (80km)	S
SPA-1X10GE-L-V2	3.6.0	Cisco 1-Port 10GE LAN-PHY Shared Port Adapter	S

Table 5-64 **Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
SPA-1XOC48POS/RPR	3.6.0	Port OC-48c/STM-16c POS/RPR Shared Port Adapter	S
SPA-1XTENGE-XFP	3.6.0	1-port 10Gigabit Ethernet Shared Port Adapter XFP based	S
SPA-2X1GE	3.6.0	2 ports Gigabit Ethernet Shared Port Adapters	S
SPA-2X1GE-V2	3.6.1	2 ports Gigabit Ethernet Shared Port Adapters	S
SPA-2XCT3/DS0	3.6.1	2-port Channelized T3 to DS0 Shared Port Adapter	S
SPA-2XOC12-POS	3.6.0	2-Port OC-3c/STM-1 and OC-12c/STM-4 POS SPA	S
SPA-2XOC48POS/RPR	3.6.0	2-port OC48/STM16 POS/RPR Shared Port Adapters	S
SPA-2XT3/E3	3.6.1	2-port Clear Channel T3/E3 Shared Port Adapter	S
SPA-4XOC12-POS	3.6.0	4-port OC-12/STM-4 POS Shared Port Adapters	S
SPA-4XT3/E3	3.6.1	4-port Clear Channel T3/E3 Shared Port Adapter	S
SPA-5X1GE	3.6.0	5-Port Gigabit Ethernet SPA	S
SPA-5X1GE-V2	3.6.0	5-Port Gigabit Ethernet SPA	S
SPA-8XCHT1/E1	3.6.1	8-port Channelized T1/E1 to DS0 Shared Port Adapter	S
SPA-8XOC12-POS	3.6.0	8-Port OC-12c/STM-4 Multirate POS SPA	S
SPA-IPSEC-2G-2	3.6.1	Cisco XR 12000 Series IPsec VPN Shared Port Adapter	S
SPA-OC192POS-LR	3.6.0	1-port OC192/STM64 POS/RPR SMLR Optics	S
12000/4-BLOWER	3.6.2	GSR 12404 Fan tray - cevFan12404FanTray7	S
GSR4/80-AC	3.6.2	GSR 12404 AC Power Supply - cevPowerSupply12404AC	S
4OC3X/ATM-IR-SC	3.6.1	4-port OC3/STM1 ATM Single Mode, intermediate reach ISE Line Card with SC connector	S
SPA-1XCHOC48/DS3	3.6.2	1-Port Channelized STM-16/OC-48 SPA.	S
SPA-1XCHSTM1/OC3	3.6.1	1-port Channelized STM-1/OC-3c to DS0 Shared Port Adapter.	S
SPA-1XOC12-ATM-V2	3.6.2	1-port OC12c SFP Optics ATM Shared Port Adapter	S
SPA-1XOC3-ATM-V2	3.6.2	1-port OC3c SFP Optics ATM Shared Port Adapter	S
SPA-2CHT3-CE-ATM	3.6.2	2-port Channelized T3/E3 ATM + Circuit Emulation Shared Port Adapter	S
SPA-1XOC3-ATM-V2	3.6.2	1-port OC3c SFP Optics ATM Shared Port Adapter	S
XR-PRP-2	3.6.1	Cisco XR 12000 and 12000 Series Performance Router Processor-2	S
SPA-4XOC3-POS-V2	3.6.3	4-Port OC-3c/STM-1 POS SPA	S
SPA-1XOC3-ATM-V2	3.6.4	1-port OC3c SFP Optics ATM Shared Port Adapter	S
12000/16-AC-PEM	3.6.4	GSR16 AC POWER SUPPLY	S

Table 5-64 Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
12000/4-DC-PEM	3.6.4	Cisco 12000 4-slot DC PEM	S
12000/6-AC-PEM	3.6.4	Cisco 12000 6-slot Enhanced AC PEM	S
12000/6-DC-PEM	3.6.4	Cisco 12000 6-slot Enhanced DC PEM	S
12000/16-AC-PEM	3.6.4	Cisco 12000 16-slot Enhanced AC PEM	S
12000/16-DC-PEM	3.6.4	Cisco 12000 16-slot Enhanced DC PEM	S
SPA-10X1GE-V2	3.6.2	10-port 1GbE SPA (Fugu ASIC)	V
12000-SIP-401	3.6.0	Cisco 12000 Series SPA Interface Processor-401	S
12000-SIP-501	3.6.0	Cisco 12000 Series SPA Interface Processor-501	S
12000-SIP-600	3.6.0	Cisco 12000 Series SPA Interface Processor-600	S
12000-SIP-601	3.6.0	Cisco 12000 Series SPA Interface Processor-601	S
12DS3-SMB	3.6.0	24 Port Copper DS3 Interface Line Card	S
16OC3X/POS-IR-LC-B	3.6.0	GSR 16-Port OC3/POS MM/I Eng3 Release B = 16OC3X/POS-IR-LC-B	S
16OC3X/POS-I-LC-B	3.6.0	GSR16-Port OC3/POS MM/I Eng3 Release B	S
16OC3X/POS-M-MJ-B	3.6.0	GSR16-Port OC3/POS MM/I Eng3 Release B	S
16-OC3X/POS-IR-LC	3.6.0	16-Port Packet-Over-SONET OC-3/STM-1 with Extended Feature Set Line Card (concatenated)	S
3GE-GBIC-SC	3.6.0	4 Port Gigabit Ethernet Line Card (trident)	S
4GE-SFP-LC	3.6.0	4 port-GE line card for Cisco 12000	S
4OC12/POS-IR-SC-B	3.6.0	Enhanced 4 port OC-12 Intermediate Reach Line Card	S
4OC12X/POS-I-SC-B	3.6.0	4 Port OC12 SM Intermediate Reach POS	S
4OC12X/POS-M-SC-B	3.6.0	5 port (Quad) OC-12 POS Card, Single Mode, Short Reach	S
4OC3/ATM-IR-SC	3.6.0	4 port OC3/STM1 ATM line MM/IR card	S
4OC3/ATM-MM-SC	3.6.0	4 port OC3/STM1 ATM line MM/IR card	S
4OC3X/POS-IR-LC-B	3.6.0	GSR 4-port OC3/POS IR Eng3 release B	S
4OC3X/POS-LR-LC-B	3.6.0	GSR 4-port OC3/POS IR Eng3 release B	S
4OC3X/POS-MM-MJ-B	3.6.0	GSR 4-port OC3/POS IR Eng3 release B	S
4OC48E/POS-LR-SC	3.6.0	5 Port (Quad) Enhanced OC-48 Long Reach FC Connector Line Card	S
4OC48E/POS-SR-SC	3.6.0	5 Port (Quad) Enhanced OC-48 Short Reach SC Connector Line Card	S
4XOC48POS/RPR	3.6.0	4-port OC48/STM16 POS/RPR Shared Port Adapter = SPA-4XOC48POS/RPR	S
6CT3-SMB	3.6.0	18 Port Copper DS3 Interface Line Card	S
8FE-FX-SC	3.6.0	8-Port Fast Ethernet Line Card	S

Table 5-64 **Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
8FE-TX-RJ45	3.6.0	8-Port Fast Ethernet Line Card	S
8OC3X/POS-IR-LC-B	3.6.0	GSR 8-Port OC3/POS MM/IR Eng3 Release B	S
8OC3X/POS-MM-MJ-B	3.6.0	GSR 8-Port OC3/POS MM/IR Eng3 Release B	S
8X1FE-V2	3.6.0	8-port Fast Ethernet Shared Port Adapter V2 = SPA-8X1FE-V2	S
BUS_BOARD	3.6.0	GSR16 BUS BOARD (16) =	S
CHOC12/DS1-IR-SC	3.6.0	Cisco 12000 Series 1-Port Channelized OC-12c/STM-4	S
COPPER-12DS3	3.6.0	12 Port Copper DS3 Interface Line Card	S
COPPER-6DS3	3.6.0	6 Port Copper DS3 Interface Line Card	S
CRS-16-ALARM	3.6.0	Cisco CRS-1 Series 16 Slots Alarm Board = CRS-16-ALARM	S
GSR10-AC-PDU	3.6.0	Cisco 12410 AC Power Distribution Unit (spare)	S
GSR10-ADVNCDCSC	3.6.0	12010 Advanced Clock Scheduler Card	S
GSR10-ADVNCDSFC	3.6.0	12010 Advanced Switch Fabric Card	S
GSR10-ALRM	3.6.0	12410, 12010 Alarm Card	S
GSR10-CSC	3.6.0	12410 Clock Scheduler Card	S
GSR10-SFC	3.6.0	Cisco 12410 Switch Fabric Card	S
GSR16/320-CSC	3.6.0	12416 Clock Scheduler Card	S
GSR16/320-SFC	3.6.0	12416 Switch Fabric Card	S
GSR16/80-CSC	3.6.0	Cisco 12016 80 Gbps GSR Scheduler/Fabric	S
GSR16/80-SFC	3.6.0	Cisco 12016 80 GbpsGSR Switch Fabric	S
GSR16-ALRM	3.6.0	Cisco 12016 GSR Alarm Card	S
GSR16-BLOWER	3.6.0	Cisco 12016, 12416 Blower	S
GSR-3GE	3.6.0	3 Port Gigabit Ethernet Line Card (trident)	S
GSR6-ADVNCDCSC	3.6.0	12006 Advanced Clock Scheduler Card	S
GSR6-ALRM	3.6.0	12406, 12006 Alarm Card	S
GSR6-BLOWER	3.6.0	12406, 12006 Blower	S
GSR6-CSC	3.6.0	Cisco 12406 Clock Scheduler Card	S
GSR6-SFC	3.6.0	Cisco 12406 Switch Fabric Card	S
GSR8-CSC/ALRM	3.6.0	Cisco 12008 GSR Scheduler/Fabric/Alarm	S
GSR-8FE-FX	3.6.0	8 port Fast Ethernet card with Fiber Interface	S
GSR8-SFC	3.6.0	Switch Fabric	S
GSR-ALARM10	3.6.0	GSR Alarm module	S
GSR-ALARM16	3.6.0	GSR-Alarm	S
GSR-BUS-BOARD16	3.6.0	GSR Bus Board for Power distribution	S

Table 5-64 Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
GSR-CLOCK-OC192	3.6.0	GSR Clock Scheduler	S
GSR-CSC	3.6.0	GSR Clock Scheduler Card	S
GSR-CSC12410	3.6.0	GSR 12410 Clock scheduler	S
GSR-CSC16	3.6.0	GSR Clock Scheduler	S
GSR-CSC16-OC192	3.6.0	GSR 12406 Clock Scheduler Card	S
GSR-E48-ATM-4OC12-MM-SR-SC	3.6.0	GSR Edge Engine 48, ATM, 4 port OC12/STM4Multi Mode Short Reach Line Card	S
GSR-E48-ATM-4OC12-SM-IR-SC	3.6.0	GSR Edge Engine 48, ATM, 4 ports OC12/STM4 Single Mode Intermediate Reach Line Card	S
GSR-E48-POS-16OC3-SM-IR-LC	3.6.0	16 Port OC3 SM Intermediate Reach POS	S
GSR-E48-POS-OC48-SM-LR-SC	3.6.0	GSR 12406 Switch Fabric Card	S
GSR-E48-POS-OC48-SM-SR-SC	3.6.0	GSR, Edge Engine 48 Port OC-48 SRP Single Mode Long Reach Line Card	S
GSR-E48-POS-QOC12-SM-IR-SC	3.6.0	4 Port OC12 SM Intermediate Reach POS	S
GSR-E-OC192-SM-SR-SC	3.6.0	Enhanced 1 Port OC 192 Short Reach 2 FC Connector Line Card.	S
GSR-E-QOC48-SM-LR-SC	3.6.0	4 Port Enhanced OC 48 Short Reach SC Connector Line Card	S
GSR-E-QOC48-SM-SR-SC	3.6.0	4 Port Enhanced OC 48 Short Reach SC Connector Line Card	S
GSR-GEFE	3.6.0	GSR General Fan	S
GSR-PA-3GE	3.6.0	GSR 3 port Port Adapter	S
GSR-RP	3.6.0	GSR RoMman Recovery	S
GSR-SFC	3.6.0	GSR Switch Fabric Card	S
GSR-SFC12410	3.6.0	GSR 12410 Switch Fabric Card	S
GSR-SFC16	3.6.0	Switch Fabric Card	S
GSR-SFC16-OC192	3.6.0	GSR 12406 Switch Fabric Card	S
OC12/SRP-IR-SC-B	3.6.0	2 Port OC-12 Single Mode SRP Intermediate Reach Line Card	S
OC12/SRP-MM-SC-B	3.6.0	2 Port OC-12 Multi Mode SRP Line Card	S
OC-48E/POS-SR-SC-B	3.6.0	2 Port Packet Over Sonet OC-48, Single Mode, Short Reach, SC Connector Card	S
OC48X/POS-LR-SC	3.6.0	One-Port OC-48c/STM-16c POS/SDH ISE Line Card, Long Reach	S
OC48X/POS-SR-SC	3.6.0	One-Port OC-48c/STM-16c POS/SDH ISE Line Card, Short Reach	S

Table 5-64 **Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
POS-EN-OC48-LR-SC	3.6.0	Enhanced OC-48 Long Reach SC Connector Line Card	S
POS-EN-OC48-SR-SC	3.6.0	Enhanced OC-48 Short Reach SC Connector Line Card	S
POS-EN-QOC12-IR	3.6.0	Enhanced 4 port OC-12 Intermediate Reach Line Card	S
POS-EN-QOC48-SM-LR-FC	3.6.0	4 Port (Quad) Enhanced OC-48 Long Reach FC Connector Line Card	S
POS-EN-QOC48-SM-LR-SC	3.6.0	4 Port (Quad) Enhanced OC-48 Long Reach SC Connector Line Card	S
POS-EN-QOC48-SM-SR-SC	3.6.0	4 Port (Quad) Enhanced OC-48 Short Reach SC Connector Line Card	S
POS-OC48-SM-SR-SC	3.6.0	1 Port Packet Over Sonet OC-48, Single Mode, Short Reach, SC Connector Card	S
POS-QOC12-MM-SR	3.6.0	4 port (Quad) OC-12 POS Card, Single Mode, Short Reach	S
PRP-1	3.6.0	Performance Route Processor-1	S
PRP-2	3.6.0	Cisco XR 12000 and 12000 Series Performance Router Processor-2	S
PRP-3	3.6.0	Performance Route Processor-2	S
PRP-4	3.6.0	Cisco XR 12000 and 12000 Series Performance Router Processor-3	S
SPA-10X1GE	3.6.0	10-port 1 GbE Shared Port Adapter	S
SPA-1XOC192POS-VSR	3.6.0	1-port OC192/STM64 POS VSR Optics Shared Port Adapter	S
SPA-1XTENGE-XFP-V2	3.6.0	1-port 10GbE Shared Port Adapter XFP based V2	S
SPA-4XCT3/DS0	3.6.0	4-port Channelized T3 to DS0 Shared Port Adapter	S
SPA-8X1FE-TX-V2	3.6.0	8-port 10/100 Ethernet SPA TX (Fugu ASIC)	S
SPA-8X1GE	3.6.0	8-port Gigabit Ethernet Shared Port Adapter_V2	S
SPA-8XFE-TX	3.6.0	8-port 10/100 Ethernet SPA with RJ-45	S
SPA-OC192POS-VSR	3.6.0	1-port OC192/STM64 POS/RPR VSR Optics	S
SPA-OC192POS-XFP	3.6.0	1-port OC192/STM64 POS/RPR XFP Optics Shared Port Adapter with XFP-10GLR-OC192SR	S
SPA-OC192RPR-XFP	3.6.0	1-port OC192/STM64 POS/RPR XFP Optics Shared Port Adapter = SPA-OC192RPR-XFP	S
SRP-OC12-MM	3.6.0	1 Port OC-12 Multi Mode SRP Line Card	S
SRP-OC12-SM-IR	3.6.0	1 Port OC-12 Single Mode SRP Intermediate Reach Line Card	S

Table 5-64 **Supported Modules for Cisco XR 12000 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
SSRP-OC48-SM-LR	3.6.0	1 Port OC-48 SRP Single Mode Long Reach Line Card	S
SSRP-OC48-SM-SR	3.6.0	1 Port OC-48 SRP Single Mode Short Reach Line Card	S
SPA-1XOC12-ATM-V2	3.6.4	1-port OC12c SFP Optics ATM Shared Port Adapter	S
SPA-3XOC3-ATM-V2	3.6.4	3-port OC3c SFP Optics ATM Shared Port Adapter	S
12816-SFC	3.6.4	GSR 12816 Switch Fabric Card	S
12810-SFC	3.6.5	GSR 12810 Switch Fabric Card	S

Cisco XR 12000 Series—Supported Technologies

The following technologies are supported by the Cisco XR 12000 Series in Cisco ANA 3.6.5:

- [IP](#), page 5-89
- [Routing Protocols](#), page 5-91
- [Ethernet \(IEEE 802.3\)](#), page 5-92
- [Physical Technologies](#), page 5-101
- [MPLS](#), page 5-101
- [MPLS-TE](#), page 5-103
- [VPN](#), page 5-105
- [PWE3](#), page 5-106
- [ACL](#), page 5-107
- [Physical Equipment](#), page 5-109
- [Base Logical Components](#), page 5-110
- [Common](#), page 5-111
- [Additional Technologies](#), page 5-112
- [Local Switching](#), page 5-113

Cisco XR 12000 Series—Supported Service Events

Table 5-65 Supported Service Events for Cisco XR 12000 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
BGP Neighbor Down	3.6.0	N
BGP Process Down/Up	3.6.3	N ¹
Card Up/Down	3.6.0	Y
Adaptive Polling	3.6.0	N
BGP link down	3.6.1	Y
LDP neighbor loss	3.6.3	Y
MPLS interface removed	3.6.1	Y
Layer 2 cross connect down	3.6.0	N ²

¹Indicates removal of the BGP configuration, not that the BGP process has crashed

²Expedited indirectly through port, link and card events

Cisco XR 12000 Series—Additional Information

As a prerequisite for the Cisco XR 12000 Series VNE, install the Cisco IOS XR Manageability Package on top of the IOS-XR version. In addition, the device configuration must contain the command, **xml agent tty**.

When creating the SNMP community, the SystemOwner should be specified.

Cisco CRS-1 Carrier Routing System

This section includes the following information about Cisco CRS-1 routers:

- [Cisco CRS-1—Supported Software Versions, page 5-72](#)
- [Cisco CRS-1—Supported Topologies, page 5-73](#)
- [Cisco CRS-1—Supported Modules, page 5-73](#)
- [Cisco CRS-1—Supported Technologies, page 5-77](#)
- [Cisco CRS-1—Supported Service Events, page 5-78](#)
- [Cisco CRS-1—Additional Information, page 5-79](#)

**Note**

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco CRS-1 Carrier Routing System](#).

Cisco CRS-1—Supported Software Versions

Table 5-66 *Supported Software Versions for Cisco CRS-1—Cisco ANA 3.6.5*

Version Name	Version	Certification Level
IOX 3.4.0	3.6.0	V
IOX 3.4.1	3.6.0	V
IOX 3.5.1	3.6.1	V
IOX 3.4.3	3.6.3	V
IOX 3.6.0	3.6.3	V
IOX 3.6.1	3.6.3	V
IOX 3.6.2	3.6.4	V
IOX 3.7.0	3.6.4	V
IOX 3.7.1	3.6.4	V

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco CRS-1—Supported Topologies

Table 5-67 Supported Topologies for Cisco CRS-1—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
PWE3 (Martini)	Tunnel	3.6.2
VPN (VRF)	VPN	3.6.1
Physical Layer	Physical Layer	3.6.0

Cisco CRS-1—Supported Modules

Table 5-68 Supported Modules for Cisco CRS-1—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
16OC48-POS/DPT	3.6.0	Cisco CRS-1 Series 16xOC48/STM16 POS/DPT Interface Module	V
1OC768-ITU/C	3.6.0	1 port OC768-POS-DWDM Plim	V
1OC768-POS-SR	3.6.1	1-port OC-768c/STM-256c PLIM, with short-reach optics (POS)	S
4-10GE-ITU/C	3.6.0	Module Crs1 4x10 Ge CDwdm Plim	V
4OC192-ITU/C	3.6.1	Module Crs 1 4 ports OC192 C Dwdm Plim	S
4OC192-POS/DPT	3.6.0	Cisco CRS-1 Series 4xOC192/STM64 POS/DPT Interface Module	S
4OC192-POS/DPT-IR	3.6.0	Cisco CRS-1 Series 4xOC192/STM64 POS/DPT Interface Module/IR	V
4OC192-POS/DPT-LR	3.6.0	4OC192-POS DPT	V
4OC192-POS/DPT-SR	3.6.0	Cisco CRS-1 Series 4xOC192/STM64 POS/DPT Interface Module/SR	V
4OC192-POS/DPT-VS	3.6.0	4OC192-POS DPT	V
8-10GBe	3.6.0	8x10 Gigabite Ethernet port	V
8XOC3-OC12-PO	3.6.0	SPA POS 8XOC12 Card	S
CRS-16-AC-RECT	3.6.1	Cisco CRS-1 Series AC Pwr Rectifier for 16 slot LCC and FCC	S
CRS-16-ALARM	3.6.0	Cisco CRS-1 Series 16 Slots Alarm	V
CRS-16-DC-PEM	3.6.1	DC power entry module for line card chassis	S
CRS-16-FC/D	3.6.1	Cisco CRS-1 Series 16 Slots Fabric Card/Dual	S

Table 5-68 Supported Modules for Cisco CRS-1—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
CRS-16-FC/M	3.6.0	Cisco CRS-1 Series 16 Slots Fabric Card / Multi	V
CRS-16-FC/S	3.6.0	Cisco CRS-1 Series 16 Slots Fabric Card Single	V
CRS-16-LCC	3.6.0	16 slots Line Card Chassis	V
CRS-16-LCC-FAN-CT	3.6.0	Cisco CRS-1 Series LC Chassis Fan Controler	V
CRS-16-LCC-FAN-TR	3.6.1	Cisco CRS-1 16 Slots FCC fan tray with fans	S
CRS-16-LCC-PS-ACD	3.6.1	AC Delta power shelf for line card chassis	S
CRS-16-LCC-PS-ACW	3.6.1	AC Wye power shelf for line card chassis	S
CRS-16-LCC-PS-DC	3.6.1	DC power shelf for line card chassis	S
CRS-16-RP	3.6.0	Module Crs1 16 slots RP	V
CRS-16-RP-B	3.6.0	Module Crs1 16 slots RP - B	V
CRS1-SIP-800	3.6.0	Module Crs1 SPA Interface Card	V
CRS-4-AC-SHELF	3.6.1	AC Power shelf	S
CRS-4-AC-SUPPLY	3.6.1	AC power supplies	S
CRS-4-CH	3.6.0	4 slots Chassis	V
CRS-4-DC-INPUT	3.6.1	DC power input shelf	S
CRS-4-DC-SUPPLY	3.6.1	DC power supplies	S
CRS-4-FAN-TR	3.6.1	Cisco CRS-1 4 Slots FCC fan tray with fans	S
CRS-4-FC	3.6.1	CRS-1 4-Slot Fabric Card	S
CRS-4-LCC	3.6.0	Cisco CRS-1 Series 4 Slots Line Card Chassis	S
CRS-8-AC-RECT	3.6.1	Cisco CRS-1 AC rectifier module	S
CRS-8-DC-PEM	3.6.1	DC power entry module for line card chassis	S
CRS-8-FC/M	3.6.1	Cisco CRS-1 Series 8 Slots Fabric Card/Multi	S
CRS-8-FC/S	3.6.0	Cisco CRS-1 Series 8 Slots Fabric Card Single	V
CRS-8-LCC	3.6.0	8 slots Line Card Chassis	V
CRS-8-LCC-ACD	3.6.1	Power Supply Crs 1 8 Slots AC Delta	S
CRS-8-LCC-ACW	3.6.1	Power Supply Crs 1 8 Slots ACW	S
CRS-8-LCC-DC	3.6.1	Cisco CRS-1 Series 8 slots with redundant DC power	S
CRS-8-LCC-FAN-TR	3.6.1	Cisco CRS-1 8 Slots FCC fan tray with fans	S
CRS-8-LCC-PDU-ACD	3.6.1	Cisco CRS-1 Series AC Delta PDU for CRS-8 LCC	S
CRS-8-LCC-PDU-ACW	3.6.1	AC Wye PDU	S
CRS-8-LCC-PDU-DC	3.6.1	DC PDU	S
CRS-8-RP	3.6.0	Module Crs1 8 slots RP	V
CRS-DRP	3.6.0	Cisco CRS-1 Series Distributed Route Processor	S
CRS-DRP-B-CPU	3.6.0	Cisco CRS-1 Series Distributed Route Processor	V
CRS-DRP-B-PLIM	3.6.0	Cisco CRS-1 Series Distributed Route Processor Front Accsry	V

Table 5-68 **Supported Modules for Cisco CRS-1—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
CRS-DRP-CPU	3.6.0	Cisco CRS-1 Series Distributed Route Processor	V
CRS-DRP-PLIM	3.6.0	Cisco CRS-1 Series Distributed Route Processor Front Accsry	V
CRS-FCC	3.6.0	Cisco CRS-1 Series Fabric Card Chassis Only	V
CRS-FCC-FAN-TR	3.6.1	Cisco CRS-1 FCC fan tray with fans	S
CRS-FCC-OIM-2S	3.6.1	Optical dual interface module (OIM)	S
CRS-FCC-LED	3.6.1	Fiber module LED card	S
CRS-FCC-OIM-1S	3.6.1	Optical single interface module (OIM)	S
CRS-FCC-PS-ACD	3.6.1	CRS-1 Fabric Chassis AC Delta Power Supply	S
CRS-FCC-PS-ACW	3.6.1	CRS-1 Fabric Chassis AC Wye Option	S
CRS-FCC-PS-DC	3.6.1	DC power shelf	S
CRS-FCC-SC/GEW	3.6.1	Module Crs 1 Fcc SC Ge	S
CRS-FCC-SC-22GE	3.6.1	CRS-1 fan controllers	S
CRS-FCC-SC-GE	3.6.1	2-port Shelf controller Gigabit Ethernet	S
CRS-FCC-SFC	3.6.1	Switch fabric card (fabric card chassis) S2 switch fabric cards	S
CRS-MSC	3.6.0	Cisco CRS-1 Series Modular Service Card	V
CRS-MSC-B	3.6.0	Cisco CRS-1 Series Modular Service Card	V
CRS-MSC-20G-B	3.6.0	Cisco CRS-1 Series Modular Service Card B - 20G licenses	V ¹
CRS-MSC-40G-B	3.6.0	Cisco CRS-1 Series Modular Service Card B - 40G licenses	V ²
CRS-XENPACK-10-GB-LR	3.6.0	Cisco CRS-1 Series 8x10GbE Interface Module	S
SPA-10X1GE	3.6.1	10-Port Gigabit Ethernet SPA	S
SPA-10X1GE-V2	3.6.1	10-Port Gigabit Ethernet SPA	S
SPA-1X10GE-L-V2	3.6.1	Cisco 1-Port 10GE LAN-PHY Shared Port Adapter	S
SPA-1XOC192POS-VSR	3.6.0	1-port OC192/STM64 POS VSR Optics Shared Port Adapter	S
SPA-1XOC192POS-XFP	3.6.0	1-port OC192/STM64 POS XFP Optics Shared Port Adapter	S
SPA-1XOC48POS/RPR	3.6.1	Port OC-48c/STM-16c POS/RPR Shared Port Adapter	S
SPA-1XTENGE-XFP	3.6.1	1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	S
SPA-1XTENGE-XFP-V2	3.6.0	1-port 10GbE Shared Port Adapter XFP based V2 = SPA-1XTENGE-XFP-V2	S
SPA-2X1GE	3.6.1	2 ports Gigabit Ethernet Shared Port Adapters	S
SPA-2X1GE-V2	3.6.1	2 ports Gigabit Ethernet Shared Port Adapters	S
SPA-2XCT3/DS0	3.6.1	2-Port Channelized T3 SPA	S
SPA-2XOC12-POS	3.6.1	2-Port OC-3c/STM-1 and OC-12c/STM-4 POS SPA	S
SPA-2XOC48POS/RPR	3.6.1	3 Ports OC-48c/STM-16c POS/RPR Shared Port Adapter	S
SPA-2XT3/E3	3.6.1	2-Port T3/E3 Serial SPA	S
SPA-4XOC12-POS	3.6.1	4-Port OC-3c/STM-1 and OC-12c/STM-4 POS SPA	S
SPA-4XOC3-POS	3.6.0	4-Port OC-3c/STM-1 POS SPA	V

Table 5-68 Supported Modules for Cisco CRS-1—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
SPA-4XOC3-POS-V2	3.6.0	4-Port OC-3c/STM-1 POS SPA	V
SPA-4XOC48POS/RPR	3.6.1	Port OC-48c/STM-16c POS/RPR Shared Port Adapter	S
SPA-4XT3/E3	3.6.1	4-Port T3/E3 Serial SPA	S
SPA-5X1GE	3.6.1	5-Port Gigabit Ethernet SPA	S
SPA-5X1GE-V2	3.6.1	5-Port Gigabit Ethernet SPA	S
SPA-8X1GE	3.6.0	8-port Gigabit Ethernet Shared Port Adapter	V
SPA-8X1GE-V2	3.6.1	8-port Gigabit Ethernet Shared Port Adapter	V
SPA-8XCHT1/E1	3.6.1	8-Port Channelized T1/E1 SPA	S
SPA-8XOC12-POS	3.6.1	8-Port OC-12c/STM-4 Multirate POS SPA	S
SPA-8XOC3-POS	3.6.0	8-Port OC-3c/STM-1 POS SPA	V
SPA-OC192POS-LR	3.6.1	1-PORT OC-192C/STM-64C POS/RPR SHARED PORT ADAPTER	S
SPA-OC192POS-VSR	3.6.1	1-PORT OC-192C/STM-64C POS/RPR SHARED PORT ADAPTER	S
SPA-OC192POS-XFP	3.6.0	1-port OC192/STM64 POS/RPR XFP Optics	V
CEVCPUCRS1ASMPROUTE	3.6.1	Cpu Crs 1 Asmp Route	S
CEVCPUCRS1DSMPROUTE	3.6.1	Cpu Crs 1 Dsmp Route	S
CEVCPUCRS1SPFC	3.6.1	Cpu Crs 1 SPFC	S
1OC768-DPSK/C-O	3.6.2	1-Port OC-768/STM-256c (C-band) DPSK DWDM PLIM	S
1OC768-DPSK/C-E	3.6.2	1-Port OC-768/STM-256c (C-band) DPSK DWDM PLIM	S
SPA-1XCHOC12/DS0	3.6.2	1 port channelized OC12 to DS0 Shared Port Adapter	S
OC192/POS-IR-SC	3.6.2	GSR 1 port Packet Over SONET OC-48c/STM-16 Single Mode Intermediate Reach with SC connector	S
SPA-1XOC12-ATM-V2	3.6.4	1-port OC12c SFP Optics ATM Shared Port Adapter	S
SPA-3XOC3-ATM-V2	3.6.4	3-port OC3c SFP Optics ATM Shared Port Adapter	S
CRS-FCC-FAN-TR	3.6.4	CRS-1 24-slot Fabric Chassis Fan Tray	S
CRS-16-AC-RECT	3.6.4	Cisco CRS-1 Series AC Pwr Rectifier for 16 slot LCC and FCC	S
CRS-16-DC-PEM=	3.6.4	Cisco CRS-1 Series DC PEM for 16 slot LCC and FCC	S
CRS-16-LCC-PS-ACD=	3.6.4	Cisco CRS-1 Series AC Delta Power Shelf for 16 Slots LCC	S
CRS-16-LCC-PS-ACW=	3.6.4	Cisco CRS-1 Series AC Wye Power Shelf for 16 Slots LCC	S
CRS-16-LCC-PS-DC=	3.6.4	Cisco CRS-1 Series DC Power Shelf for 16 Slots LCC	S
CRS-4-AC-SHELF	3.6.4	Cisco CRS-1 Series AC Power Shelf for CRS-4	S
CRS-4-DC-INPUT	3.6.4	Cisco CRS-1 Series 4 Slot DC Input Shelf	S
CRS-4-AC-SUPPLY	3.6.4	Cisco CRS-1 Series AC Supply for CRS-4	S
CRS-4-DC-PIM	3.6.4	Cisco CRS-1 Series 4 Slot DC Power Input Module	S
CRS-8-LCC-PDU-ACD	3.6.4	Cisco CRS-1 Series AC Delta PDU for CRS-8 LCC	S

Table 5-68 **Supported Modules for Cisco CRS-1—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
CRS-8-AC-RECT	3.6.4	Cisco CRS-1 Series AC Pwr Rectifier for 8 slot LCC	S
CRS-8-LCC-PDU-ACW	3.6.4	Cisco CRS-1 Series AC Wye PDU for CRS-8 LCC	S
CRS-8-LCC-PDU-DC	3.6.4	Cisco CRS-1 Series DC PDU for CRS-8 LCC	S
CRS-8-DC-PEM	3.6.4	Cisco CRS-1 Series DC Power Entry Module for 8 slot LCC	S
CRS-8-LCC-PDU-ACD	3.6.4	Cisco CRS-1 Series AC Delta PDU for CRS-8 LCC	S
CRS-8-LCC-PDU-ACW	3.6.4	Cisco CRS-1 Series AC Wye PDU for CRS-8 LCC	S
CRS-8-LCC-PDU-DC	3.6.4	Cisco CRS-1 Series DC PDU for CRS-8 LCC	S
CRS-FCC-PS-ACD	3.6.4	CRS-1 Fabric Chassis AC Delta Power Supply	S
CRS-FCC-PS-ACW	3.6.4	CRS-1 Fabric Chassis AC Wye Option	S
CRS-FCC-PS-DC	3.6.4	CRS-1 Fabric Chassis DC Power Option	S

Cisco CRS-1—Supported Technologies

The following technologies are supported by the Cisco CRS-1 in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [BFD, page 5-112](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)
- [Local Switching, page 5-113](#)

Cisco CRS-1—Supported Service Events

Table 5-69 **Supported Service Events for Cisco CRS-1—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
BGP Neighbor Down	3.6.0	N
BGP Process Down/Up	3.6.3	N ¹
Card Up/Down	3.6.0	Y
BGP link down	3.6.1	Y
LDP neighbor loss	3.6.3	Y
MPLS interface removed	3.6.0	Y
Layer 2 cross connect down	3.6.0	N ²

¹Indicates removal of the BGP configuration, not that the BGP process has crashed

²SP4, expedited not directly, but through port, link and card events

Cisco CRS-1—Additional Information

This section contains additional information about the Cisco Carrier Routing System (CRS-1) and includes the following topics:

- [Cisco Carrier Routing System \(CRS-1\) Prerequisite, page 5-79](#)
- [SDR Support for CRS-1, page 5-79](#)
- [Multichassis Support for CRS-1, page 5-80](#)

Cisco Carrier Routing System (CRS-1) Prerequisite

As a prerequisite for the CRS-1 VNE, install the Cisco IOS XR Manageability Package on top of the IOS-XR version. In addition, the device configuration must contain the command, **xml agent tty**.

When creating the SNMP community, the SystemOwner should be specified.

SDR Support for CRS-1

Secure Domain Router (SDR) is supported as a separate, independent VNE, with its own IP and login sequence. When adding an SDR to Cisco ANA, it is treated like any other network element, i.e., it is added as a new VNE using Cisco ANA Manage. The SDR IP address is attached to the active DRP of the SDR (or to its virtual IP, if it exists).

As a prerequisite for the CRS-1 VNE:

1. Install the Cisco IOS XR Manageability Package on top of the IOS-XR version (XR 3.4 and 3.4.1).
2. Add the command `xml agent tty` to the device configuration
3. When creating the SNMP community string, specify the SystemOwner (for SDRs, specify the SDRowner; LROwner on XR 3.5.x and below).
4. Define the IP address, snmp read community and telnet login sequence.

Cisco ANA uses the management network (if available) to manage the devices. The CRS platform assigns specific management interfaces on the RP modules (DRP for an SDR). In order to retrieve the IP address of these management interfaces, login to the device and run the command `show ipv4 interface brief | include Mgmt` as shown in the following example:

```
RP/0/RP1/CPU0:P1_CRS8#show ipv4 interface brief | include Mgmt
MgmtEth0/RP1/CPU0/0      1.60.34.104      Up                Up
MgmtEth0/4/CPU0/0        unassigned       Shutdown          Down
MgmtEth0/4/CPU1/0        unassigned       Shutdown          Down
```

In multiple (D)RP environments, there is an option to configure a virtual management interface and assign an IP address to it, so that the device is reachable via the same IP address no matter which (D)RP is active. In this environment, each (D)RP has its own IP address but it is not used in order to access the device. In order to get the virtual IP address, login to the device and run the command `show running-config ipv4 virtual address` as shown in the example:

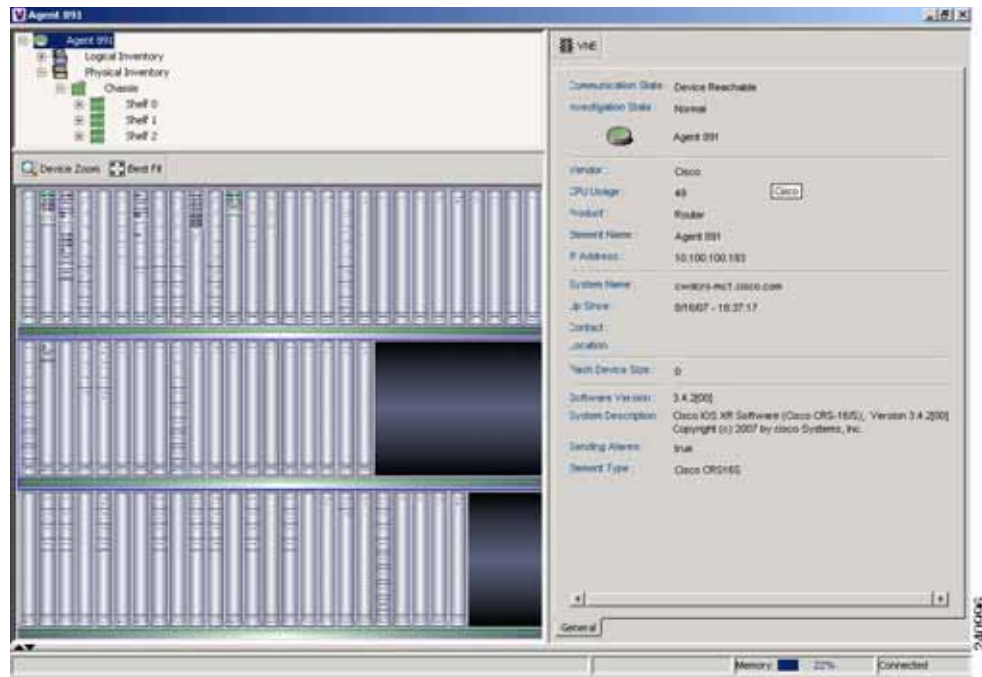
```
DRP/0/3/CPU0:CRS-PE1#show running-config ipv4 virtual address
ipv4 virtual address 10.52.123.11 255.255.255.0
```

If the SDR is managed in-band the management IP address should be supplied by the customer. The owner SDR (namely, the main router) presents all the modules that are installed on the chassis, excluding the ports that belong to other SDRs. The VNE of the SDR only displays the modules that are associated with the SDR in the Inventory window of Cisco ANA NetworkVision. It does not display the fabric, fan and power supply (namely, the shared modules).

Multichassis Support for CRS-1

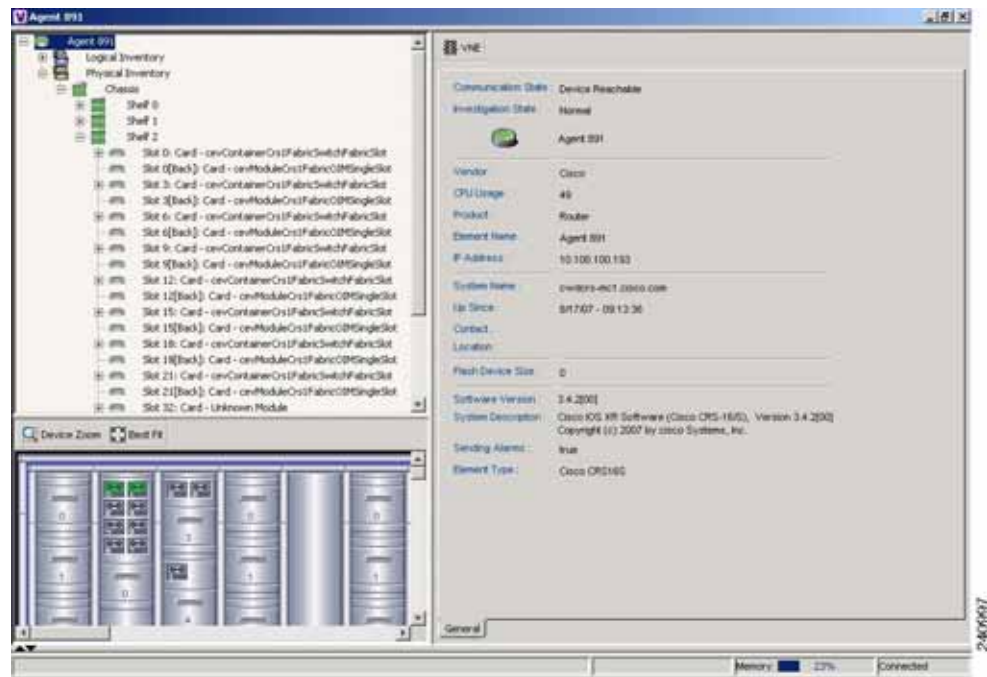
Multichassis support is available in Cisco ANA for 16-slot CRS-1 devices. As shown in [Figure 1](#), the chassis functions purely as a container for the shelves, which are treated as individual chassis and are numbered incrementally starting with 0.

Figure 1 CRS-1 Multichassis Support



As shown in Figure 2, expanding a shelf displays the modules that are installed on that shelf.

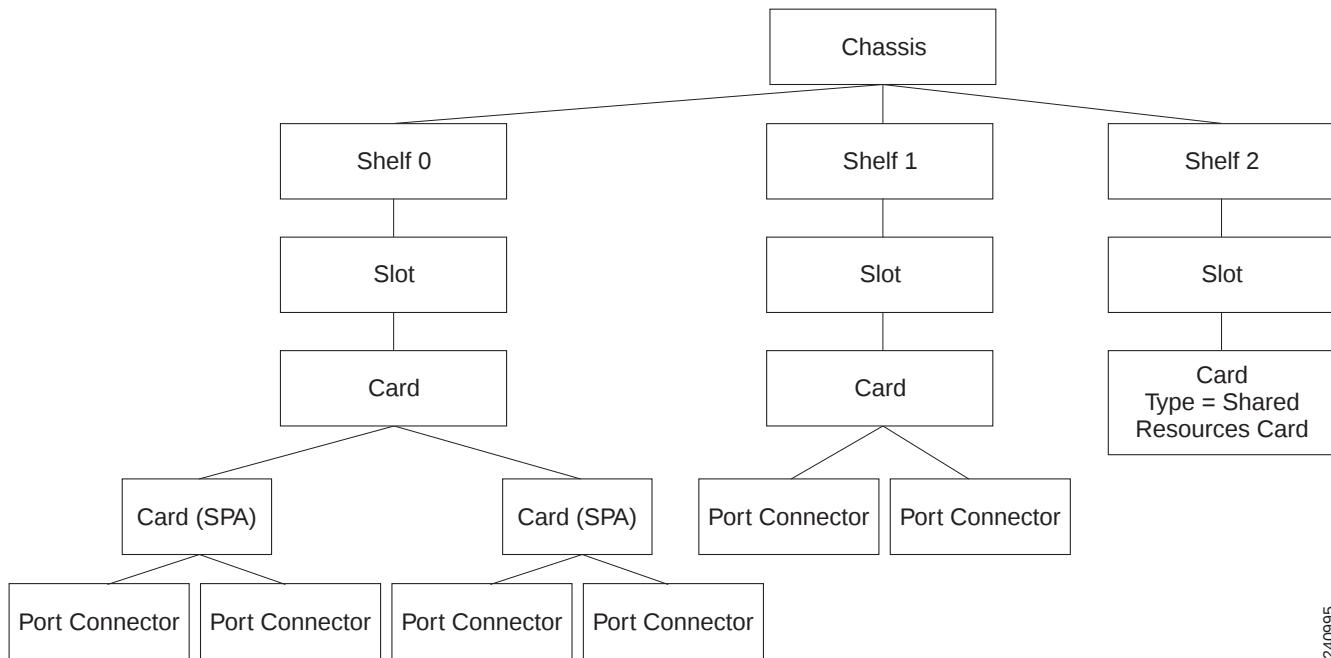
Figure 2 CRS-1 Multichassis Support—Expanded View



Because each shelf is treated as a chassis, chassis parameters such as description, serial number, status, and type are displayed for each shelf, not for the actual chassis in which the shelves are installed.

Figure 3 describes the physical model for the CRS-1 multichassis.

Figure 3 CRS-1 Multichassis Physical Model



When adding a multichassis device to Cisco ANA, it is treated like any other network element, namely, it is added as a new VNE using Cisco ANA Manage.

Cisco ASR 1000 Series Routers

This section includes the following information about Cisco ASR 1000 Series routers:

- [Cisco ASR 1000 Series—Supported Software Versions, page 5-83](#)
- [Cisco ASR 1000 Series—Supported Topologies, page 5-83](#)
- [Cisco ASR 1000 Series—Supported Modules, page 5-83](#)
- [Cisco ASR 1000 Series—Supported Technologies, page 5-84](#)
- [Cisco ASR 1000 Series—Supported Service Events, page 5-85](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco ASR 1000 Series Routers](#).

Cisco ASR 1000 Series—Supported Software Versions

Table 5-70 Supported Software Versions for Cisco ASR 1000 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS-XE R 2.2.1	3.6.5	S
IOS-XE R 2.2.2	3.6.5	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco ASR 1000 Series—Supported Topologies

Table 5-71 Supported Topologies for Cisco ASR 1000 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
BGP	BGP	3.6.5
Ethernet	Ethernet	3.6.5
Physical Layer	Physical Layer	3.6.5

Cisco ASR 1000 Series—Supported Modules

Table 5-72 Supported Modules for Cisco ASR 1000 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
ASR1000-ESP5	3.6.5	ASR1K Embedded Services Processor, 5Gbps, Crypto, ASR1002 only	V
SPA-2X1GE-V2	3.6.5	Cisco 2-Port Gigabit Ethernet Shared Port Adapter, Version 2	V
SPA-8X1FE-TX-V2	3.6.5	Cisco 8-Port 10BASE-T/100BASE Fast Ethernet Shared Port Adapter, V-2	V
ASR1000-SIP10	3.6.5	Cisco ASR1000 SPA Interface Processor 10	V
SPA-1X10GE-L-V2	3.6.5	Cisco 1-Port 10GE LAN-PHY Shared Port Adapter	V
ASR1000-RP1	3.6.5	Cisco ASR1000 Route Processor 1, 2GB DRAM	V
ASR1006-PWR-AC	3.6.5	Cisco ASR1006 AC Power Supply	V
XFP-10GLR-OC192SR	3.6.5	Multirate XFP module for 10GBASE-LR and OC192 SR-1	V

Cisco ASR 1000 Series—Supported Technologies

The following technologies are supported by the Cisco ASR 1000 Series in Cisco ANA 3.6.5:

- [IP](#), page 5-89
- [Routing Protocols](#), page 5-91
- [Ethernet \(IEEE 802.3\)](#), page 5-92
- [Physical Technologies](#), page 5-101
- [VPN](#), page 5-105
- [SBC](#), page 5-113
- [Physical Equipment](#), page 5-109
- [Base Logical Components](#), page 5-110
- [Common](#), page 5-111
- [Additional Technologies](#), page 5-112

Cisco ASR 1000 Series—Supported Service Events

Table 5-73 Supported Service Events for Cisco ASR 1000 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.5	Y
Interface Status Down/Up	3.6.5	Y
Card In/Out	3.6.5	Y
Link Down/Up	3.6.5	Y
Device Unreachable	3.6.5	N
CPU Over Utilized	3.6.5	N
Memory Over Utilized	3.6.5	N
Device Unsupported	3.6.5	N
Discard Packets	3.6.5	N
Dropped Packets	3.6.5	N
Module Unsupported	3.6.5	N
Port Flapping	3.6.5	N
Port Down	3.6.5	Y
Rx Over Utilized	3.6.5	N
Tx Over Utilized	3.6.5	N
Cloud Problem	3.6.5	N
BGP Neighbor Down	3.6.5	Y
Card Up/Down	3.6.5	Y
Adaptive Polling	3.6.5	N
BGP link down	3.6.5	Y
BGP process down	3.6.5	N

Cisco ASR 9000 Series Aggregation Services Routers

This section includes the following information about Cisco ASR 9000 routers:

- [Cisco ASR 9000—Supported Software Versions, page 5-86](#)
- [Cisco ASR 9000—Supported Topologies, page 5-86](#)
- [Cisco ASR 9000—Supported Modules, page 5-86](#)
- [Cisco ASR 9000—Supported Technologies, page 5-87](#)
- [Cisco ASR 9000—Supported Service Events, page 5-87](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco ASR 9000 Series Aggregation Services Routers](#).

Cisco ASR 9000—Supported Software Versions

Table 5-74 Supported Software Versions for Cisco ASR 9000—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOX 3.7.2	3.6.5	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco ASR 9000—Supported Topologies

Table 5-75 Supported Topologies for Cisco ASR 9000—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
BGP	BGP	3.6.5
Ethernet	Ethernet	3.6.5
Physical Layer	Physical Layer	3.6.5

Cisco ASR 9000—Supported Modules

Table 5-76 Supported Modules for Cisco ASR 9000—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
A9K-RSP-4G-HDD	3.6.5	Route Switch Processor 4G Memory Hard Disc Drive	V
A9K-4T-B	3.6.5	4-Port, 10GE Line Card, Requires XFPs	V ¹
A9K-40GE-B	3.6.5	40-Port, GE Line Card, Requires SFPs	V ²
ASR-9010-FAN	3.6.5	ASR-9010 Fan Tray (Req 2)	V
A9K-3KW-AC	3.6.5	ASR-9K 3kW AC Power Module	V ³
A9K-40GE-E	3.6.5	40-Port, GE Line Card, Extended Memory, Requires SFPs	V
SFP-GE-S	3.6.5	1000BASE-SX SFP (DOM), MMF, 550/220m	V

Cisco ASR 9000—Supported Technologies

The following technologies are supported by the Cisco ASR 9000 in Cisco ANA 3.6.5:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [VPN, page 5-105](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)

Cisco ASR 9000—Supported Service Events

Table 5-77 **Supported Service Events for Cisco ASR 9000—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.5	Y
Interface Status Down/Up	3.6.5	Y
Card In/Out	3.6.5	Y
Link Down/Up	3.6.5	Y
Device Unreachable	3.6.5	N
CPU Over Utilized	3.6.5	N
Memory Over Utilized	3.6.5	N
Device Unsupported	3.6.5	N
Discard Packets	3.6.5	N
Dropped Packets	3.6.5	N
Module Unsupported	3.6.5	N
Port Flapping	3.6.5	N
Port Down	3.6.5	Y
Rx Over Utilized	3.6.5	N
Tx Over Utilized	3.6.5	N
Cloud Problem	3.6.5	N
BGP Neighbor Down	3.6.5	N
BGP Process Down/Up	3.6.5	N

Table 5-77 **Supported Service Events for Cisco ASR 9000—Cisco ANA 3.6.5 (Continued)**

Event Name	ANA Version	Expedited
Card Up/Down	3.6.5	Y
BGP link down	3.6.5	Y
BGP process down	3.6.5	Y

Supported Technologies on Cisco Routers

The following sections list the objects and attributes that are supported on Cisco routers in Cisco ANA 3.6.5 per technology:

- [IP, page 5-89](#)
- [Routing Protocols, page 5-91](#)
- [Ethernet \(IEEE 802.3\), page 5-92](#)
- [ATM, page 5-95](#)
- [Frame Relay, page 5-97](#)
- [Point to Point, page 5-99](#)
- [DSL, page 5-99](#)
- [Physical Technologies, page 5-101](#)
- [MPLS, page 5-101](#)
- [MPLS-TE, page 5-103](#)
- [VPN, page 5-105](#)
- [PWE3, page 5-106](#)
- [ACL, page 5-107](#)
- [Physical Equipment, page 5-109](#)
- [Base Logical Components, page 5-110](#)
- [Common, page 5-111](#)
- [Additional Technologies, page 5-112](#)
- [BFD, page 5-112](#)
- [Local Switching, page 5-113](#)
- [SBC, page 5-113](#)

IP

Table 5-78 IP Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IIPInterface																				
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Subnetwork Mask	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IP Interface Addresses Array	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Interface Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Interface Description	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IP Interface State	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OSPF Interface Cost																				
Broadcast Address																				
MTU		Y							Y					Y				Y		Y
Lookup Method																				
Address Resolution Type																				
ARP Timeout																				
Secured ARP																				
ICMP Mask Reply																				
IGMP Proxy																				
HSRP Groups		Y			Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y
IP Multiplexing Table																				
IANA Type	Y		Y	Y		Y	Y	Y												
Containing CTPs																				
Contained CTPs																				
IMO Name—IIPMuxEntry																				
Termination Point	Y	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y				
Destination IP Subnet	Y	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y				
IMO Name—IRoutingEntity																				
Routing Table	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ARP Entity	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Routing Table Changes																				
Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Logical Sons	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IRoutingEntry																				
Destination IP Subnet	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 5-78 IP Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Next Hop IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Routing Protocol Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Outgoing Interface Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IARPEntity																				
ARP Table	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IARPEntity																				
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MAC Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Port	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Entry Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
IMO Name—IIPPool																				
IP Address Pool Entries																				
Name																				
Index																				
IMO Name—IIPRangeBasedIPPoolEntry																				
Start IP Address																				
End IP Address																				
Unused Addresses																				
Used Addresses																				
Reserved Addresses																				
IMO Name—IIPSubnetBasedIPPoolEntry																				
IP Subnet																				
Unused Addresses																				
Used Addresses																				
Reserved Addresses																				
IMO Name—HSRPGroupEntry																				
Group Number			Y	Y	Y	Y	Y		Y	Y		Y	Y	Y	Y	Y				
Port Description			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y				
Priority			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Coupled Router			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
State			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Tracking Interfaces																				
Virtual IP Address			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Virtual MAC Address			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				

Table 5-78 IP Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—I Tunnel GRE																				
Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Tunnel Destination and Source	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
IP Interface State								Y								Y				
IANA Type								Y												
Containing CTPs																				
Contained CTPs																				

Routing Protocols

Table 5-79 Routing Protocols Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IBgp Neighbour Entry																				
Remote Identifier	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	
Neighbor Type				Y		Y	Y	Y			Y						Y	Y		Y
Distributing Interfaces											Y					Y				
Remote Address	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Remote Autonomous System	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Status	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hold Time	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Keep Alive Time	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IOspf Entry																				
Area Identifier	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Administrative Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Operational Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Ethernet (IEEE 802.3)

Table 5-80 Ethernet (IEEE 802.3) Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—I LAGPortEntry																				
Actor and Partner Admin Keys										Y			Y	Y		Y	Y	Y		Y
Actor and Partner Oper Keys					Y					Y		Y	Y	Y	Y	Y	Y	Y		Y
Selected and Attached Aggregation Identification										Y			Y	Y		Y	Y	Y		Y
Actor Port										Y			Y	Y		Y	Y	Y		Y
Actor Port Priority										Y			Y	Y		Y	Y	Y		Y
Partner Admin and Oper Port										Y			Y	Y		Y	Y	Y		Y
Partner Admin and Oper Port Priority										Y			Y	Y		Y	Y	Y		Y
Actor and Partner Admin States										Y			Y	Y		Y	Y	Y		Y
Actor and Partner Oper States								Y		Y			Y	Y		Y	Y	Y		Y
IMO Name—I Ethernet																				
MAC Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Duplex Mode																				
Output Flow Control																				
Input Flow Control																				
IANA Type	Y			Y	Y	Y	Y					Y	Y		Y		Y	Y		Y
Containing CTPs																				
Contained CTPs																				
IMO Name—I VlanInterface																				
Mode														Y						
Native VLAN Identification				Y	Y									Y						
Virtual LAN Table								Y												
IANA Type				Y	Y						Y									
Containing CTPs																				
Contained CTPs																				
IMO Name—I VlanEncapMux																				
IANA Type				Y	Y				Y					Y						
Containing CTPs																				
Contained CTPs																				
IMO Name—I IEEE802																				
VLAN Identification	Y				Y		Y	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y	

Table 5-80 Ethernet (IEEE 802.3) Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Binding Information																				
Binding Status																				
IANA Type							Y	Y	Y	Y		Y	Y	Y	Y	Y		Y	Y	Y
Containing CTPs																				
Contained CTPs																				
IMO Name—IStpService																				
Protocol Type																				Y
Current and Bridge Max Age	Y										Y		Y	Y				32		Y ⁶⁵
Current and Bridge Hello Time	Y										Y		Y	Y				33		Y ⁶⁶
Current and Bridge Forward Delay	Y										Y		Y	Y				34		Y ⁶⁷
Instance Information Table	Y										Y		Y	Y				35		Y ⁶⁸
Same as ISystemService																				
IMO Name—IMstService																				
Protocol Properties																				
Same as IStpService																				
IMO Name—IMstProperties																				
Force Version	Y										Y		Y	Y						Y
Configuration Format, Region Name and Revision Level	Y										Y		Y	Y						Y
External Root Cost																				Y
Maximum Instances																				Y
IMO Name—IStpInstanceInfo																				
Object Identification														Y						
Identification														Y						
Priority														Y						
Designated Parent and Root Bridges	Y										Y		Y	Y						Y
Root Cost	Y										Y		Y	Y						Y
Is Root	Y										Y		Y	Y						Y
Root Port Identification	Y										Y		Y	Y						Y
Port Information Table														Y						Y
IMO Name—IMstInstanceInfo																				
Instance Identification	Y										Y		Y	Y						Y
Same as IStpInstanceInfo													Y	Y						Y

Table 5-80 Ethernet (IEEE 802.3) Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IPvstpInstanceInfo																				
Protocol Type	Y										Y		Y	Y						
Current and Bridge Maximum Age	Y										Y		Y							
Current and Bridge Hello Time	Y										Y		Y	Y						
Current and Bridge Forward Delay	Y										Y		Y	Y						
Same as IStpInstanceInfo													Y	Y						
Current and Bridge Maximum Age	Y																			
IMO Name—IRstpInstanceInfo																				
Force Version	Y										Y		Y	Y						
Same as IStpInstanceInfo													Y	Y						
IMO Name—IStpPortInfo																				
Object Identification											Y		Y	Y						Y
Priority											Y		Y	Y						Y
State											Y		Y	Y						Y
Path Cost											Y		Y	Y						Y
Is Edge											Y		Y	Y						Y
Is Point to Point											Y		Y	Y						Y
Role											Y		Y	Y						Y
IMO Name—IMstPortInfo																				
Hello Time											Y									Y
Same as IStpPortInfo											Y		Y	Y						Y
IMO Name—IEthernetChannel																				
Group Number	Y					Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y ¹	Y ³⁶		Y
Bandwidth	Y								Y	Y	Y	Y	Y	Y		Y	Y ²	Y ³⁷		Y
Aggregation Protocol									Y	Y	Y	Y	Y	Y		Y	Y ³	Y ³⁸		Y
IANA Type	Y		Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y ⁴	Y ³⁹		Y
Containing CTPs																				
Contained CTPs																				

¹Added show lacp bundle from ANA 3.6.3.1²Added show lacp bundle from ANA 3.6.3.1³Added show lacp bundle from ANA 3.6.3.1⁴Added show lacp bundle from ANA 3.6.3.1³²The current value used and the value that all bridges should use when this bridge is acting as the root of the maximum age of learned spanning tree protocol port information (hundredths' of seconds)

³³The current value used and the value that all bridges should use when this bridge is acting as the root for hello time messages' keep alive interval of a spanning tree protocol root (in hundredths of seconds)

³⁴The current value used and the value that all bridges should use when this bridge is acting as the root for port delay in each of the listening and learning states, preceding the forwarding one (in hundredths of seconds)

³⁵Array of Spanning Tree Protocol Bridge information

³⁶SNMP is supported from ANA 3.6.0 Added show lacp bundle from ANA 3.6.3.1

³⁷SNMP is supported from ANA 3.6.0 Added show lacp bundle from ANA 3.6.3.1

³⁸SNMP is supported from ANA 3.6.0 Added show lacp bundle from ANA 3.6.3.1

³⁹SNMP is supported from ANA 3.6.0 Added show lacp bundle from ANA 3.6.3.1

⁶⁵Only the Birdge Max Age is supported and not the Current value..

⁶⁶Only the Birdge Hello Time is supported and not the Current value.

⁶⁷Only the Birdge Forward Delay is supported and not the Current value.

⁶⁸Array of Spanning Tree Protocol Bridge information

ATM

Table 5-81 ATM Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IAtm																				
ATM Address																				
Interface Type																Y				
VP and VC Ranges			Y	Y		Y	Y	Y				Y								
VC Table		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y				
Cross-Connect Table																				
IANA Type		Y	Y		Y	Y			Y	Y		Y	Y	Y	Y	Y				
Containing CTPs																				
Contained CTPs																				
IMO Name—IAtmVc																				
Virtual Channel Identifier	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Virtual Path Identifier	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Shaping Profile																				
Discarded and Received Input Data Counters	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Dropped and Forward Output Data Counters	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Ingress Traffic Descriptor	Y	Y	Y		Y	Y	Y		Y	Y		Y	Y	Y	Y	Y				

Table 5-81 ATM Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Egress Traffic Descriptor	Y	Y	Y		Y	Y	Y		Y	Y		Y	Y	Y	Y	Y				
Administrative Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Operational Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
IANA Type	Y											Y				Y				
Containing CTPs																				
Contained CTPs																				
IMO Name—IIMAGroup																				
Description																				
Speed																				
Admin Status																				
Oper Status																				
Oper Status Last Change																				
IANA Type																				
Containing CTPs																				
IMO Name—IATmTrafficDescriptor																				
Traffic Descriptor Type			Y	Y	Y				Y	Y		Y	Y	Y	Y	Y				
Service Category			Y	Y	Y				Y	Y		Y	Y	Y	Y	Y				
Cell Loss Priority			Y	Y	Y			Y	Y	Y		Y	Y	Y	Y	Y				
Cell Delay Variation								Y												
Cell Dealy Variation Tolerance			Y	Y	Y			Y	Y	Y		Y	Y	Y	Y					
Maximum High Priority and Aggregate Cell Rates	Y		Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y				
Minimum High Priority and Aggregate Cell Rates	Y		Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y				
Sustainable High Priority and Aggregate Cell Rates	Y		Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y				
Peak High Priority and Aggregate Cell Rates	Y		Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y				
Name																				
Index				Y										Y	Y	Y				
Cell Delay Variation Tolerance	Y																			
IMO Name—IATmTrafficShapingDescriptor																				
Maximum Burst Size																				
Sustainable and Peak Cell Rates																				
Cell Delay Variation																				
State																				

Table 5-81 ATM Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Buffer Size																				
Cell Loss Priority Discarded Size																				
Name																				
Index																				
IMO Name—IAtmTrunk																				
Same as IAtm																				
IMO Name—IAtmLogicalPort/Trunk																				
Resource Management Cell Termination																				
Resource Management Cell Generation																				
Effective Check Input and Output Capacities																				
Admin Status																				
Oper Status																				
Same as IAtm																				
IMO Name—IAtmTrunkVc																				
Destination Description																				
Same as IAtmVc																				

Frame Relay

Table 5-82 Frame Relay Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—Iframerelay/IFrTrunk																				
Protocol Type		Y								Y		Y	Y	Y	Y	Y				
VC Table		Y	Y		Y				Y	Y			Y	Y		Y				
Cross-Connect Table																				
IANA Type												Y			Y					
Containing CTPs																				
Contained CTPs																				
IMO Name—IfrVc																				
Data Link Connection Identifier		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y				

Table 5-82 Frame Relay Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Traffic Descriptor		Y	Y		Y				Y	Y		Y	Y	Y	Y	Y				
Discard and Received Input Data Counters												Y								
Dropped and Forward Output Data Counters																				
Ingress Traffic Descriptor		Y	Y						Y	Y			Y	Y	Y	Y				
Egress Traffic Descriptor		Y	Y						Y	Y			Y	Y	Y	Y				
Administrative Status		Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y				
Operational Status		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y				
IANA Type				Y	Y	Y	Y					Y	Y							
Containing CTPs																				
Contained CTPs																				
IMO Name—IFRTrafficDescriptor																				
Committed Rate		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Excess Burst Rate		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Name								Y												
Index								Y												
IMO Name—IFramerelayLogicalPort/Trunk																				
Admin Status																				
Oper Status																				
Same as IFrameRelay													Y			Y				
IMO Name—IFrTrunkVc																				
Destination Description																				
Same as IFRvc																				
IMO Name—IEncapsulation																				
Virtual Connection Interface		Y	Y						Y	Y		Y	Y	Y	Y	Y				
Binding Information								Y							Y					

Point to Point

Table 5-83 Point to Point Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IVcBasedEncapsulation																				
Virtual Connection								Y												
Binding Information				Y	Y	Y	Y	Y			Y									
Binding Status		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
IANA Type		Y	Y	Y	Y		Y		Y	Y		Y	Y	Y	Y	Y				
Containing CTPs																				
Contained CTPs																				
Virtual Connection																				
IMO Name—Iencapsulation (HDLC/PPP)																				
Virtual Connection		Y	Y					Y			Y	Y	Y	Y	Y	Y				
Binding Information								Y			Y	Y		Y						
Binding Status		Y	Y	Y	Y		Y	Y			Y	Y	Y	Y	Y	Y				
IANA Type		Y	Y	Y	Y		Y					Y	Y	Y	Y	Y				
Containing CTPs																				
Contained CTPs																				

DSL

Table 5-84 DSL Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IDsl / Ildsl / ISdsl / Ishdsl																				
Modulation Type																				
Customer Identification																				
Traffic Descriptor	Y																			
Same as IPPhysicalLayer																				
IMO Name—IADsl																				
Maximum Reception and Transmission Bandwidth																				
Same as IDsl	Y																			

Table 5-84 DSL Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IADsl2																				
Spectrum Traffic Descriptor																				
Traffic Descriptor	Y																			
Same as IADsl																				
IMO Name—IADsltraTrafficDescriptor																				
Max, Min and Target Transmission and Reception Noise Margins																				
Max, Min and Planned Target Transmission and Reception Bit Rates																				
Max Transmission Power Spectral Density																				
Transmission and Reception Rate Adaption																				
Channel type																				
Name																				
Index																				
Transmission and Reception Rate Adaption																				
IMO Name—IADsl2SpectrumTrafficDescriptor																				
Max, Min and Target Transmission and Reception Noise Margins																				
Max, Min and Planned Target Transmission and Reception Bit Rates																				
Name																				
Index																				
IMO Name—IIsdnLayer2																				
Control Administrative Status																				
Oper Status																				
Channels Table																				
IANA Type																				
Containing CTPs																				
Contained CTPs																				
IMO Name—IIsdnChannel																				
Control Administrative Status																				
Oper Status																				
IMO Name—IIsdnLayer1																				
Same as IPhysicalLayer																				

Physical Technologies

Table 5-85 Physical Technologies Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IsonetSdh																				
Specific Type																				
Loopback Type						Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
Scrambling Mode		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y			Y	
Same as IPhysicalLayer																				
IMO Name—IDS0Bundle																				
Bundled Time Slots	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
Bundle Location	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y				
IANA Type	Y	Y	Y	Y	Y			Y			Y									
Containing CTPs																				
Contained CTPs																				
IMO Name—IDS1Pdh / IDS3Pdh																				
Framing Type																				
Cell Mapping Type																				
Loopback Type									Y	Y										
Scrambling Mode	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	
Same as IPhysicalLayer																				

MPLS

Table 5-86 MPLS Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IMpls																				
Distribution Protocol									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Outer and Inner Labels																	Y	Y		
Traffic Engineering Properties									Y	Y		Y	Y	Y	Y	Y				
Resource reservation Properties																				
IANA Type									Y	Y		Y		Y	Y		Y	Y		Y
Containing CTPs																				

Table 5-86 MPLS Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Contained CTPs																				
IMO Name—ILse																				
MPLS Table										Y		Y	Y	Y	Y		Y	Y		
MPLS Aggregate Table												Y	Y	Y	Y		Y	Y		
MPLS Tunnel Segments									Y			Y	Y	Y	Y		Y	Y		
LDP Service												Y	Y	Y	Y		Y	Y		
Logical Sons						Y				Y		Y	Y	Y	Y	Y	Y	Y		
IMO Name—ILdpService																				
Local Identification Status												Y	Y	Y	Y		Y	Y		
LDP Peers									Y	Y	Y	Y	Y	Y	Y		Y	Y		
IMO Name—ILdpPeer																				
Peer Identification									Y	Y	Y	Y	Y	Y	Y		Y	Y		
Transport Address									Y	Y	Y	Y	Y	Y	Y		Y	Y		
Distribution Method									Y	Y	Y	Y	Y	Y	Y		Y	Y		
Protocol Type									Y		Y	Y	Y	Y	Y		Y	Y		
Path Vector Limit										Y		Y	Y	Y	Y					
Session Status									Y	Y	Y	Y	Y	Y	Y		Y	Y		
Protocol Version Hold Time									Y	Y	Y									
Hold Time									Y	Y	Y	Y	Y	Y	Y		Y	Y		
Hello Time Interval									Y	Y	Y						Y	Y		
Peer Discovery Sources									Y	Y	Y	Y	Y	Y	Y		Y	Y		
IMO Name—ILdpDiscoverySource																				
Interface Name									Y	Y		Y	Y	Y	Y		Y	Y		
Source Address									Y	Y		Y	Y	Y	Y		Y	Y		
Type									Y	Y		Y	Y	Y	Y		Y	Y		
IMO Name—IMplsEntry																				
Incoming Label									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Outgoing Interface and Label									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Switching Action									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Next Hop IP Address									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
IMO Name—IMplsAggregateEntry																				
Virtual Routing Entity									Y	Y		Y	Y	Y	Y	Y	Y	Y		
Incoming Label									Y	Y		Y	Y	Y	Y	Y	Y	Y		
Outgoing Interface and Label									Y	Y		Y	Y	Y	Y	Y	Y	Y		

Table 5-86 MPLS Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Switching Action									Y	Y		Y	Y	Y	Y	Y	Y	Y		
Next Hop IP Address									Y	Y		Y	Y	Y	Y	Y	Y	Y		

MPLS-TE

Table 5-87 MPLS-TE Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IMplsTETunnel																				
Destination Address									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Outgoing Interface and Label									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Path Identification									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Requested Bandwidth									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Measured Average Burst and Peak Bandwidth									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Setup and Hold Priority									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Affinity Bits and Mask									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Automatic Route Announcement Status									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Optimization Lock Down Status									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Path Option									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Name									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Description									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Administrative Status									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Operational Status									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
IANA Type									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
IMO Name—IMplsTEProperties																				
Administrative Weight									Y	Y		Y	Y	Y	Y	Y	Y ⁵	Y ⁴⁰		
Attributes Identifier																	Y ⁶	Y ⁴¹		
Signalling Protocol									Y	Y	Y	Y	Y	Y	Y	Y ⁷	Y ⁴²			
Available Physical and Reservable Bandwidth									Y	Y	Y	Y	Y	Y	Y	Y	Y ⁸	Y ⁴³		
Reserved Bandwidth									Y	Y	Y	Y	Y	Y	Y	Y	Y ⁹	Y ⁴⁴		
Signaling Protocol	Y																			

Table 5-87 MPLS-TE Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IMplsTEPropertiesAllocationEntry																				
Priority Level											Y									
Allocated and Cumulative Bandwidth											Y									
IMO Name—IMplsTESegment																				
Segment Type									Y	Y		Y	Y	Y	Y	Y	Y	Y		
Measured Average Burst and Peak Bandwidth									Y	Y		Y	Y	Y	Y	Y	Y	Y		
Path Identification									Y	Y		Y	Y	Y	Y	Y	Y	Y		
Name									Y	Y		Y	Y	Y	Y	Y	Y	Y		

⁵Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁶Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁷Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁸Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁹Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁴⁰Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁴¹Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁴²Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁴³Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

⁴⁴Till ANA 3.6.2 - show mpls traffic-eng link-management bandwidth-allocation \$telnetString\$ From ANA 3.6.3 - show mpls traffic-eng link-management bandwidth-allocation interface \$telnetString\$

VPN

Table 5-88 VPN Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IVrf																				
Virtual Routing Table												Y	Y			Y		Y		
Exported Route Targets											Y	Y	Y	Y			Y		Y	
Imported Route Targets											Y	Y	Y	Y			Y		Y	
Route Distinguisher									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
ARP Entity											Y	Y	Y	Y			Y		Y	
Name									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Logical Sons							Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	
Virtual Routing Table	Y																			
IMO Name—IVrfEntry																				
Next Hop BGP Address									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Incoming and Outgoing Inner Label									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Outer Label									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Destination IP Subnet									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Next Hop IP Address									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Type									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Routing Protocol Type									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Outgoing Interface Name									Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
IMO Name—IMpBgp																				
BGP Identifier	Y						Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Local Autonomous System							Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cross Virtual Routing Table						Y	Y		Y	Y	Y	Y	Y	Y	Y	Y			Y	
BGP Neighbors						Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Logical Sons							Y		Y	Y		Y	Y	Y	Y	Y	Y		Y	
IMO Name—ICrossVrf																				
Virtual Routing Entries												Y	Y	Y	Y	Y	Y		Y	
Virtual Routing Entity Name												Y	Y	Y	Y	Y	Y		Y	
IMO Name—ICrossVrfRoutingEntry																				
Outgoing Virtual Routing Entity Identifier																				
Incoming and Outgoing Virtual Routing Tags																				

Table 5-88 VPN Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Destination IP Subnet									Y	Y		Y	Y	Y	Y	Y			Y	
Next Hop IP Address									Y	Y		Y	Y	Y	Y	Y			Y	
Type									Y	Y		Y	Y	Y	Y	Y			Y	
Routing Protocol Type									Y	Y		Y	Y	Y	Y	Y			Y	
Outgoing Interface Name																				

PWE3

Table 5-89 PWE3 Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IPTPLayer2MplsTunnel																				
Local and Remote Router Addresses									Y	Y	Y	Y	Y	Y	Y	Y	Y ¹⁰	Y ⁴⁵		
Local and Remote Virtual Connection Labels									Y	Y		Y	Y	Y	Y	Y	Y ¹¹	Y ⁴⁶		
Tunnel Identification									Y	Y	Y	Y	Y	Y	Y	Y	Y ¹²	Y ⁴⁷		
Tunnel Status									Y	Y	Y	Y	Y	Y	Y	Y	Y ¹³	Y ⁴⁸		
Local and Remote Tunnel Interface											Y						Y ¹⁴			
IANA Type									Y	Y		Y	Y	Y	Y	Y	Y ¹⁵	Y		
Containing CTPs																				
Contained CTPs																				

¹⁰Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

¹¹Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

¹²Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

¹³Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

¹⁴Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

¹⁵Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

⁴⁵Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

⁴⁶Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

⁴⁷Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

⁴⁸Till ANA 3.6.2 show l2vpn xconnect detail | include (Group | AC: | PW:) show l2vpn xconnect group \$groupName\$ xc-name \$xcname\$ detail show l2vpn xconnect group \$groupName\$ detail From ANA 3.6.3 - show l2vpn xconnect detail

ACL

Table 5-90 ACL Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IAccessList																				
Type	Y						Y	Y	Y	Y		Y	Y	Y	Y	Y	Y ¹⁶	Y ⁴⁹		Y
Access List Entries	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ¹⁷	Y ⁵⁰		Y
Name	Y						Y	Y	Y	Y		Y	Y	Y	Y	Y	Y ¹⁸	Y ⁵¹		Y
Index	Y						Y	Y	Y	Y		Y	Y	Y	Y	Y	Y ¹⁹	Y ⁵²		Y
IMO Name—IAccessListEntry																				
Entry Identification	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁰	Y ⁵³		Y
Action Logic	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²¹	Y ⁵⁴		Y
Source and Destination Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²²	Y ⁵⁵		Y
Source and Destination Wildcard	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²³	Y ⁵⁶			
Protocol Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁴	Y ⁵⁷		Y
Source and Destination Port Ranges	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁵	Y ⁵⁸		Y
Source and Destination Port Action	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁶	Y ⁵⁹		Y
Protocol Specific Info	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁷	Y ⁶⁰		Y
Differential Services Code Points	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁸	Y ⁶¹		Y
Type of Service	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ²⁹	Y ⁶²		Y

Table 5-90 ACL Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
Precedence	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ³⁰	Y ⁶³		Y
Matches	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y ³¹	Y ⁶⁴		Y
Source and Destination Wildcard	Y																			

¹⁶Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

¹⁷Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

¹⁸Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

¹⁹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁰Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²¹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²²Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²³Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁴Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁵Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁶Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁷Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁸Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

²⁹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

³⁰Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

³¹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁴⁹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁰Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵¹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵²Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵³Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁴Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁵Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁶Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁷Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁸Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁵⁹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁶⁰Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁶¹Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁶²Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁶³Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

⁶⁴Till ANA 3.6.0 - show access-lists ipv4 From ANA 3.6.1 - show running-config ipv4 access-list

Physical Equipment

Table 5-91 Physical Equipment Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IChassis																				
Description	Y										Y	Y	Y		Y	Y				
Equipment Holder Type		Y	Y	Y	Y				Y	Y		Y	Y	Y	Y				Y	
Contained Equipment Holders																				
Contained Equipments																				
IMO Name—IShelf																				
Description																		Y		
Status																		Y		
Equipment Holder Type																				
Contained Equipment Holders																				
Contained Equipments																				
IMO Name—IModule																				
Module Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Module Description	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Software Version	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Operational Status	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hardware Type + Version	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Managed IP Address																				
Redundant Equipment																Y	Y			
Configured Redundancy																Y	Y			
Redundancy Status	Y		Y	Y		Y	Y				Y	Y		Y		Y	Y		Y	
Operational Status Last Changed	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	
Supported Physical Termination Points		Y	Y						Y	Y		Y	Y	Y	Y	Y	Y		Y	
Serial Number (soft property)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Base Logical Components

Table 5-92 Base Logical Components Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IManagedElement																				
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Communication State	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Investigation State	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Element Category	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Element Type and Key	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Device Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
System Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
System Description	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Up Time	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Software Version	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vendor Identity	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Memory and CPU Usage	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IContext																				
Name						Y	Y	Y	Y	Y		Y	Y	Y	Y	Y			Y	
Bounded Connections																				
IP Address Pools																				
Forwarding Components List																				
Traffic Descriptors List																				
Tunnel Containers List																				
Data Link Aggregation Containers List																				
IMO Name—ISystemService																				
Type																				
Status																				
Up Time	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Common

Table 5-93 Common Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IPhysicalLayer																				
Media Type		Y	Y	Y	Y	Y	Y			Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
Clocking Source	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Maximum Speed	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is Internal Port	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Discarded Bandwidth																				
Dropped Bandwidth																				
Input Bandwidth			Y	Y		Y	Y	Y		Y										
Output Bandwidth			Y	Y		Y	Y	Y		Y										
Discarded and Received Input Data Counters	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Dropped and Forward Output Data Counters	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Administrative Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Operational Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Last Changed	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y	
IANA Type	Y	Y			Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Containing CTPs																				
Contained CTPs																				
Received and Discarded Input Data Counters	Y																			
Forwarded and Dropped Output Data Counters	Y																			
IMO Name—IBridge																				
Bridge Table	Y								Y				Y	Y	Y					
Type	Y												Y	Y	Y					
MAC Address	Y												Y	Y	Y					
IP Interface	Y												Y	Y	Y					
Name	Y						Y		Y				Y	Y	Y	Y	Y	Y		
Logical Sons	Y						Y		Y				Y	Y	Y	Y	Y	Y		
IMO Name—IBridgeEntry																				
Destination MAC	Y					Y	Y		Y				Y	Y	Y					
Outgoing Interface	Y					Y	Y		Y				Y	Y	Y					

Table 5-93 Common Attribute Support on Cisco Routers—Cisco ANA 3.6.5 (Continued)

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—IVcSwitchingEntity																				
Cross Connect Table																				
Logical Sons																				

Additional Technologies

Table 5-94 Additional Technologies Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	800	1000	1600	1700	1800	2500	2600	2800	3600	3700	3800	7200	7400	7600	10000	12000	XR 12000	CRS-1	ASR 1000	ASR 9000
IMO Name—POS																				
POS	Y	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y

BFD

Table 5-95 BFD Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	7600	CRS-1	ASR 1000	ASR 9000
IMO Name—IBfdService				
Status	Y	Y		
IMO Name—IBfdSession				
SourceIp	Y	Y		
DestinationIp	Y	Y		
Interval	Y	Y		
Multiplier	Y	Y		
Protocol	Y	Y		
State	Y	Y		
Interface	Y	Y		

Local Switching

Table 5-96 Local Switching Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	XR 12000	CRS-1	ASR 9000
IMO Name—ILocatSwitchingEntity			
LocalSwitchingTable	Y	Y	
IMO Name—ILocatSwitchingEntry			
Local Switching Entry Key	Y	Y	
Local Switching Entry Status	Y	Y	
Segment 1 Port	Y	Y	
Segment 1 Status	Y	Y	
Segment 2 Port	Y	Y	
Segment 2 Status	Y	Y	

SBC

Table 5-97 SBC Attribute Support on Cisco Routers—Cisco ANA 3.6.5

Attribute	ASR 1000
IMO Name—ISbcService	
name	Y
status	Y



CHAPTER 6

Support Information for Cisco Security Appliances

This chapter contains support information for Virtual Network Elements (VNEs) that manage Cisco security appliances in Cisco ANA 3.6.5, and contains the following topics:

- [Cisco Adaptive Security Appliance 5550 Series, page 6-1](#)
- [Supported Technologies on Cisco Security Appliances, page 6-3](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

Cisco Adaptive Security Appliance 5550 Series

This section includes the following information about Cisco ASA 5550 Series security appliances:

- [Cisco ASA 5550 Series—Supported Software Versions, page 6-2](#)
- [Cisco ASA 5550 Series—Supported Topologies, page 6-2](#)
- [Cisco ASA 5550 Series—Supported Modules, page 6-2](#)
- [Cisco ASA 5550 Series—Supported Technologies, page 6-2](#)
- [Cisco ASA 5550 Series—Supported Service Events, page 6-3](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Adaptive Security Appliance 5550 Series](#).

Cisco ASA 5550 Series—Supported Software Versions

Table 6-1 Supported Software Versions for Cisco ASA 5550 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
7.2(3)12	3.6.3	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco ASA 5550 Series—Supported Topologies

Table 6-2 Supported Topologies for Cisco ASA 5550 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.3

Cisco ASA 5550 Series—Supported Modules

Table 6-3 Supported Modules for Cisco ASA 5550 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
SSM-4GE-INC	3.6.3	SSM-4GE Included with ASA 5550 System	S

Cisco ASA 5550 Series—Supported Technologies

The following technologies are supported by the Cisco ASA 5550 Series in Cisco ANA 3.6.5:

- [IP, page 6-4](#)
- [Ethernet \(IEEE 802.3\), page 6-6](#)
- [Physical Equipment, page 6-9](#)
- [Base Logical Components, page 6-10](#)
- [Common, page 6-11](#)

Cisco ASA 5550 Series—Supported Service Events

Table 6-4 *Supported Service Events for Cisco ASA 5550 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	Y
All IP Interfaces Down / Active IP Interfaces Found	3.6.3	Y
Interface Status Down/Up	3.6.3	Y
Card In/Out	3.6.3	Y
Link Down/Up	3.6.3	Y
Device Unreachable	3.6.3	Y
CPU Over Utilized	3.6.3	Y
Memory Over Utilized	3.6.3	Y
Device Unsupported	3.6.3	Y
Discard Packets	3.6.3	N
Dropped Packets	3.6.3	N
Module Unsupported	3.6.3	N
Port Down	3.6.3	Y
Card Up/Down	3.6.3	Y

Supported Technologies on Cisco Security Appliances

The following sections list the objects and attributes that are supported on Cisco security appliances in Cisco ANA 3.6.5 per technology:

- [IP, page 6-4](#)
- [Ethernet \(IEEE 802.3\), page 6-6](#)
- [Physical Equipment, page 6-9](#)
- [Base Logical Components, page 6-10](#)
- [Common, page 6-11](#)

IP

Table 6-5 IP Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5

Attribute	ASA5550
IMO Name—IIPInterface	
IP Address	Y
Subnetwork Mask	Y
IP Interface Addresses Array	Y
Interface Name	Y
Interface Description	Y
IP Interface State	Y
OSPF Interface Cost	
Broadcast Address	
MTU	
Lookup Method	
Address Resolution Type	
ARP Timeout	
Secured ARP	
ICMP Mask Reply	
IGMP Proxy	
HSRP Groups	
IP Multiplexing Table	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IIPMuxEntry	
Termination Point	
Destination IP Subnet	
IMO Name—IIRoutingEntity	
Routing Table	Y
ARP Entity	Y
Routing Table Changes	
Name	Y
Logical Sons	Y
IMO Name—IIRoutingEntry	
Destination IP Subnet	Y

Table 6-5 IP Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)

Attribute	ASA5550
Next Hop IP Address	Y
Type	Y
Routing Protocol Type	Y
Outgoing Interface Name	Y
IMO Name—IARPEntity	
ARP Table	Y
IMO Name—IARPEntity	
IP Address	Y
MAC Address	Y
Port	Y
Entry Type	Y
IMO Name—IIPPool	
IP Address Pool Entries	
Name	
Index	
IMO Name—IIPRangeBasedIPPoolEntry	
Start IP Address	
End IP Address	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—IIPSubnetBasedIPPoolEntry	
IP Subnet	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—HSRPGroupEntry	
Group Number	
Port Description	
Priority	
Coupled Router	
State	
Tracking Interfaces	
Virtual IP Address	
Virtual MAC Address	

Table 6-5 *IP Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)*

Attribute	ASA5550
IMO Name—I TunnelIGRE	
Name	
Tunnel Destination and Source	
IP Address	
IP Interface State	
IANA Type	
Containing CTPs	
Contained CTPs	

Ethernet (IEEE 802.3)

Table 6-6 *Ethernet (IEEE 802.3) Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5*

Attribute	ASA5550
IMO Name—I LagPortEntry	
Actor and Partner Admin Keys	
Actor and Partner Oper Keys	
Selected and Attached Aggregation Identification	
Actor Port	
Actor Port Priority	
Partner Admin and Oper Port	
Partner Admin and Oper Port Priority	
Actor and Partner Admin States	
Actor and Partner Oper States	
IMO Name—I Ethernet	
MAC Address	Y
Duplex Mode	
Output Flow Control	
Input Flow Control	
IANA Type	Y
Containing CTPs	
Contained CTPs	

Table 6-6 Ethernet (IEEE 802.3) Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)

Attribute	ASA5550
IMO Name—IVlanInterface	
Mode	
Native VLAN Identification	
Virtual LAN Table	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IVlanEncapMux	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IIEEE802	
VLAN Identification	
Binding Information	
Binding Status	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IStpService	
Protocol Type	
Current and Bridge Max Age	
Current and Bridge Hello Time	
Current and Bridge Forward Delay	
Instance Information Table	
Same as ISystemService	
IMO Name—IMstService	
Protocol Properties	
Same as IStpService	
IMO Name—IMstProperties	
Force Version	
Configuration Format, Region Name and Revision Level	
External Root Cost	
Maximum Instances	

Table 6-6 Ethernet (IEEE 802.3) Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)

Attribute	ASA5550
IMO Name—IStpInstanceInfo	
Object Identification	
Identification	
Priority	
Designated Parent and Root Bridges	
Root Cost	
Is Root	
Root Port Identification	
Port Information Table	
IMO Name—IMstInstanceInfo	
Instance Identification	
Same as IStpInstanceInfo	
IMO Name—IPvstpInstanceInfo	
Protocol Type	
Current and Bridg Maximum Age	
Current and Bridge Hello Time	
Current and Bridge Forward Delay	
Same as IStpInstanceInfo	
IMO Name—IRstpInstanceInfo	
Force Version	
Same as IStpInstanceInfo	
IMO Name—IStpPortInfo	
Object Identification	
Priority	
State	
Path Cost	
Is Edge	
Is Point to Point	
Role	
IMO Name—IMstPortInfo	
Hello Time	
Same as IStpPortInfo	
IMO Name—IEthernetChannel	
Group Number	

Table 6-6 Ethernet (IEEE 802.3) Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)

Attribute	ASA5550
Bandwidth	
Aggregation Protocol	
IANA Type	
Containing CTPs	
Contained CTPs	

Physical Equipment

Table 6-7 Physical Equipment Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5

Attribute	ASA5550
IMO Name—IChassis	
Description	
Equipment Holder Type	Y
Contained Equipment Holders	
Contained Equipments	
IMO Name—IShelf	
Description	
Status	
Equipment Holder Type	
Contained Equipment Holders	
Contained Equipments	
IMO Name—IModule	
Module Name	Y
Module Description	Y
Software Version	Y
Operational Status	Y
Hardware Type + Version	Y
Managed IP Address	
Redundant Equipment	
Configured Redundancy	
Redundancy Status	

Table 6-7 Physical Equipment Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)

Attribute	ASA5550
Operational Status Last Changed	
Supported Physical Termination Points	
Serial Number (soft property)	Y

Base Logical Components

Table 6-8 Base Logical Components Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5

Attribute	ASA5550
IMO Name—IManagedElement	
IP Address	Y
Communication State	Y
Investigation State	Y
Element Category	Y
Element Type and Key	Y
Device Name	Y
System Name	Y
System Description	Y
Up Time	Y
Software Version	Y
Vendor Identity	Y
Memory and CPU Usage	Y
IMO Name—IContext	
Name	
Bounded Connections	
IP Address Pools	
Forwarding Components List	
Traffic Descriptors List	
Tunnel Containers List	
Data Link Aggregation Containers List	
IMO Name—ISystemService	
Type	

Table 6-8 *Base Logical Components Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5 (Continued)*

Attribute	ASA5550
Status	
Up Time	Y

Common

Table 6-9 *Common Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5*

Attribute	ASA5550
IMO Name—IPPhysicalLayer	
Media Type	Y
Clocking Source	
Maximum Speed	Y
Is Internal Port	Y
Discarded Bandwidth	
Dropped Bandwidth	
Input Bandwidth	
Output Bandwidth	
Discarded and Received Input Data Counters	
Dropped and Forward Output Data Counters	
Administrative Status	Y
Operational Status	Y
Last Changed	
IANA Type	Y
Containing CTPs	
Contained CTPs	
IMO Name—IBridge	
Bridge Table	
Type	
MAC Address	
IP Interface	
Name	
Logical Sons	

Table 6-9 Common Attribute Support on Cisco Security Appliances—Cisco ANA 3.6.5

Attribute	ASA5550
IMO Name—IBridgeEntry	
Destination MAC	
Outgoing Interface	
IMO Name—IVcSwitchingEntity	
Cross Connect Table	
Logical Sons	



CHAPTER 7

Support Information for Cisco Switches

This chapter contains support information for Virtual Network Elements (VNEs) that manage Cisco switches in Cisco ANA 3.6.5, and contains the following topics:

- [Cisco Catalyst 2900 Series Switches, page 7-2](#)
- [Cisco ME 3400 Series Ethernet Access Switches, page 7-4](#)
- [Cisco Catalyst 3500 XL Series Switches, page 7-6](#)
- [Cisco Catalyst 3550 Series Switches, page 7-8](#)
- [Cisco Catalyst 3560 Series Switches, page 7-10](#)
- [Cisco Catalyst 3750 Series Switches, page 7-13](#)
- [Cisco Catalyst 3750 Metro Series Switches, page 7-15](#)
- [Cisco Catalyst 4000 Series Switches, page 7-17](#)
- [Cisco Catalyst 4500 Series Switches, page 7-20](#)
- [Cisco Catalyst 4900 Series Switches, page 7-23](#)
- [Cisco ME 4900 Series Ethernet Switches, page 7-26](#)
- [Cisco Catalyst 6500 Series \(CatOS\) Switches, page 7-29](#)
- [Cisco Catalyst 6500 Series \(IOS\) Switches, page 7-34](#)
- [Cisco ME 6500 Series Ethernet Switches \(6524\), page 7-42](#)
- [Supported Technologies on Cisco Switches, page 7-45](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

Cisco Catalyst 2900 Series Switches

This section includes the following information about Cisco Catalyst 2900 Series switches:



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 2900 Series Switches](#).

- [Cisco Catalyst 2900 Series—Supported Software Versions, page 7-2](#)
- [Cisco Catalyst 2900 Series—Supported Topologies, page 7-2](#)
- [Cisco Catalyst 2900 Series—Supported Modules, page 7-3](#)
- [Cisco Catalyst 2900 Series—Supported Technologies, page 7-3](#)
- [Cisco Catalyst 2900 Series—Supported Service Events, page 7-3](#)

Cisco Catalyst 2900 Series—Supported Software Versions

Table 7-1 *Supported Software Versions for Cisco Catalyst 2900 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
12.2(25)FX	3.6.0	S
CatOS 9.00.04	3.6.0	S
12.1(22)EA8	3.6.2	S
12.1(22)EA8a	3.6.2	S
12.0(5)WC17	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 2900 Series—Supported Topologies

Table 7-2 *Supported Topologies for Cisco Catalyst 2900 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 2900 Series—Supported Modules

Table 7-3 Supported Modules for Cisco Catalyst 2900 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
WS-C2912-XL	3.6.0	12 fixed autosensing 10/100 ports	S
WS-C2924M-XL	3.6.0	24 fixed autosensing 10/100 ports 2 expansion slots	S
WS-C2948G	3.6.0	48 10/100 ports and 2 fixed, gigabit interface converter (GBIC)-based 1000BASE-X uplink ports 1.5 RU switch Catalyst OS installed	S
WS-X2948	3.6.0	Switching Supervisor	S

Cisco Catalyst 2900 Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 2900 Series in Cisco ANA 3.6.5:

- [IP](#), page 7-46
- [Ethernet \(IEEE 802.3\)](#), page 7-49
- [Physical Equipment](#), page 7-62
- [Base Logical Components](#), page 7-63
- [Common](#), page 7-64

Cisco Catalyst 2900 Series—Supported Service Events

Table 7-4 Supported Service Events for Cisco Catalyst 2900 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco ME 3400 Series Ethernet Access Switches

This section includes the following information about Cisco ME 3400 Series switches:

- [Cisco ME 3400 Series—Supported Software Versions, page 7-4](#)
- [Cisco ME 3400 Series—Supported Topologies, page 7-5](#)
- [Cisco ME 3400 Series—Supported Modules, page 7-5](#)
- [Cisco ME 3400 Series—Supported Technologies, page 7-5](#)
- [Cisco ME 3400 Series—Supported Service Events, page 7-6](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco ME 3400 Series Ethernet Access Switches](#).

Cisco ME 3400 Series—Supported Software Versions

Table 7-5 *Supported Software Versions for Cisco ME 3400 Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
12.3(23)S1	3.6.1	S
12.3(22)S	3.6.1	S
12.3(23)	3.6.1	S
12.3(23)S2	3.6.1	S
12.3(23)S3	3.6.1	S
12.2(25) SEG	3.6.1	S
12.2(35) SE1	3.6.1	S
12.2(35) SE	3.6.1	S
12.2(35)SE3	3.6.1	S
12.2(37)SE	3.6.3	S
12.2(44)SE	3.6.3	S
12.2(46)SE	3.6.4	V
12.2(0.0.48)EY	3.6.5	S
12.2(44)EY	3.6.5	S
12.2(44)EY4	3.6.5	S ²

²Tested as modified version of 12.2(44)EY



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco ME 3400 Series—Supported Topologies

Table 7-6 Supported Topologies for Cisco ME 3400 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco ME 3400 Series—Supported Modules

Table 7-7 Supported Modules for Cisco ME 3400 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
ME-3400G-12CS-A	3.6.1	12 dual-purpose ports (10/100/1000 and Small Form-Factor Pluggable [SFP]) and 4 SFP uplinks	S
ME-3400G-12CS-DC	3.6.1	12 dual-purpose ports (10/100/1000 and SFP) and 4 SFP uplinks	S
ME-3400G-2CS	3.6.1	2 dual-purpose ports (10/100/1000 and SFP) and 2 SFP uplinks	S
ME-3400EG-2CS-A	3.6.5	ME-3400EG-2CS-A - Fixed Module 0	S ¹
ME-3400EG-12CS-M	3.6.5	ME-3400EG-12CS-M - Fixed Module 0	S
ME-3400E-24TS-M	3.6.5	ME-3400E-24TS-M - Fixed Module 0	S
SFP-GE-L	3.6.5	1000BASE-LX/LH SFP transceiver module for MMF and SMF, 1300-nm wavelength, extended operating temperature range and DOM support	S
GLC-LH-SM	3.6.5	1000BASE-LX/LH SFP transceiver module for MMF and SMF, 1300-nm wavelength	S

¹Tested on an ME-3400G-2CS-A device.

Cisco ME 3400 Series—Supported Technologies

The following technologies are supported by the Cisco ME 3400 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Routing Protocols, page 7-48](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [VPN, page 7-60](#)
- [ACL, page 7-62](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco ME 3400 Series—Supported Service Events

Table 7-8 Supported Service Events for Cisco ME 3400 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N
Card Up/Down	3.6.1	Y
Adaptive Polling	3.6.1	N

Cisco Catalyst 3500 XL Series Switches

This section includes the following information about Cisco Catalyst 3500 XL Series switches:

- [Cisco Catalyst 3500 XL Series—Supported Software Versions, page 7-7](#)
- [Cisco Catalyst 3500 XL Series—Supported Topologies, page 7-7](#)
- [Cisco Catalyst 3500 XL Series—Supported Modules, page 7-7](#)
- [Cisco Catalyst 3500 XL Series—Supported Technologies, page 7-7](#)
- [Cisco Catalyst 3500 XL Series—Supported Service Events, page 7-8](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 3500 XL Series Switches](#).

Cisco Catalyst 3500 XL Series—Supported Software Versions

Table 7-9 Supported Software Versions for Cisco Catalyst 3500 XL Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
Cat IOS 12.0(5)WC9a	3.6.0	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 3500 XL Series—Supported Topologies

Table 7-10 Supported Topologies for Cisco Catalyst 3500 XL Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 3500 XL Series—Supported Modules

Table 7-11 Supported Modules for Cisco Catalyst 3500 XL Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
C3K-BLWR-60CFM	3.6.4	Fan Module for the Catalyst 3750-E and 3560-E Series	S

Cisco Catalyst 3500 XL Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 3500 XL Series in Cisco ANA 3.6.5:

- [IP](#), page 7-46
- [Ethernet \(IEEE 802.3\)](#), page 7-49
- [Physical Equipment](#), page 7-62
- [Base Logical Components](#), page 7-63
- [Common](#), page 7-64

Cisco Catalyst 3500 XL Series—Supported Service Events

Table 7-12 *Supported Service Events for Cisco Catalyst 3500 XL Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco Catalyst 3550 Series Switches

This section includes the following information about Cisco Catalyst 3550 Series switches:

- [Cisco Catalyst 3550 Series—Supported Software Versions, page 7-9](#)
- [Cisco Catalyst 3550 Series—Supported Topologies, page 7-9](#)
- [Cisco Catalyst 3550 Series—Supported Technologies, page 7-9](#)
- [Cisco Catalyst 3550 Series—Supported Technologies, page 7-9](#)
- [Cisco Catalyst 3550 Series—Supported Service Events, page 7-10](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 3550 Series Switches](#).

Cisco Catalyst 3550 Series—Supported Software Versions

Table 7-13 Supported Software Versions for Cisco Catalyst 3550 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.1(11)EA*	3.6.1	S
12.1(12c)EA1	3.6.1	S
12.1(13)EA*	3.6.1	S
12.1(14)AX3	3.6.1	S
12.1(14)EA1	3.6.1	S
12.1(19)EA*	3.6.1	S
12.1(20)EA*	3.6.1	S
12.1(22)EA*	3.6.1	S
12.1(22)EA6	3.6.1	S
12.1(22)EA8a	3.6.1	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 3550 Series—Supported Topologies

Table 7-14 Supported Topologies for Cisco Catalyst 3550 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 3550 Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 3550 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco Catalyst 3550 Series—Supported Service Events

Table 7-15 Supported Service Events for Cisco Catalyst 3550 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Cloud Problem	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco Catalyst 3560 Series Switches

This section includes the following information about Cisco Catalyst 3560 Series switches:

- [Cisco Catalyst 3560 Series—Supported Software Versions, page 7-11](#)
- [Cisco Catalyst 3560 Series—Supported Topologies, page 7-11](#)
- [Cisco Catalyst 3560 Series—Supported Modules, page 7-12](#)
- [Cisco Catalyst 3560 Series—Supported Technologies, page 7-12](#)
- [Cisco Catalyst 3560 Series—Supported Service Events, page 7-12](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 3560 Series Switches](#).

Cisco Catalyst 3560 Series—Supported Software Versions

Table 7-16 Supported Software Versions for Cisco Catalyst 3560 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.1(13)EA1a	3.6.0	S
12.1(14)EA1a	3.6.0	S
12.1(25)EW	3.6.0	S
12.1(6)EA1a	3.6.0	S
12.2(25)SED	3.6.0	S
12.1(22)EA5	3.6.1	S
12.1(22)EA8a	3.6.1	S
12.2(25)SEE2	3.6.1	S
12.1(22)EA1	3.6.2	S
12.2(25)SEC2	3.6.2	S
12.2(25)SEC	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 3560 Series—Supported Topologies

Table 7-17 Supported Topologies for Cisco Catalyst 3560 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 3560 Series—Supported Modules

Table 7-18 *Supported Modules for Cisco Catalyst 3560 Series—Cisco ANA 3.6.5*

Module Name	ANA Version	Module Description	Certification Level
WS-C3560-24PS	3.6.1	24 Ethernet 10/100 ports and 2 SFP-based Gigabit Ethernet ports	S
WS-C3560-48PS	3.6.0	48 Ethernet 10/100 ports and 4 SFP-based Gigabit Ethernet ports	S
WS-C3560G-24PS	3.6.1	24 Ethernet 10/100/1000 ports and 4 SFP-based Gigabit Ethernet ports	S
WS-C3560G-24TS	3.6.1	24 Ethernet 10/100/1000 ports and 4 SFP-based Gigabit Ethernet ports	S
WS-C3560G-48TS	3.6.0	48 Ethernet 10/100/1000 ports and 4 SFP-based Gigabit Ethernet ports	S
WS-C3560G-48PS	3.6.1	48 Ethernet 10/100/1000 ports and 4 SFP-based Gigabit Ethernet ports	S
WS-C3560-48TS	3.6.2	48 Ethernet 10/100 ports and 4 SFP-based Gigabit Ethernet ports	S
C3K-BLWR-60CFM	3.6.4	Fan Module for the Catalyst 3750-E and 3560-E Series	S

Cisco Catalyst 3560 Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 3560 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco Catalyst 3560 Series—Supported Service Events

Table 7-19 *Supported Service Events for Cisco Catalyst 3560 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N

Table 7-19 Supported Service Events for Cisco Catalyst 3560 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco Catalyst 3750 Series Switches

This section includes the following information about Cisco 3750 Series switches:

- [Cisco 3750 Series—Supported Software Versions, page 7-13](#)
- [Cisco 3750 Series—Supported Topologies, page 7-14](#)
- [Cisco 3750 Series—Supported Technologies, page 7-14](#)
- [Cisco 3750 Series—Supported Service Events, page 7-14](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 3750 Series Switches](#).

Cisco 3750 Series—Supported Software Versions

Table 7-20 Supported Software Versions for Cisco 3750 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.2(25)EY3	3.6.0	S
12.2(25)SEC2	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 3750 Series—Supported Topologies

Table 7-21 *Supported Topologies for Cisco 3750 Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco 3750 Series—Supported Technologies

The following technologies are supported by the Cisco 3750 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)

Cisco 3750 Series—Supported Service Events

Table 7-22 *Supported Service Events for Cisco 3750 Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco Catalyst 3750 Metro Series Switches

This section includes the following information about Cisco Catalyst 3750 Metro Series switches:

- [Cisco Catalyst 3750 Metro Series—Supported Software Versions, page 7-15](#)
- [Cisco Catalyst 3750 Metro Series—Supported Topologies, page 7-16](#)
- [Cisco Catalyst 3750 Metro Series—Supported Modules, page 7-16](#)
- [Cisco Catalyst 3750 Metro Series—Supported Technologies, page 7-16](#)
- [Cisco Catalyst 3750 Metro Series—Supported Service Events, page 7-17](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 3750 Metro Series Switches](#).

Cisco Catalyst 3750 Metro Series—Supported Software Versions

Table 7-23 *Supported Software Versions for Cisco Catalyst 3750 Metro Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
12.2.(40)SE	3.6.3	S
12.2(44)SE1	3.6.3	S ¹
12.2(25)SEG1	3.6.3	S ²
12.2(25)SEB4	3.6.3	S ³
12.2.(40)SE	3.6.3	S ⁴
12.2(25)EY3	3.6.3	S ⁵
12.2(25)EY*	3.6.3	S
12.2(37)SE1	3.6.3	S ⁶
12.2(37)SE*	3.6.3	S
12.2(35)SE	3.6.3	S
12.2(46)SE	3.6.4	S ⁷

¹Tested on lab device.

²Tested on lab device.

³Tested on lab device.

⁴Tested on lab device.

⁵Tested on lab device (SP2).

⁶Tested on lab device.

⁷Tested on lab device.

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 3750 Metro Series—Supported Topologies

Table 7-24 *Supported Topologies for Cisco Catalyst 3750 Metro Series—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
PPP/HDLC	PPP or HDLC	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 3750 Metro Series—Supported Modules

Table 7-25 *Supported Modules for Cisco Catalyst 3750 Metro Series—Cisco ANA 3.6.5*

Module Name	ANA Version	Module Description	Certification Level
CATALYST375024ME	3.6.0	Metro Ethernet Catalyst 3750 Module. 24-10/100 + 2 SFP (Small Formfactor Pluggable) ports for downlinks	S
SFP-GE-L	3.6.5	1000BASE-LX/LH SFP transceiver module for MMF and SMF, 1300-nm wavelength, extended operating temperature range and DOM support	S
GLC-LH-SM	3.6.5	1000BASE-LX/LH SFP transceiver module for MMF and SMF, 1300-nm wavelength	S

Cisco Catalyst 3750 Metro Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 3750 Metro Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Routing Protocols, page 7-48](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [MPLS, page 7-57](#)
- [VPN, page 7-60](#)
- [PWE3, page 7-61](#)
- [ACL, page 7-62](#)
- [Physical Equipment, page 7-62](#)

- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco Catalyst 3750 Metro Series—Supported Service Events

Table 7-26 *Supported Service Events for Cisco Catalyst 3750 Metro Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
BGP Neighbor Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco Catalyst 4000 Series Switches

This section includes the following information about Cisco Catalyst 4000 Series switches:

- [Cisco Catalyst 4000 Series—Supported Software Versions, page 7-18](#)
- [Cisco Catalyst 4000 Series—Supported Topologies, page 7-18](#)
- [Cisco Catalyst 4000 Series—Supported Modules, page 7-18](#)
- [Cisco Catalyst 4000 Series—Supported Technologies, page 7-19](#)
- [Cisco Catalyst 4000 Series—Supported Service Events, page 7-20](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 4000 Series Switches](#).

Cisco Catalyst 4000 Series—Supported Software Versions

Table 7-27 Supported Software Versions for Cisco Catalyst 4000 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.1(12c)EW1	3.6.0	S
IOS 12.2(20)EWA1	3.6.0	S
IOS 12.2(25)SG	3.6.0	S
12.2(31)SGA2	3.6.2	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 4000 Series—Supported Topologies

Table 7-28 Supported Topologies for Cisco Catalyst 4000 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 4000 Series—Supported Modules

Table 7-29 Supported Modules for Cisco Catalyst 4000 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
WS-X4124-FX-MT	3.6.0	FE Switching Module, 24-port 100FX (MTRJ)	V
WS-X4148-FX-MT	3.6.0	FE Switching Module, 48-100FX MMF (MTRJ)	V
WS-X4148-RJ	3.6.0	10/100 Fast Ethernet Module, 48 Ports (RJ-45)	V
WS-X4148-RJ21	3.6.0	Telco switch module, 48-port 10/100 (4xRJ21)	V
WS-X4148-RJ45V	3.6.0	Inline Power 10/100, 48-port (RJ45)	V
WS-X4232-GB-RJ	3.6.0	E/FE/GE Module, 2-GE (GBIC), 32-10/100 FE (RJ-45)	V
WS-X4232-RJ-XX	3.6.0	FE Base Module, 32-10/100(RJ45)+ Modular Uplink slot	V
WS-X4306-GB	3.6.0	Gigabit Ethernet Module, 6 Ports (GBIC)	V
WS-X4412-2GB-T	3.6.0	GE Module, 12-1000T (RJ45)+2-1000X (GBIC Slot)	V
WS-X4424-GB-RJ-45	3.6.0	24 port 10/100/1000 Auto-Sensing Module (RJ45)	V
WS-X4448-GB-RJ45	3.6.0	48 port 10/100/1000 Auto-Sensing Module (RJ45)	V

Table 7-29 **Supported Modules for Cisco Catalyst 4000 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WS-X4418-GB	3.6.0	GE Module, Server Switching 18 Ports (GBIC)	V
WS-U4504-FX-MT	3.6.0	FE Uplink Daughter Card, 4-port 100FX (MTRJ)	V
WS-X4014	3.6.0	Catalyst 4006 Supervisor 3, Spare	V
WS-X4302-GB	3.6.0	2-port 1000BASE-X (GBIC) Gigabit Ethernet	V
WS-X4424-GB-RJ45	3.6.0	24-port 10/100/1000BASE-T Gigabit Ethernet switching module	V
WS-X4448-GB-LX	3.6.0	48-port 1000BASE-LX (SFP included) Gigabit Ethernet switching module	V
WS-X4248-RJ45V	3.6.0	48-port PoE 10/100BASE-TX switching module	V
WS-X4248-RJ21V	3.6.0	48-port PoE 10/100 BASE-TX switching module	V
WS-X4548-GB-RJ45V	3.6.0	48-port PoE 10/100/1000BASE-T switching module	V
WS-X4548-GB-RJ45	3.6.0	48-port Gigabit Ethernet 10/100/1000BASE-T switching module	V
CWDM-SFP-1470	3.6.0	CWDM SFP 1470 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1490	3.6.0	CWDM SFP 1490 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1510	3.6.0	CWDM SFP 1510 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1530	3.6.0	CWDM SFP 1530 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1550	3.6.0	CWDM SFP 1550 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1570	3.6.0	CWDM SFP 1570 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1590	3.6.0	CWDM SFP 1590 nm, Gigabit Ethernet and 1G/2G FC	V
CWDM-SFP-1610	3.6.0	CWDM SFP 1610 nm, Gigabit Ethernet and 1G/2G FC	V

Cisco Catalyst 4000 Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 4000 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)

Cisco Catalyst 4000 Series—Supported Service Events

Table 7-30 Supported Service Events for Cisco Catalyst 4000 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco Catalyst 4500 Series Switches

This section includes the following information about Cisco Catalyst 4500 Series switches:

- [Cisco Catalyst 4500 Series—Supported Software Versions, page 7-20](#)
- [Cisco Catalyst 4500 Series—Supported Topologies, page 7-21](#)
- [Cisco Catalyst 4500 Series—Supported Modules, page 7-21](#)
- [Cisco Catalyst 4500 Series—Supported Technologies, page 7-22](#)
- [Cisco Catalyst 4500 Series—Supported Service Events, page 7-23](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 4500 Series Switches](#).

Cisco Catalyst 4500 Series—Supported Software Versions

Table 7-31 Supported Software Versions for Cisco Catalyst 4500 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.1(12c)EW1	3.6.0	V
IOS 12.2(20)EWA1	3.6.0	V
IOS 12.2(25)SG	3.6.0	V
12.1(13)EW	3.6.0	S

Table 7-31 Supported Software Versions for Cisco Catalyst 4500 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.2(20)EWA	3.6.0	S
12.2(31)SGA2	3.6.2	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 4500 Series—Supported Topologies

Table 7-32 Supported Topologies for Cisco Catalyst 4500 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Framerelay	Framerelay	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 4500 Series—Supported Modules

Table 7-33 Supported Modules for Cisco Catalyst 4500 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
WS-X4013+	3.6.0	Catalyst 4500 Supervisor II-Plus (IOS), 2GE, Console(RJ-45)	S
WS-X4013+TS	3.6.0	Catalyst 4503 SupII-Plus-TS, 12 10/100/1000 PoE+8 SFP slots	S
WS-X4014	3.6.0	Supervisor Engine III	S
WS-X4515	3.6.0	Catalyst 4500 Supervisor IV (2 GE), Console(RJ-45)	S
WS-X4516	3.6.0	Catalyst 4500 Supervisor V (2 GE), Console(RJ-45)	S
WS-X4516-10GE	3.6.0	Catalyst 4500 Supervisor V-10GE, 2x10GE (X2) and 4x1GE (SFP)	S
WS-X4124-FX-MT	3.6.0	24-Port 100BASE-FX Fast Ethernet Switching Module	S
WS-X4148-FX-MT	3.6.0	Catalyst 4500 FE Switching Module, 48-100FX MMF(MTRJ)	S
WS-X4148-RJ	3.6.0	Catalyst 4500 10/100 Auto Module, 48-Ports (RJ-45)	S
WS-X4148-RJ21	3.6.0	Catalyst 4500 10/100 Module, 48-Ports Telco (4xRJ21)	S
WS-X4148-RJ45V	3.6.0	10/100BASE-TX Fast Ethernet switching module with Cisco pre-standard PoE	S
WS-X4248-FE-SFP	3.6.0	Catalyst 4500 48-Port 100BASE-X (SFPs Optional)	S
WS-X4224-RJ45V	3.6.0	Catalyst 4500 10/100 PoE 802.3af 24-ports (RJ45)	S

Table 7-33 **Supported Modules for Cisco Catalyst 4500 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WS-X4248-RJ21V	3.6.0	Catalyst 4500 PoE 802.3af 10/100, 48-Ports (RJ21)	S
WS-X4248-RJ45V	3.6.0	Catalyst 4500 PoE 802.3af 10/100, 48-Ports (RJ45)	S
WS-X4232-GB-RJ	3.6.0	Catalyst 4500 32-10/100 (RJ-45),2-GE(GBIC)	S
WS-X4232-RJ-XX	3.6.0	Catalyst 4500 10/100 Module,32-ports(RJ45)+Modular uplinks	S
WS-U4504-FX-MT	3.6.0	Catalyst 4500 4-port 100FX(MTRJ) Uplink for WS-X4232-RJ-XX	S
WS-X4302-GB	3.6.0	Catalyst 4500 Gigabit Ethernet Module, 2-Ports (GBIC)	S
WS-X4306-GB	3.6.0	Catalyst 4500 Gigabit Ethernet Module, 6-Ports (GBIC)	S
WS-X4506-GB-T	3.6.0	Catalyst 4500 6-Port 10/100/1000 PoE or SFP (Optional)	S
WS-X4412-2GB-T	3.6.0	1000BASE-T plus 1000BASE-X Gigabit Ethernet switching module	S
WS-X4418-GB	3.6.0	Catalyst 4500 GE Module, Server Switching 18-Ports (GBIC)	S
WS-X4424-GB-RJ45	3.6.0	Catalyst 4500 24-port 10/100/1000 Module (RJ45)	S
WS-X4448-GB-LX	3.6.0	1000BASE-X Gigabit Ethernet switching module	S
WS-X4448-GB-RJ45	3.6.0	Catalyst 4500 48-Port 10/100/1000 Module (RJ45)	S
WS-X4524-GB-RJ45V	3.6.0	Catalyst 4500 PoE 802.3af 10/ 100/1000 24-ports (RJ45)	S
WS-X4548-GB-RJ45	3.6.0	Catalyst 4500 Enhanced 48-Port 10/100/1000 Base-T (RJ-45)	S
WS-X4448-GB-SFP	3.6.0	Catalyst 4500 48-Port 1000Base-X (SFPs Optional)	S
WS-X4548-GB-RJ45V	3.6.0	Catalyst 4500 PoE 802.3af 10/100/1000, 48-Ports (RJ45)	S
WS-X4604-GWY	3.6.0	Catalyst 4000 Access Gateway Module	S
WS-X4232-L3	3.6.0	Layer 3 Services Module	S
WS-X4148-FE-BD-LC	3.6.0	48-Port 100BASE-BX10-D Fast Ethernet Switching Module	S
WS-X4148-FE-LX-MT	3.6.0	48-Port 100Base-LX-MT Fast Ethernet Switching Module	S
WS-X4124-RJ45	3.6.0	24-Port 10/100BASE-TX Fast Ethernet Switching Module	S
PWR-C45-1300ACV	3.6.4	Cisco 4506 Power supply module	S

Cisco Catalyst 4500 Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 4500 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)

Cisco Catalyst 4500 Series—Supported Service Events

Table 7-34 Supported Service Events for Cisco Catalyst 4500 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Card Up/Down	3.6.0	Y

Cisco Catalyst 4900 Series Switches

This section includes the following information about Cisco Catalyst 4900 Series switches:

- [Cisco Catalyst 4900 Series—Supported Software Versions, page 7-24](#)
- [Cisco Catalyst 4900 Series—Supported Topologies, page 7-24](#)
- [Cisco Catalyst 4900 Series—Supported Modules, page 7-24](#)
- [Cisco Catalyst 4900 Series—Supported Technologies, page 7-25](#)
- [Cisco Catalyst 4900 Series—Supported Service Events, page 7-26](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 4900 Series Switches](#).

Cisco Catalyst 4900 Series—Supported Software Versions

Table 7-35 Supported Software Versions for Cisco Catalyst 4900 Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.2(31)SG	3.6.1	S
IOS 12.2(31)SGA1	3.6.1	S
IOS 12.2(25)EWA6	3.6.2	S
IOS 12.2(25)EWA4	3.6.2	S
IOS 12.2(25)EWA	3.6.3	S
IOS 12.2(25)EWA2	3.6.3	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 4900 Series—Supported Topologies

Table 7-36 Supported Topologies for Cisco Catalyst 4900 Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco Catalyst 4900 Series—Supported Modules

Table 7-37 Supported Modules for Cisco Catalyst 4900 Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
GLC-LH-SM	3.6.5	Gigabit Ethernet SFP, LC connector LH transceiver	S
GLC-SX-MM	3.6.1	Gigabit Ethernet SFP, LC connector SX transceiver	S
GLC-ZX-SM	3.6.1	Gigabit Ethernet SFP, LC connector ZX transceiver	S
GLC-T	3.6.1	Gigabit Ethernet SFP, RJ-45 connector, 1000BASE-T transceiver	S
GLC-BX-D	3.6.1	1000BASE-BX10-D downstream bidirectional single fiber; with DOM	S
GLC-BX-U	3.6.1	1000BASE-BX10-U upstream bidirectional single fiber; with DOM	S
CWDM-SFP-1470	3.6.1	Longwave 1470 nm laser single-mode	S
CWDM-SFP-1490	3.6.1	Longwave 1490 nm laser single-mode	S
CWDM-SFP-1510	3.6.1	Longwave 1510 nm laser single-mode	S

Table 7-37 **Supported Modules for Cisco Catalyst 4900 Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
CWDM-SFP-1530	3.6.1	Longwave 1530 nm laser single-mode	S
CWDM-SFP-1550	3.6.1	Longwave 1550 nm laser single-mode	S
CWDM-SFP-1570	3.6.1	Longwave 1570 nm laser single-mode	S
CWDM-SFP-1590	3.6.1	Longwave 1590 nm laser single-mode	S
CWDM-SFP-1610	3.6.1	Longwave 1610 nm laser single-mode	S
CWDM-SFP-XXXX	3.6.1	CWDM small form-factor pluggable module	S
X2-10GB-LR	3.6.1	10GBASE-LR single-mode X2 module	S
X2-10GB-SR	3.6.1	10GBASE-SR single-mode X2 module	S
X2-10GB-CX4	3.6.1	10GBASE-CX4 single-mode X2 module	S
X2-10GB-LX4	3.6.1	10GBASE-LX4 single-mode X2 module	S
X2-10GB-ER	3.6.1	10GBASE-ER single-mode X2 module	S
WS-C4948	3.6.1	Catalyst 4000 series fixed configuration switch with 48 10/100/1000BaseT wirespeed ports and 4 1000BaseX SFP ports	S
WS-C4948-10GE	3.6.1	Catalyst 4000 series fixed configuration switch with 48 10/100/1000BaseT wirespeed ports and 2 10Gbps X2 ports	S
X2-10GE-CX4	3.6.1	10GBASE-CX4 X2 Module	S
X2-10GE-ER	3.6.1	10GBASE-ER X2 Module	S
X2-10GE-SR	3.6.1	10GBASE-SR X2 Module	S
X2-10GE-LX4	3.6.1	10GBASE-LX4 X2 Module	S
X2-10GE-LR	3.6.1	10GBASE-LR X2 Module	S
CSS5-CABLX-LCSC	3.6.1	Cisco CSS 11500 10m fiber single-mode LX LC-to-SC connectors	S
CSS5-CABSX-LC	3.6.1	Cisco CSS 11500 10m fiber multimode SX LC connectors	S
CSS5-CABSX-LCSC	3.6.1	Cisco CSS 11500 10m fiber multimode SX LC-to-SC connectors	S
CAB-SM-LCSC-1M	3.6.1	1m fiber single-mode LC-to-SC connectors	S
CAB-SM-LCSC-5M	3.6.1	5m fiber single-mode LC-to-SC connectors	S

Cisco Catalyst 4900 Series—Supported Technologies

The following technologies are supported by the Cisco Catalyst 4900 Series in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Routing Protocols, page 7-48](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco Catalyst 4900 Series—Supported Service Events

Table 7-38 Supported Service Events for Cisco Catalyst 4900 Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	Y
Interface Status Down/Up	3.6.1	Y
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N
Cloud Problem	3.6.1	N
Layer 2 Tunnel Down	3.6.1	N
Card Up/Down	3.6.1	Y

Cisco ME 4900 Series Ethernet Switches

This section includes the following information about Cisco 4924 ME switches:

- [Cisco 4924 ME—Supported Software Versions, page 7-27](#)
- [Cisco 4924 ME—Supported Topologies, page 7-27](#)
- [Cisco 4924 ME—Supported Modules, page 7-27](#)
- [Cisco 4924 ME—Supported Technologies, page 7-28](#)
- [Cisco 4924 ME—Supported Service Events, page 7-29](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco ME 4900 Series Ethernet Switches](#).

Cisco 4924 ME—Supported Software Versions

Table 7-39 Supported Software Versions for Cisco 4924 ME—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.2(25)EWA	3.6.3	S
12.2(25)EWA4	3.6.3	S
12.2(25)EWA6	3.6.3	S
12.2(31)SG	3.6.3	S
12.2(31)SGA1	3.6.1	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco 4924 ME—Supported Topologies

Table 7-40 Supported Topologies for Cisco 4924 ME—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1
Physical Layer	Physical Layer	3.6.1

Cisco 4924 ME—Supported Modules

Table 7-41 Supported Modules for Cisco 4924 ME—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
ME-4924-10GE	3.6.1	Cisco ME 4924-10GE, IP Base software image (RIP, static routes), no power supply, fan tray	S
X2-10GE-CX4	3.6.1	10GBASE-CX4 X2 Module	S
X2-10GE-ER	3.6.1	10GBASE-ER X2 Module	S
X2-10GE-SR	3.6.1	10GBASE-SR X2 Module	S
X2-10GE-LX4	3.6.1	10GBASE-LX4 X2 Module	S
X2-10GE-LR	3.6.1	10GBASE-LR X2 Module	S
GLC-LH-SM	3.6.5	Gigabit Ethernet SFP, LC connector LH transceiver	S
GLC-SX-MM	3.6.1	Gigabit Ethernet SFP, LC connector SX transceiver	S
GLC-ZX-SM	3.6.1	Gigabit Ethernet SFP, LC connector ZX transceiver	S

Table 7-41 **Supported Modules for Cisco 4924 ME—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
GLC-T	3.6.1	Gigabit Ethernet SFP, RJ-45 connector, 1000BASE-T transceiver	S
GLC-BX-D	3.6.1	1000BASE-BX10-D downstream bidirectional single fiber; with DOM	S
GLC-BX-U	3.6.1	1000BASE-BX10-U upstream bidirectional single fiber; with DOM	S
CWDM-SFP-1470	3.6.1	Cisco CWDM SFP 1470 nm; Gigabit Ethernet and 1G/2G FC (gray)	S
CWDM-SFP-1490	3.6.1	Cisco CWDM SFP 1490 nm; Gigabit Ethernet and FC (violet)	S
CWDM-SFP-1510	3.6.1	Cisco CWDM SFP 1510 nm; Gigabit Ethernet and 1G/2G FC (blue)	S
CWDM-SFP-1530	3.6.1	Cisco CWDM SFP 1530 nm; Gigabit Ethernet and 1G/2G FC (green)	S
CWDM-SFP-1550	3.6.1	Cisco CWDM SFP 1550 nm; Gigabit Ethernet and 1G/2G FC (yellow)	S
CWDM-SFP-1570	3.6.1	Cisco CWDM SFP 1570 nm; Gigabit Ethernet and 1G/2G FC (orange)	S
CWDM-SFP-1590	3.6.1	Cisco CWDM SFP 1590 nm; Gigabit Ethernet and 1G/2G FC (red)	S
CWDM-SFP-1610	3.6.1	Cisco CWDM SFP 1610 nm; Gigabit Ethernet and 1G/2G FC (brown)	S
CSS5-CABLX-LCSC	3.6.1	Cisco CSS 11500 10m fiber single-mode LX LC-to-SC connectors	S
CSS5-CABSX-LC	3.6.1	Cisco CSS 11500 10m fiber multimode SX LC connectors	S
CSS5-CABSX-LCSC	3.6.1	Cisco CSS 11500 10m fiber multimode SX LC-to-SC connectors	S
CAB-SM-LCSC-1M	3.6.1	1m fiber single-mode LC-to-SC connectors	S
CAB-SM-LCSC-5M	3.6.1	5m fiber single-mode LC-to-SC connectors	S

Cisco 4924 ME—Supported Technologies

The following technologies are supported by the Cisco 4924 ME in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Routing Protocols, page 7-48](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco 4924 ME—Supported Service Events

Table 7-42 Supported Service Events for Cisco 4924 ME—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Card In/Out	3.6.1	N
Link Down/Up	3.6.1	N
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Module Unsupported	3.6.1	N
Port Flapping	3.6.1	N
Port Down	3.6.1	N
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N
Card Up/Down	3.6.1	N

Cisco Catalyst 6500 Series (CatOS) Switches

This section includes the following information about Cisco Catalyst 6500 Series (CatOS) switches:

- [Cisco Catalyst 6500 Series \(CatOS\)—Supported Software Versions, page 7-30](#)
- [Cisco Catalyst 6500 Series \(CatOS\)—Supported Topologies, page 7-30](#)
- [Cisco Catalyst 6500 Series \(CatOS\)—Supported Modules, page 7-30](#)
- [Cisco Catalyst 6500 Series \(CatOS\)—Supported Technologies, page 7-33](#)
- [Cisco Catalyst 6500 Series \(CatOS\)—Supported Service Events, page 7-34](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 6500 Series \(CatOS\) Switches](#).

Cisco Catalyst 6500 Series (CatOS)—Supported Software Versions

Table 7-43 *Supported Software Versions for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
6.4(10)	3.6.3	V
7.6(1)	3.6.3	V
7.6(8)	3.6.3	V
8.3(4)	3.6.3	V
8.4.1	3.6.3	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 6500 Series (CatOS)—Supported Topologies

Table 7-44 *Supported Topologies for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5*

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 6500 Series (CatOS)—Supported Modules

Table 7-45 *Supported Modules for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5*

Module Name	ANA Version	Module Description	Certification Level
AIP	3.6.0	ATM Interface Processor	S
CAT6509	3.6.0	Catalyst 6500 Plus with 9 slots	V
CAT6K-MSFC	3.6.0	Multilevel Switching Feature Card for the Catalyst 6000 series	S
CAT6K-MSFC2	3.6.0	Multilevel Switching Feature Card Version 2 for the Catalyst 6000 series	S
CAT6K-WSF-6700-CFC	3.6.0	Catalyst 6500 centralized Forwarding Card	S
CAT6K-WSF-6K-DFC3A	3.6.0	Catalyst 6500 Distributed L3 switching engine IIIa	S
CAT6K-WSF-6K-PFC3A	3.6.0	Catalyst 6500 Centralized L3 switching engine IIIa	S

Table 7-45 Supported Modules for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
CAT6K-WSF-6K-VPWR-GE	3.6.0	Cat6k voice daughter cards	S
CAT6K-WS-SUP32-GE-3B	3.6.0	cat6k-ws-sup32-ge-3b	S
CAT6K-WS-SUP720	3.6.0	Catalyst 6500 Supervisor Module 720 CPU board	S
CAT6K-WS-SUP720-BASE	3.6.0	Catalyst 6500 Supervisor Module 720 base board	S
CAT6K-WS-SVC-IDSM2	3.6.0	Catalyst 6500 Intrusion Detection Module	S
CAT6K-WSX-6066-SLB-APC	3.6.0	Content Switching Module	S
CAT6K-WSX-6148-GE-TX	3.6.0	Catalyst 6000 48 port10/100/1000BaseT(RJ-45) module	S
CAT6K-WSX-6148-RJ45	3.6.0	48 port10/100BaseTX(RJ-45) module	S
CAT6K-WSX-6248A-RJ45	3.6.0	Catalyst 6000 48-port 10/100BaseTX RJ-45	S
CAT6K-WSX-6248-RJ45	3.6.0	Catalyst 6000 Family 48-port 10/100 RJ-45 module	S
CAT6K-WSX-6348-RJ45	3.6.0	48-port 10/100 ethernet module	S
CAT6K-WSX-6416-GBIC	3.6.0	16-port GBIC Gigabit ethernet module	S
CAT6K-WSX-6515-GETX	3.6.0	Catalyst 6500 16 port 10/100/1000BaseT (RJ-45) module	S
CAT6K-WSX-6516A-GBIC	3.6.0	Catalyst 6500 16 port 1000BaseX (GBIC)	S
CAT6K-WSX-6516-GBIC	3.6.0	Catalyst 6500 16 port 1000BaseX GBIC	S
CAT6K-WSX-6524-MMMT	3.6.0	Catalyst 6500 24 port 100BaseX MM (MT-RJ) module	S
CAT6K-WSX-6548-GETX	3.6.0	Catalyst 6500 48 port 10/100/1000 (RJ-45)	S
CAT6K-WSX-6548-RJ21	3.6.0	Catalyst 6500 48 port 10/100BaseTX (RJ-21)	S
CAT6K-WSX-6548-RJ45	3.6.0	48 port 10/100 Hydra2+/Hydra2V+	S
CAT6K-WSX-6704-10GE	3.6.0	Catalyst 6500 4 port 10 GE	S
CAT6K-WSX-6724-SFP	3.6.0	Catalyst 6500 24 port 1000Base FX (SFP GBIC)	S
CAT6K-WSX-6748-GETX	3.6.0	Catalyst 6500 48 port 10/100/1000 (RJ-45)	S
CAT6K-WSX-SUP1A-2GE	3.6.0	Catalyst 6500 2 port 1000BaseX Supervisor module (GBIC)	S
CAT6K-WSX-SUP2-2GE	3.6.0	Supervisor 2 with 2 Gigabit Ethernet ports	S
CATALYST 6500 FIREWALL MODULE	3.6.0	Catalyst 6500 Firewall Module	S
CEF720 48 PORT 1000MB SFP	3.6.0	Catalyst 6500 48 port 1000Base FX (SFP GBIC)	S
CISCO ME 6524 ETHERNET SWITCH	3.6.0	Cisco ME 6524 Ethernet Switch	S
FSIP	3.6.0	Fast Serial Interface processor	S
GSR-ALARM16	3.6.0	gsr-alarm16	V
HDV	3.6.0	High Density Voice module	V
MIP	3.6.0	MultiChanel Interface Processor	S
MSFC2A ROUTE ENGINE	3.6.0	MSFC2A Route Engine	S

Table 7-45 **Supported Modules for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
OC192-POS-RPR1-SM-VSR-SPA	3.6.0	1 port OC-192c/STM-64 POS/RPR single mode very short reach Shared Port Adapter =SPA=	V
PA-1T3-PLUS	3.6.0	pa-1t3-plus	V
PA-2FEISL-TX	3.6.0	pa-2feisl-tx	V
PA-2T3-PLUS	3.6.0	pa-2t3-plus	V
PA-8CE1	3.6.0	pa-8ce1	V
PA-A4T	3.6.0	pa-a4t	S
PA-A8T-V35	3.6.0	pa-a8t-v35	S
PA-AH1T	3.6.0	pa-ah1t	S
PA-AH2T	3.6.0	pa-ah2t	S
PA-ATMDX-DS3	3.6.0	pa-atmdx-ds3	S
PA-ATMDX-E3	3.6.0	pa-atmdx-e3	S
PA-ATMDX-MM-OC3	3.6.0	pa-atmdx-mm-oc3	V
PA-ATMDX-SMI-OC3	3.6.0	pa-atmdx-smi-oc3	V
PA-ATMDX-SML-OC3	3.6.0	pa-atmdx-sml-oc3	S
PA-CE3	3.6.0	pa-ce3	V
PA-POSSW-LR	3.6.0	pa-possw-lr	V
PA-POSSW-MM	3.6.0	pa-possw-mm	V
PA-POSSW-SM	3.6.0	pa-possw-sm	V
PM-1FE-1T1	3.6.0	pm-1fe-1t1	V
POLICY FEATURE CARD 3	3.6.0	Policy Feature Card 3	V
POS-OC12-MM	3.6.0	pos-oc12-mm	V
RP	3.6.0	ROMmon Recovery Procedure	V
SPA-10X1GE	3.6.1	10-port Gigabit Ethernet SPA, SFP Optics	S
SPA-1XTENGE-XFP	3.6.1	1-port 10 Gigabit Ethernet SPA, LANPHY XFP Optics	S
SPA-2XOC3-ATM	3.6.1	2-port OC-3c/STM-1c ATM SPA	S
SPA-2XOC48POS/RPR	3.6.1	1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	S
SPA-4XOC3-ATM	3.6.1	4-port OC-3c/STM-1c ATM SPA	S
TRIP	3.6.0	trip	S
VPN MODULE	3.6.0	VPN Module	V
VPN MODULE SUPPORTING 3DES	3.6.0	VPN Module supporting 3DES	S
WS-C6500-SFM	3.6.0	Switch Fabric Module	V
WS-C6509-NEB-A	3.6.1	Enhanced 9-slot vertically oriented chassis	S

Table 7-45 **Supported Modules for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WS-F6K-PWR(INLINE POWER CARD)	3.6.0	CATALYST 6000 INLINE POWER CARD, REF	S
WS-SUP720-3BXL	3.6.0	Catalyst 6500/Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3BXL	V
WS-SVC-ADM-1-K9=	3.6.0	Catalyst 6500 Cisco Anomaly Detection Module	V
WS-SVC-AGM-1-K9=	3.6.0	Catalyst 6500 Cisco Anomaly Guard Module	V
WS-SVC-IDS2-BUN-K9	3.6.1	Cisco Catalyst 6500 Series Intrusion Detection System (IDSM-2) Service Module	S
WS-SVC-SSL-1-K9=	3.6.0	SSL Module for Catalyst 6500	V
WS-X6148-FE-SFP	3.6.0	Cisco Catalyst 6500 48-port 100BASE-X SFP Module	V
WSX-6408A-GBIC	3.6.0	Catalyst 6000 8-port Gigabit Ethernet Module	S
WSX-6408-GBIC	3.6.0	Card with 8 Gigabit Ethernet ports for the Catalyst 6000 series	S
WS-X6500-SFM2	3.6.0	Switch Fabric Module 2	V
WVIC-2DSU-T1(V2)	3.6.0	wvic-2dsu-t1(V2)	V

Cisco Catalyst 6500 Series (CatOS)—Supported Technologies

The following technologies are supported by the Cisco Catalyst 6500 Series (CatOS) in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [Frame Relay, page 7-54](#)
- [Point to Point, page 7-56](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)

Cisco Catalyst 6500 Series (CatOS)—Supported Service Events

Table 7-46 Supported Service Events for Cisco Catalyst 6500 Series (CatOS)—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
Cloud Problem	3.6.0	N
Card Up/Down	3.6.0	Y

Cisco Catalyst 6500 Series (IOS) Switches

This section includes the following information about Cisco Catalyst 6500 Series (IOS) switches:

- [Cisco Catalyst 6500 Series \(IOS\)—Supported Software Versions, page 7-34](#)
- [Cisco Catalyst 6500 Series \(IOS\)—Supported Topologies, page 7-35](#)
- [Cisco Catalyst 6500 Series \(IOS\)—Supported Modules, page 7-36](#)
- [Cisco Catalyst 6500 Series \(IOS\)—Supported Technologies, page 7-41](#)
- [Cisco Catalyst 6500 Series \(IOS\)—Supported Service Events, page 7-42](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco Catalyst 6500 Series \(IOS\) Switches](#).

Cisco Catalyst 6500 Series (IOS)—Supported Software Versions

Table 7-47 Supported Software Versions for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.1	3.6.1	S
IOS 12.2(17d)SXB	3.6.1	S
IOS 12.2(18)SXE*	3.6.1	S

Table 7-47 Supported Software Versions for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
IOS 12.2(18)SXF*	3.6.1	S
IOS 12.2(33)	3.6.1	S
IOS 12.2(33)SRA	3.6.1	S
IOS 12.2(33)SXH	3.6.3	S
IOS 12.1(13)E6	3.6.2	S
IOS 12.1(20)E3	3.6.2	S
IOS 12.2(18)SXD2	3.6.2	S
IOS 12.2(18)SXD5	3.6.2	S
IOS 12.2(33)SXH1	3.6.3	S
IOS 12.2(18)SXF7	3.6.2	S
IOS 12.2(33)SRA6	3.6.3	S
IOS 12.2(33)SXI	3.6.4	S
12.2(33)SXH2a	3.6.5	S

**Note**

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco Catalyst 6500 Series (IOS)—Supported Topologies

Table 7-48 Supported Topologies for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
PWE3 (Martini)	Tunnel	3.6.0
GRE Tunnel	GRE Tunnel	3.6.0
VPN (VRF)	VPN	3.6.0
Physical Layer	Physical Layer	3.6.0

Cisco Catalyst 6500 Series (IOS)—Supported Modules

Table 7-49 Supported Modules for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
7600-ES20	3.6.1	Cisco 7600 Series Ethernet Services Card	S
7600-ES20-10G3C	3.6.1	Cisco 7600 ES20 line card, 2x10GE XFP with DFC 3C	S
7600-ES20-10G3CXL	3.6.1	Cisco 7600 ES20 line card, 2x10GE XFP with DFC 3CXL	S
7600-ES20-GE3C	3.6.1	Cisco 7600 ES20 line card, 20xGE SFP with DFC 3C	S
7600-ES20-GE3CXL	3.6.1	Cisco 7600 ES20 line card, 20xGE SFP with DFC 3CXL	S
7600-ES20-PROC	3.6.1	7600 ES20 PROC FRU	S
7600-MSFC4	3.6.1	c7600 MSFC4 Daughterboard	S
7600-SIP-200	3.6.0	SPA Interface Processor-200	S
7600-SIP-400	3.6.0	SPA Interface Processor-400	S
7600-SIP-600	3.6.0	SPA Interface Processor-600	S
OSM-12CT3T1	3.6.0	12-port channelized/unchannelized CT3-T1	S
OSM-1CHOC12T3-SI	3.6.0	1-port channelized OC-12, SM-IR	S
OSM-1OC48-POS-SI+	3.6.0	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-IR	S
OSM-1OC48-POS-SL+	3.6.0	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-LR	S
OSM-1OC48-POS-SS+	3.6.0	Enhanced 1-port OC-48/STM-16 SONET/SDH OSM, SM-SR	S
OSM-2+4GE-WAN+	3.6.0	4-port Gigabit Ethernet WAN (GBIC) with two Layer 2 LAN ports; CEF256	S
OSM-2OC12-ATM-MM+	3.6.0	Enhanced 2-port OC-12/STM-4 ATM OSM, MM	S
OSM-2OC12-ATM-SI+	3.6.0	Enhanced 2-port OC-12/STM-4 ATM OSM, SM-IR	S
OSM-2OC12-POS-SI+	3.6.0	Enhanced 2-port OC-12c/STM-4c POS, SM-IR; CEF256	S
OSM-4OC12-POS-SI+	3.6.0	Enhanced 4-port OC-12c/STM-4c POS, SM-IR; CEF256	S
OSM-4OC3-POS-SI+	3.6.0	Enhanced 4-port OC-3c/STM-1c POS, SM-IR;	S
PA-1FE-TX, -FX	3.6.0	1-port Fast Ethernet port adapter	S
PA-2FE-TX, -FX	3.6.0	2-port Fast Ethernet port adapter	S
PA-4T+	3.6.0	T1/E1 port adapters	S
PA-A3-E3	3.6.0	ATM with traffic shaping port adapters	S
PA-A3-T3	3.6.0	ATM with traffic shaping port adapters	S
PA-MC-4T1	3.6.0	T1/E1 port adapters	S
PA-MC-8T1	3.6.0	T1/E1 port adapters	S
PA-MC-STM-1	3.6.0	Multichannel STM-1 port adapters	S
PA-POS-2OC3	3.6.0	2-port POS OC3c/STM1 port adapter	S
SFP-OC3-IR1	3.6.0	Intermediate range, single-mode fiber	S
SFP-OC3-LR1	3.6.0	Long range, single-mode fiber	S

Table 7-49 **Supported Modules for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
SFP-OC3-MM	3.6.0	Short range, multimode fiber	S
SPA-10X1GE	3.6.0	10-port Gigabit Ethernet SPA, SFP Optics	S
SPA-10X1GE-V2	3.6.0	10-port Gigabit Ethernet SPA, SFP Optics	S
SPA-1XCHSTM1/OC3	3.6.0	1-port Channelized STM1/OC3 to DS0 SPA	S
SPA-1XOC12-ATM	3.6.0	1-Port OC-12c/STM-4c ATM SPA	S
SPA-1XOC12-POS	3.6.0	1-port OC-12c/STM-4c POS SPA	S
SPA-1XOC48-ATM	3.6.0	1 port OC-48c/STM-16 ATM SPA	S
SPA-1XTENGE-XFP	3.6.0	1-port 10 Gigabit Ethernet SPA, LANPHY XFP Optics	S
SPA-24CHT1-CE-ATM	3.6.0	24-Port Channelized T1/E1/J1 ATM CEoP SPA	S
SPA-2X1GE	3.6.0	2-port Gigabit Ethernet SPA, SFP Optics	S
SPA-2X1GE-V2	3.6.0	2-port Gigabit Ethernet SPA, SFP Optics	S
SPA-2XCT3/DS0	3.6.0	2-port Channelized T3 to DS0 SPA	S
SPA-2XOC3-ATM	3.6.0	2-port OC-3c/STM-1c ATM SPA	S
SPA-2XOC3-POS	3.6.0	2-port OC-3c/STM-1c POS SPA	S
SPA-2XOC48POS/RPR	3.6.1	1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	S
SPA-2XOC48POS/RPR	3.6.0	2 port OC-48 POS/RPR SPA with SFP Optics	S
SPA-2XT3/E3	3.6.0	2-port Clear Channel T3/E3 SPA	S
SPA-4X1FE-TX-V2	3.6.0	4-port 10/100 Ethernet SPA TX	S
SPA-4XCT3/DS0	3.6.0	4-port Channelized T3 to DS0 SPA	S
SPA-4XOC3-ATM	3.6.0	4-port OC-3c/STM-1c ATM SPA	S
SPA-4XOC3-POS	3.6.0	4-port OC-3c/STM-1c POS SPA	S
SPA-4XOC48POS/RPR	3.6.0	4-port OC-48c/STM-16 POS/DPT/RPR SPA	S
SPA-4XT3/E3	3.6.0	4-port Clear Channel T3/E3 SPA	S
SPA-5X1GE	3.6.0	5-port Gigabit Ethernet SPA, SFP Optics	S
SPA-8X1FE-TX-V2	3.6.0	8-port 10/100 Ethernet SPA TX	S
SPA-8XCHT1E1	3.6.0	8-Port Channelized T1/E1 SPA	S
SPA-OC192POS-LR	3.6.0	1-port OC-192c/STM-64 POS/RPR SPA, SM-LR	S
SPA-OC192POS-XFP	3.6.0	1-port OC-192c/STM-64 POS/RPR SPA, XFP Optics	S
WS-C6509-E-FAN	3.6.0	High-capacity fan tray	S
WS-C6509-NEB-A	3.6.1	Enhanced 9-slot vertically oriented chassis	S
WS-CAC-6000W	3.6.0	6000W AC power supply	S
WS-F6700-DFC3BXL	3.6.0	Distributed Forwarding Card 3BXL (DFC3BXL) for use on CEF720 modules	S
WS-F6700-DFC3C	3.6.0	Distributed Forwarding Card 3C (DFC3C) for use on CEF720 modules	S

Table 7-49 **Supported Modules for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WS-F6700-DFC3CXL	3.6.0	Distributed Forwarding Card 3CXL (DFC3CXL) for use on CEF720 modules	S
WS-F6K-FE48X2-AF	3.6.0	IEEE 802.3af PoE daughter card	S
WS-F6K-GE48-AF	3.6.0	IEEE 802.3af PoE daughter card	S
WS-F6K-MSFC2	3.6.1	Multilevel Switching Feature Card Version 2 for Catalyst 6000 that is treated as a standalone system by the NMS	S
WS-F6K-PFC2	3.6.1	Catalyst 6500 L3 switching engine II	S
WS-F6K-PFC3BXL	3.6.0	Policy Feature Card 3BXL (PFC3BXL)	V
WS-F6K-PFC3CXL	3.6.0	Policy Feature Card 3CXL (PFC3CXL)	S
WS-F6K-VPWR	3.6.0	PoE Daughter card	S
WS-F6K-VPWR-GE	3.6.0	PoE Daughter card	S
WS-G6483	3.6.0	10GBASE-ER serial 1550 nm extended-reach OIM	S
WS-G6488	3.6.0	10GBASE-LR serial 1310 nm long-reach OIM	S
WS-SUP32-10GE-3B	3.6.0	Supervisor Engine 32	S
WS-SUP32-GE-3B	3.6.0	Supervisor Engine 32	S
WS-SUP720-3B	3.6.0	Supervisor Engine 720 with PFC3B	V
WS-SUP720-3BXL	3.6.0	Supervisor Engine 720 with PFC3BXL	V
WS-SVC-IDS2-BUN-K9	3.6.1	Cisco Catalyst 6500 Series Intrusion Detection System (IDS2) Service Module	S
WS-SVC-MWAM-1	3.6.0	Multi-Processor WAN Application Module	S
WS-SVC-NAM-1	3.6.0	Network Analysis module 1	S
WS-SVC-NAM-2	3.6.0	Network Analysis module 2	S
WS-X6148A-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6148A-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6148-FE-SFP	3.6.0	48 port 100BASE-FX Fast Ethernet Switching Module	S
WS-X6148-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6148-RJ-21	3.6.0	48 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6148-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6148X2-RJ-45	3.6.0	96 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6196-RJ-21	3.6.0	96 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6248A-TEL	3.6.0	48 port 10/100TX RJ-21 Enhanced Ethernet/Fast Ethernet Switching Module	S
WS-X6248-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6248-TEL	3.6.0	48 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6316-GE-TX	3.6.0	16-port Gigabit Ethernet RJ-45	S
WS-X6324-100FX-SM	3.6.0	24 port 100FX Single Mode Fast Ethernet Switching Module	S

Table 7-49 **Supported Modules for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WS-X6348-RJ-21	3.6.0	6500 48 port 10/100BaseTX (RJ-21)	S
WS-X6348-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6408A-GBIC	3.6.0	8-port Gigabit Ethernet GBIC Enhanced QoS Module	S
WS-X6408-GBIC	3.6.0	8-port Gigabit Ethernet GBIC	S
WS-X6416-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
WS-X6502-10GE	3.6.0	1-port 10-Gigabit Ethernet	S
WS-X6516A-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
WS-X6516-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
WS-X6516-GE-TX	3.6.0	16 port 10/100/1000 Base-T Ethernet Switching Module	S
WS-X6548-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6548-RJ-21	3.6.0	48 port 10/100TX RJ-21 Ethernet/Fast Ethernet Switching Module	S
WS-X6548-RJ-45	3.6.0	48 port 10/100TX RJ-45 Ethernet/Fast Ethernet Switching Module	S
WS-X6582-2PA	3.6.0	Enhanced FlexWAN Module;	S
WS-X6700-CFC	3.6.0	Centralized Forwarding Card	S
WS-X6704-10GE	3.6.0	4-port 10-Gigabit Ethernet	S
WS-X6724-SFP	3.6.0	24-port Gigabit Ethernet SFP	S
WS-X6748-GE-TX	3.6.0	48 port 10/100/1000 RJ-45 Ethernet Switching Module	S
WS-X6748-SFP	3.6.0	48-port Gigabit Ethernet SFP	S
WS-X6816-GBIC	3.6.0	16-port Gigabit Ethernet GBIC	S
XENPAK-10GB-ER	3.6.0	10GBASE-ER Serial 1550-nm extended-reach, single-mode fiber (SMF), dispersion-shifted fiber (DSF)	S
XENPAK-10GB-SR	3.6.0	10GBASE-SR Serial 850-nm short-reach multimode fiber (MMF)	S
WS-6700-DFC3B	3.6.1	Catalyst 6500 Distributed forwarding card 3B	S
WS-6700-DFC3BXL	3.6.1	Catalyst 6500 Distributed forwarding card 3B XL	S
WS-X6148FE-SFP	3.6.1	Catalyst 6500 48 port 100Base-X SFP module	S
WS-X6K-S1A-MSFC2	3.6.1	Catalyst 6000 Supervisor Engine 1A, 2 Gigabit Ethernet, plus MSFC2 and policy feature card (PFC)	S
WS-X6K-SUP2-2GE	3.6.1	Supervisor 2 with 2 Gigabit Ethernet ports	S
WS-F6700-DFC3A	3.6.1	Distributed Forwarding Card 3	S
CEVFAN	3.6.1	Fan	S
DFC-3C	3.6.1	Distributed Forwarding Card 3C	S
PA-2CE/PRI	3.6.1	Not Found	S
PA-MC-2E1/120	3.6.1	2 port multichannel E1 port adapter with G.703 120ohm interf	S
PA-MCX-8TE1	3.6.1	8 port multichannel T1/E1 8PRI port adapter	S
PFC-3CXL	3.6.1	Policy Feature Card 3Cxl (PFC3CXL)	S
RSP720-3C-GE	3.6.1	Route Switch Processor 720 with PFC3C	S

Table 7-49 Supported Modules for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5 (Continued)

Module Name	ANA Version	Module Description	Certification Level
WS-X6K-S2-MSFC2	3.6.1	Catalyst 6500 Supervisor Engine-2, 2GE, plus MSFC-2 / PFC-2	S
SFP-OC3-SR	3.6.1	OC3/STM1 SFP, Single-mode fiber, Short Reach	S
SPA-2X1GE-V2	3.6.2	2-Port Gigabit Ethernet Shared Port Adapter.	S
SPA-5X1GE-V2	3.6.2	5-Port Gigabit Ethernet Shared Port Adapter	S
SPA-CHOC3-CE-ATM	3.6.2	1-port Channelized OC3/STM-1 ATM + Circuit Emulation Shared Port Adapter	S
WS-F6700-DFC-3C	3.6.2	Catalyst 6500 Distributed forwarding card 3C	S
WS-F6700-DFC-3CXL	3.6.2	Catalyst 6500 Distributed forwarding card 3C XL	S
4000W-DC	3.6.2	4000W DC PS for 7609/7613Chassis	S
6000W-DC	3.6.2	6000W DC PS	S
MSFC4	3.6.2	Multilayer Switch Feature Card	S
PFC-3C	3.6.2	Policy Feature Card 3C	S
CAT6500FIREWALLSM	3.6.2	Cisco Catalyst 6500 Series Firewall Services Module	S
CAT6500SSLSM	3.6.2	Cisco Catalyst 6500 Series SSL Services Module	S
PWR-2700-DC/4	3.6.2	2700W DC Power Supply for Cisco 6504-E	S
WS-X6708-10GE	3.6.3	C6K 8 port 10 Gigabit Ethernet module with DFC	S
WS-CAC-4000W-INT	3.6.3	4000W AC PowerSupply, International (cable included)	S
WS-X6708-10G-3C	3.6.1	C6K 8 port 10 Gigabit Ethernet module with DFC3C (req. X2)	S
WS-C6K-13SLT-FAN2	3.6.0	High Speed Fan Tray for Catalyst 6513 / Cisco 7613	S
WS-SVC-FWM-1	3.6.0	Catalyst 6500 Firewall Module	S
WS-SVC-IDSM-2	3.6.1	Catalyst 6500 Intrusion Detection Module	S
VS-S720-10G-3C	3.6.1	Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with two 10 Gigabit Ethernet ports and MSFC3 PFC3C	S
VS-S720-10G-3CXL	3.6.1	Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with two 10 Gigabit Ethernet ports and MSFC3 PFC3C XL	S
ACE20-MOD-K9	3.6.3	Application Control Engine 20 Hardware	S
7600-SSC-400	3.6.3	Cisco 7600 / Catalyst 6500 Services SPA Carrier Card-400 Rev. 2.0	S
PWR-2700-AC/4	3.6.4	2700W AC power supply for Cisco Catalyst 6504-E	S
WS-CAC-3000W	3.6.4	Catalyst 6500 3000W AC power supply	S
WS-C6506-E-FAN	3.6.4	Catalyst 6506 - E chassis fan 1	S
WS-CAC-2500W	3.6.4	Catalyst 6500 2500W AC power supply	S
FAN-MOD-09	3.6.4	Catalyst 6509-NEB-A Fan Tray	S
PWR-4000-DC	3.6.4	Cisco 4000 Watt DC power supply for Catalyst 6000	S
WS-CDC-2500W	3.6.4	Cisco 2500 Watt DC power supply for Catalyst 6000 or 8500 series	S
WS-C6509-NEB-FAN	3.6.4	Catalyst 6509-NEB Fan Tray for 9-Vertical-Slot System	S
RSP720-3CXL	3.6.4	Catalyst 6500 Supervisor Module 720 base board	S

Table 7-49 **Supported Modules for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
WS-G5486	3.6.4	Long Haul fiber Gigabit Ethernet	S
GLC-LH-SM	3.6.5	Short Wave fiber Gigabit Ethernet	S
SFP-GE-L	3.6.5	1000BASE-LH/LX pluggable transceiver	S
XFP-10GLR-OC192SR	3.6.4	OC192 XFP Single Mode Long Reach 2 (80km).	S
XENPAK-10GB-LR	3.6.4	10 Gigabit Ethernet Serial 1310nm Laser Xenpak Module	S
7600-ES40-G3CXL	3.6.4	7600 ES+ Line Card, 40xGE SFP with DFC 3CXL	S
WS-C6503-E-FAN	3.6.4	Catalyst 6503-E Chassis Fan Tray	S
WS-C6506-E-FAN	3.6.4	Catalyst 6506-E Chassis Fan Tray	S
FAN-MOD-09	3.6.4	Fan Module for CISCO7609 and Catalyst WS-C6509-NEB-A	S
WS-C6509-V-E-FAN	3.6.4	Catalyst 6509-V-E Fan Tray	S
WS-C6K-13SLT-FAN2	3.6.4	High Speed Fan Tray for Catalyst 6513 / Cisco 7613	S
X2-10GB-SR	3.6.5	10GBASE-SR Serial 850-nm short-reach multimode (MMF)	S

Cisco Catalyst 6500 Series (IOS)—Supported Technologies

The following technologies are supported by the Cisco Catalyst 6500 Series (IOS) in Cisco ANA 3.6.5:

- [IP, page 7-46](#)
- [Routing Protocols, page 7-48](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [ATM, page 7-52](#)
- [Physical Technologies, page 7-56](#)
- [MPLS, page 7-57](#)
- [MPLS-TE, page 7-59](#)
- [VPN, page 7-60](#)
- [PWE3, page 7-61](#)
- [ACL, page 7-62](#)
- [BFD, page 7-66](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)

Cisco Catalyst 6500 Series (IOS)—Supported Service Events

Table 7-50 *Supported Service Events for Cisco Catalyst 6500 Series (IOS)—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	Y
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y
Adaptive Polling	3.6.0	N
BGP link down	3.6.1	Y
MPLS interface removed	3.6.0	Y

Cisco ME 6500 Series Ethernet Switches (6524)

This section includes the following information about Cisco ME 6500 Series (6524) switches:

- [Cisco ME 6500 Series \(6524\)—Supported Software Versions, page 7-43](#)
- [Cisco ME 6500 Series \(6524\)—Supported Topologies, page 7-43](#)
- [Cisco ME 6500 Series \(6524\)—Supported Modules, page 7-43](#)
- [Cisco ME 6500 Series \(6524\)—Supported Technologies, page 7-44](#)
- [Cisco ME 6500 Series \(6524\)—Supported Service Events, page 7-44](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Cisco ME 6500 Series Ethernet Switches \(6524\)](#).

Cisco ME 6500 Series (6524)—Supported Software Versions

Table 7-51 Supported Software Versions for Cisco ME 6500 Series (6524)—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
12.2(18)ZU	3.6.0	V
12.2(18)ZU1	3.6.0	V
12.2(18)ZU2	3.6.0	V
12.2(MAGO_ZU_INTEG_061213)	3.6.0	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Cisco ME 6500 Series (6524)—Supported Topologies

Table 7-52 Supported Topologies for Cisco ME 6500 Series (6524)—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.6.0
BGP	BGP	3.6.0
Ethernet	Ethernet	3.6.0
MPLS	MPLS	3.6.0
VPN (VRF)	VPN	3.6.0
Physical Layer	Physical Layer	3.6.0
IP	IP	3.6.0

Cisco ME 6500 Series (6524)—Supported Modules

Table 7-53 Supported Modules for Cisco ME 6500 Series (6524)—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
WS-6148-GE-TX	3.6.0	Catalyst 6000 48 port 10/100/1000BaseT(RJ-45) module	V
WS-6148A-GE-TX	3.6.0	Catalyst 6500 48 port 10/100/1000BaseTX (RJ-45) module	V

Cisco ME 6500 Series (6524)—Supported Technologies

The following technologies are supported by the Cisco ME 6500 Series (6524) in Cisco ANA 3.6.5:

- [IP](#), page 7-46
- [Routing Protocols](#), page 7-48
- [Ethernet \(IEEE 802.3\)](#), page 7-49
- [ATM](#), page 7-52
- [Frame Relay](#), page 7-54
- [Point to Point](#), page 7-56
- [MPLS](#), page 7-57
- [MPLS-TE](#), page 7-59
- [VPN](#), page 7-60
- [PWE3](#), page 7-61
- [ACL](#), page 7-62
- [Physical Equipment](#), page 7-62
- [Base Logical Components](#), page 7-63
- [Common](#), page 7-64
- [Additional Technologies](#), page 7-66

Cisco ME 6500 Series (6524)—Supported Service Events

Table 7-54 *Supported Service Events for Cisco ME 6500 Series (6524)—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.6.0	N
Secondary HSRP Interface Active/Inactive	3.6.0	N
All IP Interfaces Down / Active IP Interfaces Found	3.6.0	Y
Interface Status Down/Up	3.6.0	Y
Card In/Out	3.6.0	Y
Link Down/Up	3.6.0	Y
Device Unreachable	3.6.0	N
CPU Over Utilized	3.6.0	N
Memory Over Utilized	3.6.0	N
Device Unsupported	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Module Unsupported	3.6.0	N
Port Flapping	3.6.0	N

Table 7-54 **Supported Service Events for Cisco ME 6500 Series (6524)—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
Port Down	3.6.0	Y
Rx Over Utilized	3.6.0	N
Tx Over Utilized	3.6.0	N
VPN Leak	3.6.0	N
Cloud Problem	3.6.0	N
Broken LSP Discovered	3.6.0	N
MPLS Black Hole	3.6.0	N
Layer 2 Tunnel Down	3.6.0	N
MPLS TE Tunnel Down/Flapping	3.6.0	N
BGP Neighbor Down	3.6.0	N
Card Up/Down	3.6.0	Y

Supported Technologies on Cisco Switches

The following sections list the objects and attributes that are supported on Cisco switches in Cisco ANA 3.6.5 per technology:

- [IP, page 7-46](#)
- [Routing Protocols, page 7-48](#)
- [Ethernet \(IEEE 802.3\), page 7-49](#)
- [ATM, page 7-52](#)
- [Frame Relay, page 7-54](#)
- [Point to Point, page 7-56](#)
- [Physical Technologies, page 7-56](#)
- [MPLS, page 7-57](#)
- [MPLS-TE, page 7-59](#)
- [VPN, page 7-60](#)
- [PWE3, page 7-61](#)
- [ACL, page 7-62](#)
- [Physical Equipment, page 7-62](#)
- [Base Logical Components, page 7-63](#)
- [Common, page 7-64](#)
- [Additional Technologies, page 7-66](#)
- [BFD, page 7-66](#)

IP

Table 7-55 IP Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IIPInterface														
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Subnetwork Mask	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IP Interface Addresses Array	Y						Y					Y	Y	Y
Interface Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Interface Description					Y		Y	Y					Y	Y
IP Interface State	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OSPF Interface Cost													Y	
Broadcast Address								Y					Y	
MTU		Y		Y				Y					Y	Y
Lookup Method														
Address Resolution Type														
ARP Timeout														
Secured ARP														
ICMP Mask Reply														
IGMP Proxy														
HSRP Groups							Y						Y	Y
IP Multiplexing Table														
IANA Type								Y						
Containing CTPs														
Contained CTPs														
IMO Name—IIPMuxEntry														
Termination Point				Y	Y		Y						Y	Y
Destination IP Subnet				Y	Y		Y						Y	Y
IMO Name—IIRoutingEntity														
Routing Table	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
ARP Entity	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
Routing Table Changes														
Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
Logical Sons	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
IMO Name—IIRoutingEntry														
Destination IP Subnet	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 7-55 IP Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Next Hop IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Routing Protocol Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Outgoing Interface Name	Y	Y	Y	Y	Y	Y	Y		Y		Y	Y	Y	Y
IMO Name—IARPEntity														
ARP Table	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
IMO Name—IARPEntity														
IP Address	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
MAC Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Port	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
Entry Type							Y	Y					Y	Y
IMO Name—IIPPool														
IP Address Pool Entries														
Name														
Index														
IMO Name—IIPRangeBasedIPPoolEntry														
Start IP Address														
End IP Address														
Unused Addresses														
Used Addresses														
Reserved Addresses														
IMO Name—IIPSubnetBasedIPPoolEntry														
IP Subnet														
Unused Addresses														
Used Addresses														
Reserved Addresses														
IMO Name—HSRPGGroupEntry														
Group Number							Y						Y	Y
Port Description							Y						Y	Y
Priority							Y						Y	Y
Coupled Router							Y						Y	Y
State							Y						Y	Y
Tracking Interfaces														
Virtual IP Address							Y						Y	Y

Table 7-55 IP Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Virtual MAC Address							Y						Y	Y
IMO Name—I Tunnel GRE														
Name													Y	Y
Tunnel Destination and Source													Y	Y
IP Address													Y	Y
IP Interface State													Y	
IANA Type														
Containing CTPs														
Contained CTPs														

Routing Protocols

Table 7-56 Routing Protocols Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IBgp Neighbour Entry														
Remote Identifier							Y						Y	Y
Neighbor Type														
Distributing Interfaces														
Remote Address							Y						Y	Y
Remote Autonomous System							Y						Y	Y
Status							Y						Y	Y
Hold Time							Y						Y	Y
Keep Alive Time							Y						Y	Y
IMO Name—Iospf Entry														
Area Identifier		Y					Y			Y	Y		Y	Y
IP Address		Y					Y			Y	Y		Y	Y
Type		Y					Y			Y	Y		Y	Y
Administrative Status		Y					Y			Y	Y		Y	Y
Operational Status		Y					Y			Y	Y		Y	Y

Ethernet (IEEE 802.3)

Table 7-57 Ethernet (IEEE 802.3) Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IISLagPortEntry														
Actor and Partner Admin Keys	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Actor and Partner Oper Keys	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Selected and Attached Aggregation Identification	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Actor Port	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Actor Port Priority	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Partner Admin and Oper Port	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Partner Admin and Oper Port Priority	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Actor and Partner Admin States	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Actor and Partner Oper States	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IIEthernet														
MAC Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Duplex Mode														
Output Flow Control														
Input Flow Control														
IANA Type														Y
Containing CTPs														
Contained CTPs														
IMO Name—IIVlanInterface														
Mode		Y		Y	Y	Y	Y			Y	Y	Y	Y	Y
Native VLAN Identification		Y		Y	Y	Y	Y			Y	Y	Y	Y	Y
Virtual LAN Table														
IANA Type												Y		Y
Containing CTPs														
Contained CTPs														
IMO Name—IIVlanEncapMux														
IANA Type						Y	Y							
Containing CTPs														
Contained CTPs														

Table 7-57 Ethernet (IEEE 802.3) Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IIEEE802														
VLAN Identification		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y
Binding Information														
Binding Status														
IANA Type			Y	Y	Y	Y	Y	Y	Y				Y	Y
Containing CTPs														
Contained CTPs														
IMO Name—IStpService														
Protocol Type	Y	Y	Y	Y	Y	Y				Y	Y	Y		Y
Current and Bridge Max Age	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Current and Bridge Hello Time	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Current and Bridge Forward Delay	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Instance Information Table		Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y
Same as ISystemService		Y								Y	Y			
IMO Name—IMstService														
Protocol Properties														Y
Same as IStpService														Y
IMO Name—IMstProperties														
Force Version	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Configuration Format, Region Name and Revision Level	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
External Root Cost		Y												
Maximum Instances														
IMO Name—IStpInstanceInfo														
Object Identification		Y					Y			Y	Y			
Identification							Y							
Priority		Y					Y			Y	Y			
Designated Parent and Root Bridges	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Root Cost	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is Root	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Root Port Identification	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Port Information Table	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y

Table 7-57 Ethernet (IEEE 802.3) Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IMstInstanceInfo														
Instance Identification	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Same as IStpInstanceInfo	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IPvstpInstanceInfo														
Protocol Type	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Current and Bridg Maximum Age	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Current and Bridge Hello Time	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Current and Bridge Forward Delay	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Same as IStpInstanceInfo	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Current and Bridge Maximum Age	Y													
IMO Name—IRstpInstanceInfo														
Force Version	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Same as IStpInstanceInfo	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
IMO Name—IStpPortInfo														
Object Identification	Y		Y	Y	Y	Y	Y	Y	Y			Y		
Priority	Y		Y	Y	Y	Y	Y	Y	Y			Y		
State	Y		Y	Y	Y	Y	Y	Y	Y			Y		
Path Cost	Y		Y	Y	Y	Y	Y	Y	Y			Y		
Is Edge	Y		Y	Y	Y	Y	Y	Y	Y			Y		
Is Point to Point	Y		Y	Y	Y	Y	Y	Y	Y			Y		
Role	Y		Y	Y	Y	Y	Y	Y	Y			Y		
IMO Name—IMstPortInfo														
Hello Time	Y			Y	Y									
Same as IStpPortInfo	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
IMO Name—IEthernetChannel														
Group Number	Y ¹	Y	Y	Y ⁵	Y ⁸	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bandwidth	Y ²	Y	Y	Y	Y ⁹	Y	Y	Y	Y	Y	Y	Y	Y	Y
Aggregation Protocol	Y ³	Y	Y	Y ⁶	Y ¹⁰	Y	Y	Y	Y	Y		Y	Y	Y
IANA Type	Y ⁴	Y	Y	Y ⁷	Y ¹¹	Y	Y	Y	Y	Y		Y	Y	Y
Containing CTPs														
Contained CTPs														

¹SNMP is supported from ANA 3.6.0

²SNMP is supported from ANA 3.6.0

³SNMP is supported from ANA 3.6.0

⁴SNMP is supported from ANA 3.6.0

⁵SNMP is supported from ANA 3.6.0

⁶SNMP is supported from ANA 3.6.0

⁷SNMP is supported from ANA 3.6.0

⁸SNMP is supported from ANA 3.6.0

⁹SNMP is supported from ANA 3.6.0

¹⁰SNMP is supported from ANA 3.6.0

¹¹SNMP is supported from ANA 3.6.0

ATM

Table 7-58 **ATM Attribute Support on Cisco Switches—Cisco ANA 3.6.5**

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IAtm														
ATM Address														
Interface Type														Y
VP and VC Ranges														Y
VC Table													Y	Y
Cross-Connect Table														
IANA Type													Y	Y
Containing CTPs														
Contained CTPs														
IMO Name—IAtmVc														
Virtual Channel Identifier													Y	Y
Virtual Path Identifier													Y	Y
Shaping Profile														
Discarded and Received Input Data Counters													Y	Y
Dropped and Forward Output Data Counters													Y	Y
Ingress Traffic Descriptor													Y	Y
Egress Traffic Descriptor													Y	Y
Administrative Status													Y	Y

Table 7-58 ATM Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Operational Status													Y	Y
IANA Type														
Containing CTPs														
Contained CTPs														
IMO Name—IIMAGroup														
Description														
Speed														
Admin Status														
Oper Status														
Oper Status Last Change														
IANA Type														
Containing CTPs														
IMO Name—IAtmTrafficDescriptor														
Traffic Descriptor Type													Y	Y
Service Category													Y	Y
Cell Loss Priority													Y	Y
Cell Delay Variation														
Cell Dealy Variation Tolerance													Y	
Maximum High Priority and Aggregate Cell Rates													Y	Y
Minimum High Priority and Aggregate Cell Rates													Y	Y
Sustainable High Priority and Aggregate Cell Rates													Y	Y
Peak High Priority and Aggregate Cell Rates													Y	Y
Name														
Index														Y
Cell Delay Variation Tolerance	Y													
IMO Name—IAtmTrafficShapingDescriptor														
Maximum Burst Size														
Sustainable and Peak Cell Rates														
Cell Delay Variation														
State														
Buffer Size														

Table 7-58 ATM Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Cell Loss Priority Discarded Size														
Name														
Index														
IMO Name—IAtmTrunk														
Same as IAtm														
IMO Name—IAtmLogicalPort/Trunk														
Resource Management Cell Termination														
Resource Management Cell Generation														
Effective Check Input and Output Capacities														
Admin Status														
Oper Status														
Same as IAtm														
IMO Name—IAtmTrunkVc														
Destination Description														
Same as IAtmVc														

Frame Relay

Table 7-59 Frame Relay Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IframeRelay/IFrTrunk														
Protocol Type														Y
VC Table														Y
Cross-Connect Table														
IANA Type														
Containing CTPs														
Contained CTPs														

Table 7-59 Frame Relay Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IfrVc														
Data Link Connection Identifier														Y
Traffic Descriptor														Y
Discard and Received Input Data Counters														
Dropped and Forward Output Data Counters														
Ingress Traffic Descriptor														
Egress Traffic Descriptor														
Administrative Status														Y
Operational Status														Y
IANA Type														Y
Containing CTPs														
Contained CTPs														
IMO Name—IfrTrafficDescriptor														
Committed Rate														Y
Excess Burst Rate														Y
Name														
Index														
IMO Name—IfrFrameRelayLogicalPort/Trunk														
Admin Status														
Oper Status														
Same as IFrameRelay														
IMO Name—IfrTrunkVc														
Destination Description														
Same as IFrVc														
IMO Name—IEncapsulation														
Virtual Connection Interface												Y		Y
Binding Information														

Point to Point

Table 7-60 Point to Point Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IvcBasedEncapsulation														
Virtual Connection														
Binding Information														
Binding Status												Y		
IANA Type												Y		
Containing CTPs														
Contained CTPs														
Virtual Connection														
IMO Name—Iencapsulation (HDLC/PPP)														
Virtual Connection														
Binding Information														
Binding Status														
IANA Type														
Containing CTPs														
Contained CTPs														

Physical Technologies

Table 7-61 Physical Technologies Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IsonetSdh														
Specific Type														
Loopback Type													Y	
Scrambling Mode													Y	
Same as IPhysicalLayer														
IMO Name—IDS0Bundle														
Bundled Time Slots													Y	
Bundle Location														
IANA Type													Y	

Table 7-61 Physical Technologies Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Containing CTPs														
Contained CTPs														
IMO Name—IDS1Pdh / IDS3Pdh														
Framing Type														
Cell Mapping Type														
Loopback Type													Y	
Scrambling Mode													Y	
Same as IPhysicalLayer														

MPLS

Table 7-62 MPLS Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IMpls														
Distribution Protocol							Y						Y	Y
Outer and Inner Labels														
Traffic Engineering Properties							Y						Y	Y
Resource reservation Properties														
IANA Type							Y						Y	
Containing CTPs														
Contained CTPs														
IMO Name—ILse														
MPLS Table							Y						Y	Y
MPLS Aggregate Table							Y						Y	Y
MPLS Tunnel Segments							Y							
LDP Service							Y							
Logical Sons							Y						Y	Y
IMO Name—ILdpService														
Local Identification Status							Y							
LDP Peers							Y						Y	Y

Table 7-62 MPLS Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—ILdpPeer														
Peer Identification							Y						Y	Y
Transport Address							Y						Y	Y
Distribution Method							Y						Y	Y
Protocol Type							Y							
Path Vector Limit							Y						Y	Y
Session Status							Y						Y	Y
Protocol Version Hold Time													Y	Y
Hold Time							Y						Y	Y
Hello Time Interval													Y	Y
Peer Discovery Sources							Y						Y	Y
IMO Name—ILdpDiscoverySource														
Interface Name							Y						Y	Y
Source Address							Y						Y	Y
Type							Y						Y	Y
IMO Name—IMplsEntry														
Incoming Label							Y						Y	Y
Outgoing Interface and Label							Y						Y	Y
Switching Action							Y						Y	Y
Next Hop IP Address							Y						Y	Y
IMO Name—IMplsAggregateEntry														
Virtual Routing Entity							Y						Y	Y
Incoming Label							Y						Y	Y
Outgoing Interface and Label							Y						Y	Y
Switching Action							Y						Y	Y
Next Hop IP Address							Y						Y	Y

MPLS-TE

Table 7-63 MPLS-TE Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IMplsTETunnel														
Destination Address													Y	Y
Outgoing Interface and Label													Y	Y
Path Identification													Y	Y
Requested Bandwidth													Y	Y
Measured Average Burst and Peak Bandwidth													Y	Y
Setup and Hold Priority													Y	Y
Affinity Bits and Mask													Y	Y
Automatic Route Announcement Status													Y	Y
Optimization Lock Down Status													Y	Y
Path Option													Y	Y
Name													Y	Y
Description													Y	Y
Administrative Status													Y	Y
Operational Status													Y	Y
IANA Type													Y	Y
IMO Name—IMplsTEProperties														
Administrative Weight													Y	Y
Attributes Identifier														Y
Signalling Protocol														
Available Physical and Reservable Bandwidth													Y	Y
Reserved Bandwidth													Y	Y
Signaling Protocol	Y													
IMO Name—IMplsTEPropertiesAllocationEntry														
Priority Level														
Allocated and Cumulative Bandwidth														
IMO Name—IMplsTESegment														
Segment Type													Y	Y

Table 7-63 MPLS-TE Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Measured Average Burst and Peak Bandwidth													Y	Y
Path Identification													Y	Y
Name													Y	Y

VPN

Table 7-64 VPN Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IVrf														
Virtual Routing Table							Y						Y	
Exported Route Targets							Y							
Imported Route Targets							Y							
Route Distinguisher							Y						Y	
ARP Entity							Y							
Name							Y						Y	
Logical Sops							Y						Y	
Virtual Routing Table														
IMO Name—IVrfEntry														
Next Hop BGP Address							Y						Y	
Incoming and Outgoing Inner Label							Y						Y	
Outer Label							Y						Y	
Destination IP Subnet		Y					Y						Y	
Next Hop IP Address		Y					Y						Y	
Type							Y						Y	
Routing Protocol Type							Y						Y	
Outgoing Interface Name							Y						Y	
IMO Name—IMpBgp														
BGP Identifier							Y						Y	
Local Autonomous System							Y						Y	
Cross Virtual Routing Table							Y							

Table 7-64 VPN Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
BGP Neighbors							Y							
Logical Sons							Y						Y	
IMO Name—ICrossVrf														
Virtual Routing Entries							Y							
Virtual Routing Entity Name							Y							
IMO Name—ICrossVrfRoutingEntry														
Outgoing Virtual Routing Entity Identifier														
Incoming and Outgoing Virtual Routing Tags														
Destination IP Subnet							Y						Y	
Next Hop IP Address							Y						Y	
Type							Y						Y	
Routing Protocol Type							Y						Y	
Outgoing Interface Name														

PWE3

Table 7-65 PWE3 Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IPTLayer2MplsTunnel														
Local and Remote Router Addresses							Y						Y	Y
Local and Remote Virtual Connection Labels							Y						Y	Y
Tunnel Identification							Y						Y	Y
Tunnel Status							Y						Y	Y
Local and Remote Tunnel Interface														Y
IANA Type							Y						Y	Y
Containing CTPs														
Contained CTPs														

ACL

Table 7-66 ACL Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IAccessList														
Type		Y					Y						Y	Y
Access List Entries		Y					Y						Y	Y
Name		Y					Y						Y	Y
Index		Y					Y						Y	Y
IMO Name—IAccessListEntry														
Entry Identification		Y					Y						Y	Y
Action Logic		Y					Y						Y	Y
Source and Destination Address		Y					Y						Y	Y
Source and Destination Wildcard		Y					Y						Y	
Protocol Type		Y					Y						Y	Y
Source and Destination Port Ranges		Y					Y						Y	Y
Source and Destination Port Action		Y					Y						Y	Y
Protocol Specific Info		Y					Y						Y	Y
Differential Services Code Points		Y					Y						Y	Y
Type of Service		Y					Y						Y	Y
Precedence		Y					Y						Y	Y
Matches		Y					Y						Y	Y
Source and Destination Wildcard	Y													

Physical Equipment

Table 7-67 Physical Equipment Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IChassis														
Description								Y	Y			Y		
Equipment Holder Type			Y				Y	Y	Y				Y	Y

Table 7-67 Physical Equipment Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Contained Equipment Holders														
Contained Equipments														
IMO Name—IShelf														
Description														
Status														
Equipment Holder Type														
Contained Equipment Holders														
Contained Equipments														
IMO Name—IModule														
Module Name	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
Module Description		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
Software Version	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Operational Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hardware Type + Version	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Managed IP Address														
Redundant Equipment														
Configured Redundancy														
Redundancy Status			Y	Y	Y	Y	Y		Y				Y	Y
Operational Status Last Changed		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y
Supported Physical Termination Points		Y							Y	Y	Y		Y	Y
Serial Number (soft property)	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Base Logical Components

Table 7-68 Base Logical Components Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IManagedElement														
IP Address	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Communication State	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Investigation State	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y		Y

Table 7-68 Base Logical Components Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Element Category	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Element Type and Key	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Device Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
System Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
System Description	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Up Time	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Software Version	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vendor Identity	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
Memory and CPU Usage	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IMO Name—IContext														
Name				Y	Y		Y							Y
Bounded Connections														
IP Address Pools														
Forwarding Components List														
Traffic Descriptors List														
Tunnel Containers List														
Data Link Aggregation Containers List														
IMO Name—ISystemService														
Type														
Status														
Up Time	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y

Common

Table 7-69 Common Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—IPhysicalLayer														
Media Type	Y	Y	Y	Y	Y	Y	Y		Y		Y	Y	Y	Y
Clocking Source													Y	Y
Maximum Speed	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 7-69 Common Attribute Support on Cisco Switches—Cisco ANA 3.6.5 (Continued)

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
Is Internal Port	Y	Y	Y	Y	Y	Y	Y		Y			Y	Y	Y
Discarded Bandwidth														
Dropped Bandwidth														
Input Bandwidth														
Output Bandwidth														
Discarded and Received Input Data Counters	Y		Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
Dropped and Forward Output Data Counters	Y		Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
Administrative Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Operational Status	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Last Changed	Y		Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
IANA Type	Y		Y	Y	Y	Y	Y		Y			Y	Y	Y
Containing CTPs														
Contained CTPs														
IMO Name—IBridge														
Bridge Table	Y	Y		Y	Y			Y	Y	Y	Y		Y	Y
Type	Y	Y		Y	Y					Y	Y		Y	Y
MAC Address	Y	Y		Y	Y			Y	Y	Y	Y		Y	Y
IP Interface	Y			Y	Y			Y	Y				Y	Y
Name	Y	Y		Y	Y			Y	Y	Y	Y		Y	Y
Logical Sons	Y	Y		Y	Y			Y	Y	Y	Y		Y	Y
IMO Name—IBridgeEntry														
Destination MAC	Y	Y		Y	Y			Y	Y	Y	Y	Y	Y	Y
Outgoing Interface		Y								Y	Y	Y	Y	Y
IMO Name—IVcSwitchingEntity														
Cross Connect Table														
Logical Sons														

Additional Technologies

Table 7-70 Additional Technologies Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	2900	3400ME	3500	3550	3560	3750	ME 3750	4000	4500	4900	4924ME	6500 CatOS	6500 IOS	ME 6524
IMO Name—POS														
POS		Y		Y	Y		Y			Y	Y		Y	Y

BFD

Table 7-71 BFD Attribute Support on Cisco Switches—Cisco ANA 3.6.5

Attribute	6500 IOS
IMO Name—IBfdService	
Status	Y
IMO Name—IBfdSession	
SourceIp	Y
DestinationIp	Y
Interval	Y
Multiplier	Y
Protocol	Y
State	Y
Interface	Y



CHAPTER 8

Support Information for Juniper Devices

This chapter contains support information for Virtual Network Elements (VNEs) that manage Juniper devices in Cisco ANA 3.6.5, and contains the following topics:

- [Juniper M-Series Multiservice Edge Routers, page 8-1](#)
- [Juniper T-Series Core Platforms, page 8-6](#)
- [Supported Technologies on Juniper Devices, page 8-9](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

Juniper M-Series Multiservice Edge Routers

This section includes the following information about Juniper M-Series devices:

- [Juniper M-Series—Supported Software Versions, page 8-2](#)
- [Juniper M-Series—Supported Topologies, page 8-2](#)
- [Juniper M-Series—Supported Modules, page 8-2](#)
- [Juniper M-Series—Supported Technologies, page 8-5](#)
- [Juniper M-Series—Supported Service Events, page 8-5](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Juniper M-Series Multiservice Edge Routers](#).

Juniper M-Series—Supported Software Versions

Table 8-1 Supported Software Versions for Juniper M-Series—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
7.1R2.2	3.6.1	S
7.6 R3.6	3.6.1	S
7.6 R4.2	3.6.1	S
7.6 R4.3	3.6.1	S
8.1R2.4	3.6.1	S
8.2 R3.5	3.6.1	S
8.2R3.6	3.6.1	S



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Juniper M-Series—Supported Topologies

Table 8-2 Supported Topologies for Juniper M-Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1

Juniper M-Series—Supported Modules

Table 8-3 Supported Modules for Juniper M-Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
PEM	3.6.1	AC/DC Power Supply	S
TOP FAN	3.6.1	Fan Module	S
FPC: M320 FPC TYPE 1	3.6.1	Flexible PIC Concentrators	S
PIC: ADAPTIVE SERVICES-II	3.6.1	Physical Interface Card	S
PIC: 1X STM-16 SDH, SMSR	3.6.1	1 Port STM16 PIC with SFP	S
PIC: 1X 10GE(LAN/WAN) IQ2	3.6.1	1Port 10-Gigabit Ethernet IQ2 PIC with XFP	S
ROUTING ENGINE 0	3.6.1	Routing Engine	S
FPM GBUS	3.6.1	Fuse Module	S
CB	3.6.1	Control Board	S

Table 8-3 **Supported Modules for Juniper M-Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
CIP	3.6.1	Connector Interface Pannel	S
SIB	3.6.1	Switch Interface Board	S
PIC: 1X CHSTM1 IQ SDH, SMIR	3.6.1	1 Port Channelized STM1 IQ PIC	S
PIC: 10X CHE1 IQ	3.6.1	10 Port Channelized E1 IQ PIC	S
PIC: 1X OC-48 SONET SFP	3.6.0	1 Port SONET/SDH OC48c/STM16 PIC with SFP	S
PIC: 1X TUNNEL	3.6.0	Tunnel Services PIC	S
PIC: 1X OC-12 SONET, SMIR	3.6.0	1 Port SONET/SDH OC12c/STM4 PIC	S
PIC: 1X G/E, 1000 BASE	3.6.0	1 Port Gigabit Ethernet PIC with SFP	S
PIC: 4X E3 IQ	3.6.0	4 Port E3 IQ PIC	S
PIC: 1X G/E IQ, 1000 BASE	3.6.0	1 Port Gigabit Ethernet IQ PIC with SFP	S
PIC: 4X STM-1 SDH, SMIR	3.6.0	4 Port SONET/SDH OC3c/STM1 PIC	S
PIC: 4X CHDS3 IQ	3.6.0	4 Port Channelized DS3 IQ PIC	S
PIC: 4X F/E, 100 BASE-TX	3.6.0	4 100Base-TX ports Fast Ethernet PICs	S
PIC: 1X G/E, 1000 BASE-SX	3.6.0	1 Port Gigabit Ethernet IQ PIC with SFP	S
PIC: 2X T3	3.6.0	2 Port T3 PIC	S
CFEB INTERNET PROCESSOR II	3.6.0	Fuse Module	S
M10I MIDPLANE ¹	3.6.1	M10i Midplane	S
M320MIDPLANE ¹	3.6.1	M320 Midplane	S
PIC: 1X STM-4 SDH, MM	3.6.1	1 Port SONET/SDH OC12c/STM4 PIC	S
PIC: 4X STM-4 SDH, SMIR	3.6.1	4 Port SONET/SDH OC12c/STM4 PIC	S
PIC: 2X OC-3 ATM-II IQ, SMIR	3.6.1	2 Port ATM2 OC3/STM1 IQ PIC	S
M10I HCM	3.6.1	M10i High-Availability Chassis Manager	S
PC-1XGE-XENPAC	3.6.2	1 PORT 10 GIGABIT ENET PIC M320,T320,T640	S
XENPAK-1XGE-LR	3.6.2	Juniper Networks transceiver module	S
PB-2GE-SFP-QPP	3.6.2	2-Port Gigabit Ethernet Services PIC with QPP	S
MEM-FPC-512-S	3.6.2	Optional FPC Memory Upgrade	S
PB-4CHDS3-QPP	3.6.2	4-Port Channelized DS3 to DS0 Services PIC with QPP, BNC	S
PB-2OC3-ATM2-SMIR	3.6.2	2-PORT OC-3/STM1 ATM SERVICES PIC, SINGLE MODE, IR (WITH DIFF. SERV)	S
PB-1GE-SFP-QPP	3.6.2	1 PORT GIGABIT ETHERNET IQ PIC (USES SFP OPTICS MODULES - SEE INTERFACE ACCESSORIES SECTION)	S
PB-2GE-SFP-QPP	3.6.2	2-Port Gigabit Ethernet IQ PIC (Uses SFP Optics Modules)	S

Table 8-3 **Supported Modules for Juniper M-Series—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
PB-4GE-SFP	3.6.2	Juniper Networks expansion module	S
PB-4OC3-SON-SMIR	3.6.2	4-Port SONET/SDH OC3/STM-1 PIC, SingleMode IR, for M160-FPC1	S
PC-8GE-TYPE3-SFP-IQ2	3.6.2	8-Port Type3 Gigabit Ethernet IQ2 PIC (Uses SFP Optics Modules - See Interface Accessories section)	S
M320-FPC2	3.6.2	Juniper Networks Flexible PIC Concentrator FPC2 - expansion module	S
PB-4GE-SFP	3.6.2	4-Port Gigabit Ethernet PIC (Requires pluggable SFP Optics Modules: SFP-1GE-SX, SFP-1GE-LX, SFP-1GE-LH, or SFP-1GE-T - See Interface Accessories section)	S
PC-4OC3-SON-SMIR	3.6.2	4-port SONET,SDH OC3,STM1 PIC, SMIR (For use with T640 and T320 FPC2)	S
RE-1600-2048-BB	3.6.2	Routing Engine with 1600MHz panel and 2GB memory - Base Bundle	S
SFP-1GE-LX	3.6.2	Small Form Factor Pluggable 1000Base-LX Gigabit Ethernet Optic Module	S
PIC: 4X E1, RJ48	3.6.2	4-Port E1 with RJ48 connectors	S
jnxFPC	3.6.4	FPC	S
jnxCBD	3.6.4	CBD	S
jnxHM	3.6.4	HM	S
jnxPower	3.6.4	Power Supply	S
jnxFan	3.6.4	Fan	S
jnxFPB	3.6.4	FPB	S
jnxM120FEB	3.6.4	M120 FEB	S
jnxPicType3TenPortGigEther	3.6.4	PIC: 10x 1GE(LAN), 1000 BASE	S

1. The midplane is a panel located in the center of the chassis, running from side to side and forming the rear of the PIC card cage. All router components plug directly into the midplane. This means the midplane is just a holder for the PICs inside the chassis. If the midplane for Juniper VNEs in ANA is not supported, a “device unsupported” alarm is generated. The midplane for Juniper VNEs will not be displayed in the Network Vision GUI.

Juniper M-Series—Supported Technologies

The following technologies are supported by the Juniper M-Series in Cisco ANA 3.6.5:

- [IP, page 8-9](#)
- [Routing Protocols, page 8-12](#)
- [Ethernet \(IEEE 802.3\), page 8-12](#)
- [ATM, page 8-15](#)
- [Frame Relay, page 8-18](#)
- [Point to Point, page 8-19](#)
- [MPLS, page 8-19](#)
- [VPN, page 8-21](#)
- [Physical Equipment, page 8-22](#)
- [Base Logical Components, page 8-23](#)
- [Common, page 8-24](#)

Juniper M-Series—Supported Service Events

Table 8-4 Supported Service Events for Juniper M-Series—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	Y
Interface Status Down/Up	3.6.1	Y
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Module Unsupported	3.6.1	Y
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N
VPN Leak	3.6.1	N
BGP Neighbor Down	3.6.1	N

Table 8-4 *Supported Service Events for Juniper M-Series—Cisco ANA 3.6.5 (Continued)*

Event Name	ANA Version	Expedited
Card Up/Down	3.6.1	Y
Adaptive Polling	3.6.1	N
BGP link down	3.6.1	Y
MPLS interface removed	3.6.1	N

Juniper T-Series Core Platforms

This section includes the following information about Juniper T-Series devices:

- [Juniper T-Series—Supported Software Versions, page 8-6](#)
- [Juniper T-Series—Supported Topologies, page 8-7](#)
- [Juniper T-Series—Supported Modules, page 8-7](#)
- [Juniper T-Series—Supported Technologies, page 8-8](#)
- [Juniper T-Series—Supported Service Events, page 8-8](#)


Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Juniper T-Series Core Platforms](#).

Juniper T-Series—Supported Software Versions

Table 8-5 *Supported Software Versions for Juniper T-Series—Cisco ANA 3.6.5*

Version Name	ANA Version	Certification Level
8.2R3.6	3.6.2	S
7.6R3.6	3.6.2	S
8.2R3.5	3.6.2	S


Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Juniper T-Series—Supported Topologies

Table 8-6 Supported Topologies for Juniper T-Series—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.6.1

Juniper T-Series—Supported Modules

Table 8-7 Supported Modules for Juniper T-Series—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
CIP-L-T640-S	3.6.1	Connector Interface Panel	S
FT-T640	3.6.1	Fan Tray - T640	S
PC-10GE-SFP	3.6.1	PIC: 10x 1GE(LAN), 1000 BASE	S
PC-1XGE-XENPAK	3.6.1	PIC, 1-Port 10GE, XENPAK Optics	S
RE-1600-2048-BB	3.6.1	Routing Engine, 1600Mhz, 2048 MB DRAM	S
SCG-T	3.6.1	T Series Sonet ClockGenerator	S
SCG-T-BB	3.6.1	T640 SONET Clock Generator Board	S
SFP-1GE-LH	3.6.1	SFP Pluggable 1000Base-LH GE Optic Module	S
SFP-1GE-LX	3.6.1	SFP Pluggable 1000Base-LX GE Optic Module	S
T640-FPC3-E2	3.6.1	FPC: E2-FPC Type 1, FPC: E-FPC Type 3	S
XENPAK-1XGE-LR	3.6.1	XENPAK Pluggable 10GBase-LR Optic Module	S
MEM-FPC-512-S	3.6.1	512MB DRAM for FPC	S
PC-8GE-TYPE3-SFP-IQ2	3.6.0	Gigabit Ethernet IQ2, 8-port SFP	S
T640-FPC3-E2	3.6.0	Enhanced II FPC3	S
RE-1600-2048-R	3.6.0	Routing Engine, 1600 Mhz, 2048 MB DRAM - redundant	S
PIC: 1X OC-192 SM SR1	3.6.1	PIC: 1x OC-192 SM SR1	S
PIC: 1X TUNNEL	3.6.1	Tunnel Services PIC	S

Juniper T-Series—Supported Technologies

The following technologies are supported by the Juniper T-Series in Cisco ANA 3.6.5:

- [IP, page 8-9](#)
- [Routing Protocols, page 8-12](#)
- [Ethernet \(IEEE 802.3\), page 8-12](#)
- [ATM, page 8-15](#)
- [Frame Relay, page 8-18](#)
- [Point to Point, page 8-19](#)
- [MPLS, page 8-19](#)
- [VPN, page 8-21](#)
- [Physical Equipment, page 8-22](#)
- [Base Logical Components, page 8-23](#)
- [Common, page 8-24](#)

Juniper T-Series—Supported Service Events

Table 8-8 *Supported Service Events for Juniper T-Series—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.6.1	Y
Interface Status Down/Up	3.6.1	Y
Card In/Out	3.6.1	Y
Link Down/Up	3.6.1	Y
Device Unreachable	3.6.1	N
CPU Over Utilized	3.6.1	N
Memory Over Utilized	3.6.1	N
Device Unsupported	3.6.1	N
Discard Packets	3.6.1	N
Dropped Packets	3.6.1	N
Module Unsupported	3.6.1	Y
Port Flapping	3.6.1	N
Port Down	3.6.1	Y
Rx Over Utilized	3.6.1	N
Tx Over Utilized	3.6.1	N
VPN Leak	3.6.1	N
BGP Neighbor Down	3.6.1	N

Table 8-8 Supported Service Events for Juniper T-Series—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Card Up/Down	3.6.1	Y

Supported Technologies on Juniper Devices

The following sections list the objects and attributes that are supported on Juniper devices in Cisco ANA 3.6.5 per technology:

- [IP, page 8-9](#)
- [Routing Protocols, page 8-12](#)
- [Ethernet \(IEEE 802.3\), page 8-12](#)
- [ATM, page 8-15](#)
- [Frame Relay, page 8-18](#)
- [Point to Point, page 8-19](#)
- [MPLS, page 8-19](#)
- [VPN, page 8-21](#)
- [Physical Equipment, page 8-22](#)
- [Base Logical Components, page 8-23](#)
- [Common, page 8-24](#)

IP

Table 8-9 IP Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IPIInterface		
IP Address	Y	Y
Subnetwork Mask	Y	Y
IP Interface Addresses Array	Y	Y
Interface Name	Y	Y
Interface Description		
IP Interface State	Y	Y
OSPF Interface Cost		
Broadcast Address		
MTU		
Lookup Method		

Table 8-9 IP Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Address Resolution Type		
ARP Timeout		
Secured ARP		
ICMP Mask Reply		
IGMP Proxy		
HSRP Groups		
IP Multiplexing Table		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IIPMuxEntry		
Termination Point		
Destination IP Subnet		
IMO Name—IRoutingEntity		
Routing Table	Y	Y
ARP Entity	Y	Y
Routing Table Changes		
Name	Y	Y
Logical Sons	Y	Y
IMO Name—IRoutingEntry		
Destination IP Subnet	Y	Y
Next Hop IP Address	Y	Y
Type	Y	Y
Routing Protocol Type	Y	Y
Outgoing Interface Name	Y	Y
IMO Name—IARPEntity		
ARP Table	Y	Y
IMO Name—IARPEntity		
IP Address	Y	Y
MAC Address	Y	Y
Port	Y	Y
Entry Type	Y	Y
IMO Name—IIPPool		
IP Address Pool Entries		
Name		

Table 8-9 IP Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Index		
IMO Name—IIPRangeBasedIPPoolEntry		
Start IP Address		
End IP Address		
Unused Addresses		
Used Addresses		
Reserved Addresses		
IMO Name—IIPSubnetBasedIPPoolEntry		
IP Subnet		
Unused Addresses		
Used Addresses		
Reserved Addresses		
IMO Name—HSRPGroupEntry		
Group Number		
Port Description		
Priority		
Coupled Router		
State		
Tracking Interfaces		
Virtual IP Address		
Virtual MAC Address		
IMO Name—I TunnelGRE		
Name		
Tunnel Destination and Source		
IP Address		
IP Interface State		
IANA Type		
Containing CTPs		
Contained CTPs		

Routing Protocols

Table 8-10 Routing Protocols Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IBgpNeighbourEntry		
Remote Identifier	Y	Y
Neighbor Type	Y	Y
Distributing Interfaces		
Remote Address	Y	Y
Remote Autonomous System	Y	Y
Status	Y	Y
Hold Time	Y	Y
Keep Alive Time	Y	Y
IMO Name—IOspfEntry		
Area Identifier	Y	Y
IP Address	Y	Y
Type	Y	Y
Administrative Status	Y	Y
Operational Status	Y	Y

Ethernet (IEEE 802.3)

Table 8-11 Ethernet (IEEE 802.3) Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—ILagPortEntry		
Actor and Partner Admin Keys		
Actor and Partner Oper Keys		
Selected and Attached Aggregation Identification		
Actor Port		
Actor Port Priority		
Partner Admin and Oper Port		

Table 8-11 Ethernet (IEEE 802.3) Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
Partner Admin and Oper Port Priority		
Actor and Partner Admin States		
Actor and Partner Oper States		
IMO Name—IEthernet		
MAC Address	Y	Y
Duplex Mode		
Output Flow Control		
Input Flow Control		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IVlanInterface		
Mode		
Native VLAN Identification		
Virtual LAN Table		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IVlanEncapMux		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IIEEE802		
VLAN Identification		
Binding Information		
Binding Status		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IStpService		
Protocol Type		
Current and Bridge Max Age		
Current and Bridge Hello Time		

Table 8-11 Ethernet (IEEE 802.3) Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
Current and Bridge Forward Delay		
Instance Information Table		
Same as ISystemService		
IMO Name—IMstService		
Protocol Properties		
Same as IStpService		
IMO Name—IMstProperties		
Force Version		
Configuration Format, Region Name and Revision Level		
External Root Cost		
Maximum Instances		
IMO Name—IStpInstanceInfo		
Object Identification		
Identification		
Priority		
Designated Parent and Root Bridges		
Root Cost		
Is Root		
Root Port Identification		
Port Information Table		
IMO Name—IMstInstanceInfo		
Instance Identification		
Same as IStpInstanceInfo		
IMO Name—IPvstpInstanceInfo		
Protocol Type		
Current and Bridg Maximum Age		
Current and Bridge Hello Time		
Current and Bridge Forward Delay		
Same as IStpInstanceInfo		
IMO Name—IRstpInstanceInfo		
Force Version		

Table 8-11 Ethernet (IEEE 802.3) Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
Same as IStpInstanceInfo		
IMO Name—IStpPortInfo		
Object Identification		
Priority		
State		
Path Cost		
Is Edge		
Is Point to Point		
Role		
IMO Name—IMstPortInfo		
Hello Time		
Same as IStpPortInfo		
IMO Name—IEthernetChannel		
Group Number		
Bandwidth		
Aggregation Protocol		
IANA Type		
Containing CTPs		
Contained CTPs		

ATM

Table 8-12 ATM Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IAtm		
ATM Address		
Interface Type		
VP and VC Ranges		
VC Table	Y	Y
Cross-Connect Table		
IANA Type	Y	Y
Containing CTPs		

Table 8-12 ATM Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Contained CTPs		
IMO Name—IAtmVc		
Virtual Channel Identifier	Y	Y
Virtual Path Identifier	Y	Y
Shaping Profile		
Discarded and Received Input Data Counters		
Dropped and Forward Output Data Counters		
Ingress Traffic Descriptor		
Egress Traffic Descriptor		
Administrative Status	Y	Y
Operational Status	Y	Y
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IIMAGroup		
Description		
Speed		
Admin Status		
Oper Status		
Oper Status Last Change		
IANA Type		
Containing CTPs		
IMO Name—IAtmTrafficDescriptor		
Traffic Descriptor Type		
Service Category		
Cell Loss Priority		
Cell Delay Variation		
Cell Dealy Variation Tolerance		
Maximum High Priority and Aggregate Cell Rates		
Minimum High Priority and Aggregate Cell Rates		
Sustainable High Priority and Aggregate Cell Rates		

Table 8-12 ATM Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Peak High Priority and Aggregate Cell Rates		
Name		
Index		
IMO Name—IAtmTrafficShapingDescriptor		
Maximum Burst Size		
Sustainable and Peak Cell Rates		
Cell Delay Variation		
State		
Buffer Size		
Cell Loss Priority Discarded Size		
Name		
Index		
IMO Name—IAtmTrunk		
Same as IAtm		
IMO Name—IAtmLogicalPort/Trunk		
Resource Management Cell Termination		
Resource Management Cell Generation		
Effective Check Input and Output Capacities		
Admin Status		
Oper Status		
Same as IAtm		
IMO Name—IAtmTrunkVc		
Destination Description		
Same as IAtmVc		

Frame Relay

Table 8-13 *Frame Relay Attribute Support on Juniper Devices—Cisco ANA 3.6.5*

Attribute	M-Series	T-Series
IMO Name—Iframerelay/IFrTrunk		
Protocol Type	Y	Y
VC Table	Y	Y
Cross-Connect Table		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IFrVc		
Data Link Connection Identifier	Y	Y
Traffic Descriptor		
Discard and Received Input Data Counters		
Dropped and Forward Output Data Counters		
Ingress Traffic Descriptor		
Egress Traffic Descriptor		
Administrative Status	Y	Y
Operational Status	Y	Y
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IFRTrafficDescriptor		
Committed Rate		
Excess Burst Rate		
Name		
Index		
IMO Name—IFramerelayLogicalPort/Trunk		
Admin Status		
Oper Status		
Same as IFrameRelay		
IMO Name—IFrTrunkVc		
Destination Description		
Same as IFrVc		

Table 8-13 Frame Relay Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
IMO Name—IEncapsulation		
Virtual Connection Interface	Y	Y
Binding Information		

Point to Point

Table 8-14 Point to Point Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IVcBasedEncapsulation		
Virtual Connection	Y	Y
Binding Information		
Binding Status		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—Iencapsulation (HDLC/PPP)		
Virtual Connection	Y	Y
Binding Information		
Binding Status		
IANA Type		
Containing CTPs		
Contained CTPs		

MPLS

Table 8-15 MPLS Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IMpls		
Distribution Protocol	Y	Y
Outer and Inner Labels	Y	Y

Table 8-15 MPLS Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Traffic Engineering Properties		
Resource reservation Properties		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—ILse		
MPLS Table	Y	Y
MPLS Aggregate Table	Y	Y
MPLS Tunnel Segments	Y	Y
LDP Service	Y	Y
Logical Sons		
IMO Name—ILdpService		
Local Identification Status	Y	Y
LDP Peers	Y	Y
IMO Name—ILdpPeer		
Peer Identification	Y	Y
Transport Address	Y	Y
Distribution Method	Y	Y
Protocol Type	Y	Y
Path Vector Limit		
Session Status	Y	Y
Protocol Version Hold Time		
Hold Time	Y	Y
Hello Time Interval	Y	Y
Peer Discovery Sources	Y	Y
IMO Name—ILdpDiscoverySource		
Interface Name	Y	Y
Source Address	Y	Y
Type	Y	Y
IMO Name—IMplsEntry		
Incoming Label	Y	Y
Outgoing Interface and Label	Y	Y
Switching Action	Y	Y
Next Hop IP Address	Y	Y

Table 8-15 MPLS Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
IMO Name—IMplsAggregateEntry		
Virtual Routing Entity	Y	Y
Incoming Label	Y	Y
Outgoing Interface and Label	Y	Y
Switching Action	Y	Y
Next Hop IP Address		

VPN

Table 8-16 VPN Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IVrf		
Virtual Routing Table	Y	Y
Exported Route Targets	Y	Y
Imported Route Targets	Y	Y
Route Distinguisher	Y	Y
ARP Entity	Y	Y
Name	Y	Y
Logical Sons		
IMO Name—IVrfEntry		
Next Hop BGP Address	Y	Y
Incoming and Outgoing Inner Label	Y	Y
Outer Label	Y	Y
Destination IP Subnet	Y	Y
Next Hop IP Address	Y	Y
Type	Y	Y
Routing Protocol Type	Y	Y
Outgoing Interface Name	Y	Y
IMO Name—IMpBgp		
BGP Identifier		
Local Autonomous System		

Table 8-16 VPN Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Cross Virtual Routing Table		
BGP Neighbors	Y	Y
Logical Sons		
IMO Name—ICrossVrf		
Virtual Routing Entries		
Virtual Routing Entity Name		
IMO Name—ICrossVrfRoutingEntry		
Outgoing Virtual Routing Entity Identifier		
Incoming and Outgoing Virtual Routing Tags		
Destination IP Subnet		
Next Hop IP Address		
Type		
Routing Protocol Type		
Outgoing Interface Name		

Physical Equipment

Table 8-17 Physical Equipment Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IChassis		
Description	Y	Y
Equipment Holder Type	Y	Y
Contained Equipment Holders		
Contained Equipments		
IMO Name—IShelf		
Description		
Status		
Equipment Holder Type		
Contained Equipment Holders		
Contained Equipments		

Table 8-17 Physical Equipment Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IModule		
Module Name	Y	Y
Module Description	Y	Y
Software Version		
Operational Status	Y	Y
Hardware Type + Version	Y	Y
Managed IP Address		
Redundant Equipment		
Configured Redundancy		
Redundancy Status		
Operational Status Last Changed		
Supported Physical Termination Points		
Serial Number (soft property)	Y	Y

Base Logical Components

Table 8-18 Base Logical Components Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IManagedElement		
IP Address	Y	Y
Communication State	Y	Y
Investigation State	Y	Y
Element Category	Y	Y
Element Type and Key	Y	Y
Device Name	Y	Y
System Name	Y	Y
System Description	Y	Y
Up Time	Y	Y
Software Version	Y	Y
Vendor Identity	Y	Y
Memory and CPU Usage	Y	Y

Table 8-18 Base Logical Components Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IContext		
Name		
Bounded Connections		
IP Address Pools		
Forwarding Components List		
Traffic Descriptors List		
Tunnel Containers List		
Data Link Aggregation Containers List		
IMO Name—ISystemService		
Type		
Status		
Up Time		

Common

Table 8-19 Common Attribute Support on Juniper Devices—Cisco ANA 3.6.5

Attribute	M-Series	T-Series
IMO Name—IPhysicalLayer		
Media Type	Y	Y
Clocking Source	Y	Y
Maximum Speed	Y	Y
Is Internal Port	Y	Y
Discarded Bandwidth		
Dropped Bandwidth		
Input Bandwidth		
Output Bandwidth		
Discarded and Received Input Data Counters	Y	Y
Dropped and Forward Output Data Counters	Y	Y
Administrative Status	Y	Y
Operational Status	Y	Y

Table 8-19 Common Attribute Support on Juniper Devices—Cisco ANA 3.6.5 (Continued)

Attribute	M-Series	T-Series
Last Changed	Y	Y
IANA Type	Y	Y
Containing CTPs		
Contained CTPs		
IMO Name—IBridge		
Bridge Table		
Type		
MAC Address		
IP Interface		
Name		
Logical Sons		
IMO Name—IBridgeEntry		
Destination MAC		
Outgoing Interface		
IMO Name—IVcSwitchingEntity		
Cross Connect Table		
Logical Sons		



CHAPTER 9

Support Information for Redback Devices

This chapter contains support information for Virtual Network Elements (VNEs) that manage Redback devices in Cisco ANA 3.6.5, and contains the following topics:

- [SmartEdge 800 Multiservice Edge Router, page 9-1](#)
- [Redback SMS Family, page 9-4](#)
- [Supported Technologies on Redback Devices, page 9-6](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#).

SmartEdge 800 Multiservice Edge Router

This section includes the following information about SmartEdge 800 devices:

- [SmartEdge 800—Supported Software Versions, page 9-2](#)
- [SmartEdge 800—Supported Topologies, page 9-2](#)
- [SmartEdge 800—Supported Modules, page 9-2](#)
- [SmartEdge 800—Supported Technologies, page 9-3](#)
- [SmartEdge 800—Supported Service Events, page 9-3](#)



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [SmartEdge 800 Multiservice Edge Router](#).

SmartEdge 800—Supported Software Versions

Table 9-1 Supported Software Versions for SmartEdge 800—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
SEOS 4.0.5.5	3.5.2	V
SEOS 2.5.7.6	3.5.2	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

SmartEdge 800—Supported Topologies

Table 9-2 Supported Topologies for SmartEdge 800—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
ATM	ATM	3.5.2
Ethernet	Ethernet	3.5.2
Physical Layer	Physical Layer	3.5.2

SmartEdge 800—Supported Modules

Table 9-3 Supported Modules for SmartEdge 800—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
ETHER-12-PORT	3.5.2	12 port 10/100TX Ethernet	V
ATM-OC3-2-PORT	3.5.2	2 port OC-3c/STM-1 ATM	V
ATM-OC3-4-PORT	3.5.2	4 port OC-3c/STM-1 ATM	V
ATM-DS3-12-PORT	3.5.2	12 port DS3 ATM	V
ATM-OC12-1-PORT	3.5.2	1 port OC-12 ATM	V
ATM-OC12E-1-PORT	3.5.2	1 port OC-12e ATM	V
OC3-8-PORT	3.5.2	8 port OC-3c/STM-1	V
GIGAETHER-4-PORT	3.5.2	4 port Gigabit Ethernet	V
GIGAETHER-10-PORT	3.5.2	10 port Gigabit Ethernet	V
XCRP	3.5.2	Cross Connect Route Processor	V
XCRP3	3.5.2	Cross Connect Route Processor	V

SmartEdge 800—Supported Technologies

The following technologies are supported by the SmartEdge 800 in Cisco ANA 3.6.5:

- [IP, page 9-7](#)
- [Ethernet \(IEEE 802.3\), page 9-9](#)
- [ATM, page 9-12](#)
- [Point to Point, page 9-15](#)
- [L2TP, page 9-16](#)
- [Physical Technologies, page 9-17](#)
- [Physical Equipment, page 9-18](#)
- [Base Logical Components, page 9-19](#)
- [Common, page 9-20](#)

SmartEdge 800—Supported Service Events

Table 9-4 *Supported Service Events for SmartEdge 800—Cisco ANA 3.6.5*

Event Name	ANA Version	Expedited
All IP Interfaces Down / Active IP Interfaces Found	3.5.2	N
Interface Status Down/Up	3.5.2	N
Card In/Out	3.5.2	N
Link Down/Up	3.5.2	N
Device Unreachable	3.5.2	N
Device Unsupported	3.5.2	N
Discard Packets	3.5.2	N
Dropped Packets	3.5.2	N
Module Unsupported	3.5.2	N
Port Flapping	3.5.2	N
Port Down	3.5.2	N
Card Up/Down	3.5.2	N

Redback SMS Family

This section includes the following information about Redback SMS devices:

- Redback SMS—Supported Software Versions, page 9-4
- Redback SMS—Supported Topologies, page 9-4
- Redback SMS—Supported Modules, page 9-4
- Redback SMS—Supported Technologies, page 9-5
- Redback SMS—Supported Service Events, page 9-5



Note

For information about which NE types are supported in Cisco ANA 3.6.5, see [Redback SMS Family](#).

Redback SMS—Supported Software Versions

Table 9-5 Supported Software Versions for Redback SMS—Cisco ANA 3.6.5

Version Name	ANA Version	Certification Level
6.0.9.18 MAINTENANCE RELEASE	3.5.2	V



Note

Software versions marked with an asterisk (representing a wildcard) are supported by Cisco ANA 3.6.5. Specific software versions that have been tested and verified are listed individually and marked as V.

Redback SMS—Supported Topologies

Table 9-6 Supported Topologies for Redback SMS—Cisco ANA 3.6.5

Topology Type	Link Type	ANA Version
Ethernet	Ethernet	3.5.2

Redback SMS—Supported Modules

Table 9-7 Supported Modules for Redback SMS—Cisco ANA 3.6.5

Module Name	ANA Version	Module Description	Certification Level
AT2DS3	3.5.2	Two-Port ATM2 DS-3 I/O Module	V
AT2OC3	3.5.2	Two-Port ATM2 OC-3c SMF and MMF I/O Modules	V
AXOC12	3.5.2	Two-Port ATM2 OC-3c SMF and MMF I/O Modules	V
ATDS3	3.5.2	Two-Port ATM2 DS-3 I/O Module	V
ATOC3	3.5.2	Two-Port ATM2 OC-3c SMF and MMF I/O Modules	V

Table 9-7 **Supported Modules for Redback SMS—Cisco ANA 3.6.5 (Continued)**

Module Name	ANA Version	Module Description	Certification Level
CE1	3.5.2	Control Engine 1 Module	V
CE2	3.5.2	Control Engine 2 Module	V
CE3	3.5.2	Control Engine 3 Module	V
ENET	3.5.2	Two-Port 10/100-Mbps Ethernet I/O Module	V
GIGEX	3.5.2	Two-Port 1Gbps Ethernet I/O Module	V
FE	3.5.2	Forwarding Engine 1 Module	V
FE2	3.5.2	Forwarding Engine 2 Module	V
FE3	3.5.2	Forwarding Engine 3 Module	V
GBENET	3.5.2	Two-Port 1Gbps Ethernet I/O Module	V
XGE	3.5.2	Two-Port 1Gbps Ethernet I/O Module	V
XFE	3.5.2	Forwarding Engine 2 Module	V
FABRIC	3.5.2	Switch Fabric 42G	V
TIMING	3.5.2	Timing module	V

Redback SMS—Supported Technologies

The following technologies are supported by the Redback SMS in Cisco ANA 3.6.5:

- [IP, page 9-7](#)
- [Ethernet \(IEEE 802.3\), page 9-9](#)
- [ATM, page 9-12](#)
- [Frame Relay, page 9-14](#)
- [Point to Point, page 9-15](#)
- [L2TP, page 9-16](#)
- [Physical Technologies, page 9-17](#)
- [Physical Equipment, page 9-18](#)
- [Base Logical Components, page 9-19](#)
- [Common, page 9-20](#)

Redback SMS—Supported Service Events

Table 9-8 **Supported Service Events for Redback SMS—Cisco ANA 3.6.5**

Event Name	ANA Version	Expedited
Primary HSRP Interface Active/Inactive	3.5.2	N
Secondary HSRP Interface Active/Inactive	3.5.2	N
All IP Interfaces Down / Active IP Interfaces Found	3.5.2	Y

Table 9-8 *Supported Service Events for Redback SMS—Cisco ANA 3.6.5 (Continued)*

Event Name	ANA Version	Expedited
Interface Status Down/Up	3.5.2	Y
Card In/Out	3.5.2	Y
Link Down/Up	3.5.2	Y
Device Unreachable	3.5.2	N
CPU Over Utilized	3.5.2	N
Memory Over Utilized	3.5.2	N
Device Unsupported	3.5.2	N
Discard Packets	3.5.2	N
Dropped Packets	3.5.2	N
Module Unsupported	3.5.2	N
Port Flapping	3.5.2	N
Port Down	3.5.2	Y
Rx Over Utilized	3.5.2	N
Tx Over Utilized	3.5.2	N
VPN Leak	3.5.2	N
Cloud Problem	3.5.2	N
Broken LSP Discovered	3.5.2	N
MPLS Black Hole	3.5.2	N
Layer 2 Tunnel Down	3.5.2	N
MPLS TE Tunnel Down/Flapping	3.5.2	N
BGP Neighbor Down	3.5.2	N
Card Up/Down	3.5.2	Y

Supported Technologies on Redback Devices

The following sections list the objects and attributes that are supported on Redback devices in Cisco ANA 3.6.5 per technology:

- [IP, page 9-7](#)
- [Ethernet \(IEEE 802.3\), page 9-9](#)
- [ATM, page 9-12](#)
- [Frame Relay, page 9-14](#)
- [Point to Point, page 9-15](#)
- [L2TP, page 9-16](#)
- [Physical Technologies, page 9-17](#)
- [Physical Equipment, page 9-18](#)
- [Base Logical Components, page 9-19](#)

- [Common, page 9-20](#)

IP

Table 9-9 IP Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IPIInterface		
IP Address	Y	Y
Subnetwork Mask	Y	Y
IP Interface Addresses Array		Y
Interface Name	Y	Y
Interface Description	Y	Y
IP Interface State	Y	Y
OSPF Interface Cost		
Broadcast Address		
MTU		
Lookup Method		
Address Resolution Type		
ARP Timeout		
Secured ARP		
ICMP Mask Reply		
IGMP Proxy		
HSRP Groups		
IP Multiplexing Table		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IIPMuxEntry		
Termination Point		Y
Destination IP Subnet		Y
IMO Name—IRoutingEntity		
Routing Table	Y	Y
ARP Entity	Y	
Routing Table Changes		
Name	Y	
Logical Sons	Y	

Table 9-9 IP Attribute Support on Redback Devices—Cisco ANA 3.6.5 (Continued)

Attribute	SE 800	SMS
IMO Name—IRoutingEntry		
Destination IP Subnet	Y	Y
Next Hop IP Address	Y	Y
Type	Y	Y
Routing Protocol Type	Y	Y
Outgoing Interface Name	Y	Y
IMO Name—IARPEntity		
ARP Table	Y	
IMO Name—IARPEntity		
IP Address	Y	
MAC Address	Y	
Port	Y	
Entry Type	Y	
IMO Name—IIPPool		
IP Address Pool Entries	Y	Y
Name	Y	Y
Index		
IMO Name—IIPRangeBasedIPPoolEntry		
Start IP Address		
End IP Address		
Unused Addresses		
Used Addresses		
Reserved Addresses		
IMO Name—IIPSubnetBasedIPPoolEntry		
IP Subnet	Y	Y
Unused Addresses	Y	Y
Used Addresses	Y	Y
Reserved Addresses	Y	Y
IMO Name—HSRPGroupEntry		
Group Number		
Port Description		
Priority		
Coupled Router		
State		
Tracking Interfaces		

Table 9-9 IP Attribute Support on Redback Devices—Cisco ANA 3.6.5 (Continued)

Attribute	SE 800	SMS
Virtual IP Address		
Virtual MAC Address		
IMO Name—I TunnelGRE		
Name		
Tunnel Destination and Source		
IP Address		
IP Interface State		
IANA Type		
Containing CTPs		
Contained CTPs		

Ethernet (IEEE 802.3)

Table 9-10 Ethernet (IEEE 802.3) Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—I LagPortEntry		
Actor and Partner Admin Keys		
Actor and Partner Oper Keys		
Selected and Attached Aggregation Identification		
Actor Port		
Actor Port Priority		
Partner Admin and Oper Port		
Partner Admin and Oper Port Priority		
Actor and Partner Admin States		
Actor and Partner Oper States		
IMO Name—I Ethernet		
MAC Address	Y	Y
Duplex Mode		
Output Flow Control		
Input Flow Control		
IANA Type		
Containing CTPs		
Contained CTPs		

Table 9-10 Ethernet (IEEE 802.3) Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IVlanInterface		
Mode		
Native VLAN Identification		
Virtual LAN Table		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IVlanEncapMux		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IIEEE802		
VLAN Identification	Y	Y
Binding Information	Y ¹	Y
Binding Status	Y ²	Y
IANA Type	Y	
Containing CTPs		
Contained CTPs		
IMO Name—IStpService		
Protocol Type		
Current and Bridge Max Age		
Current and Bridge Hello Time		
Current and Bridge Forward Delay		
Instance Information Table		
Same as ISystemService		
IMO Name—IMstService		
Protocol Properties		
Same as IStpService		
IMO Name—IMstProperties		
Force Version		
Configuration Format, Region Name and Revision Level		
External Root Cost		
Maximum Instances		
IMO Name—IStpInstanceInfo		
Object Identification		

Table 9-10 Ethernet (IEEE 802.3) Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
Identification		
Priority		
Designated Parent and Root Bridges		
Root Cost		
Is Root		
Root Port Identification		
Port Information Table		
IMO Name—IMstInstanceInfo		
Instance Identification		
Same as IStpInstanceInfo		
IMO Name—IPvstpInstanceInfo		
Protocol Type		
Current and Bridg Maximum Age		
Current and Bridge Hello Time		
Current and Bridge Forward Delay		
Same as IStpInstanceInfo		
IMO Name—IRstpInstanceInfo		
Force Version		
Same as IStpInstanceInfo		
IMO Name—IStpPortInfo		
Object Identification		
Priority		
State		
Path Cost		
Is Edge		
Is Point to Point		
Role		
IMO Name—IMstPortInfo		
Hello Time		
Same as IStpPortInfo		
IMO Name—IEthernetChannel		
Group Number		
Bandwidth		
Aggregation Protocol		
IANA Type		

Table 9-10 Ethernet (IEEE 802.3) Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
Containing CTPs		
Contained CTPs		

¹No Subscriber binding info²No Subscriber binding info

ATM

Table 9-11 ATM Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IAtm		
ATM Address		
Interface Type		
VP and VC Ranges	Y	Y
VC Table	Y	
Cross-Connect Table		
IANA Type	Y	
Containing CTPs		
Contained CTPs		
IMO Name—IAtmVc		
Virtual Channel Identifier	Y	
Virtual Path Identifier	Y	
Shaping Profile		
Discarded and Received Input Data Counters	Y	
Dropped and Forward Output Data Counters	Y	
Ingress Traffic Descriptor	Y	
Egress Traffic Descriptor	Y	
Administrative Status	Y	Y
Operational Status	Y	Y
IANA Type	Y	
Containing CTPs		
Contained CTPs		
IMO Name—IIMAGroup		
Description		

Table 9-11 ATM Attribute Support on Redback Devices—Cisco ANA 3.6.5 (Continued)

Attribute	SE 800	SMS
Speed		
Admin Status		
Oper Status		
Oper Status Last Change		
IANA Type		
Containing CTPs		
IMO Name—IAtmTrafficDescriptor		
Traffic Descriptor Type	Y	Y
Service Category	Y	Y
Cell Loss Priority	Y	Y
Cell Delay Variation	Y	Y
Cell Delay Variation Tolerance	Y	Y
Maximum High Priority and Aggregate Cell Rates	Y	Y
Minimum High Priority and Aggregate Cell Rates	Y	Y
Sustainable High Priority and Aggregate Cell Rates	Y	Y
Peak High Priority and Aggregate Cell Rates	Y	Y
Name	Y	Y
Index		Y
IMO Name—IAtmTrafficShapingDescriptor		
Maximum Burst Size		
Sustainable and Peak Cell Rates		
Cell Delay Variation		
State		
Buffer Size		
Cell Loss Priority Discarded Size		
Name		
Index		
IMO Name—IAtmTrunk		
Same as IAtm		
IMO Name—IAtmLogicalPort/Trunk		
Resource Management Cell Termination		
Resource Management Cell Generation		
Effective Check Input and Output Capacities		
Admin Status		
Oper Status		

Table 9-11 ATM Attribute Support on Redback Devices—Cisco ANA 3.6.5 (Continued)

Attribute	SE 800	SMS
Same as IAtm		
IMO Name—IAtmTrunkVc		
Destination Description		
Same as IAtmVc		

Frame Relay

Table 9-12 Frame Relay Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—Iframerelay/IFrTrunk		
Protocol Type		
VC Table		
Cross-Connect Table		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IFrVc		
Data Link Connection Identifier		
Traffic Descriptor		
Discard and Received Input Data Counters		
Dropped and Forward Output Data Counters		
Ingress Traffic Descriptor		
Egress Traffic Descriptor		
Administrative Status		
Operational Status		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IFRTrafficDescriptor		
Committed Rate		
Excess Burst Rate		
Name		
Index		

Table 9-12 Frame Relay Attribute Support on Redback Devices—Cisco ANA 3.6.5 (Continued)

Attribute	SE 800	SMS
IMO Name—IFrameRelayLogicalPort/Trunk		
Admin Status		
Oper Status		
Same as IFrameRelay		
IMO Name—IfrTrunkVc		
Destination Description		
Same as IFrVc		
IMO Name—IEncapsulation		
Virtual Connection Interface		Y
Binding Information		Y

Point to Point

Table 9-13 Point to Point Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IvcBasedEncapsulation		
Virtual Connection	Y	Y
Binding Information	Y	Y
Binding Status	Y	Y
IANA Type	Y	Y
Containing CTPs		
Contained CTPs		
IMO Name—Iencapsulation (HDLC/PPP)		
Virtual Connection		
Binding Information		
Binding Status		
IANA Type		
Containing CTPs		
Contained CTPs		

L2TP

Table 9-14 L2TP Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IL2TPTunnel		
Local and Remote Tunnel Identifications	Y	Y
Local and Remote Tunnel Names		Y
Remote Address	Y	Y
Control Errors	Y	Y
Last Error Code		Y
Tunnel State	Y	Y
Sessions Count	Y	Y
Sessions Table	Y	Y
IMO Name—IL2TPSessionEntry		
Local and Remote Session Identification	Y	
Subscriber Name	Y	Y
Session Type		
Session State	Y	Y
Input and Output Data Counters		Y
IMO Name—IL2TPPeer		
Local and Peer Address	Y	Y
Local and Peer Names	Y	Y
Tunnel Type	Y	Y
Tunnel Mode		Y
Maximum and Current Tunnels Counts	Y	Y
Maximum and Current Sessions Count	Y	Y
Session Authentication Type		
Tunnel Password		
RADIUS Identification		
Hello Time Interval	Y	Y
Control Errors	Y	Y
Media Type		
Group Identification	Y	
Domain Table	Y	
Logical Sessions	Y	
IMO Name—IL2TPGroup		
Group Name	Y	Y

Table 9-14 L2TP Attribute Support on Redback Devices—Cisco ANA 3.6.5 (Continued)

Attribute	SE 800	SMS
Tunnel Algorithm	Y	Y
Dead Time	Y	Y
RADIUS Identification		
Peers List	Y	Y
Domains Table	Y	Y
Name	Y	
Index		
IMO Name—IL2TPDomainEntry		
Domain Name	Y	Y
Attached To Object	Y	
Name	Y	
Index		

Physical Technologies

Table 9-15 Physical Technologies Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IsonetSdh		
Specific Type		
Loopback Type	Y	
Scrambling Mode	Y	
Same as IPhysicalLayer		
IMO Name—IDS0Bundle		
Bundled Time Slots		
Bundle Location		
IANA Type		
Containing CTPs		
Contained CTPs		
IMO Name—IDS1Pdh / IDS3Pdh		
Framing Type	Y	Y
Cell Mapping Type		Y
Loopback Type		Y
Scrambling Mode		Y
Same as IPhysicalLayer		

Physical Equipment

Table 9-16 *Physical Equipment Attribute Support on Redback Devices—Cisco ANA 3.6.5*

Attribute	SE 800	SMS
IMO Name—IChassis		
Description	Y	
Equipment Holder Type		Y
Contained Equipment Holders		
Contained Equipments		
IMO Name—IShelf		
Description		
Status		
Equipment Holder Type		
Contained Equipment Holders		
Contained Equipments		
IMO Name—IModule		
Module Name	Y	Y
Module Description	Y	Y
Software Version	Y	Y
Operational Status	Y	Y
Hardware Type + Version	Y	Y
Managed IP Address		
Redundant Equipment		
Configured Redundancy		
Redundancy Status		
Operational Status Last Changed		
Supported Physical Termination Points		
Serial Number (soft property)	Y	Y

Base Logical Components

Table 9-17 Base Logical Components Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IManagedElement		
IP Address	Y	Y
Communication State	Y	Y
Investigation State	Y	Y
Element Category	Y	Y
Element Type and Key	Y	Y
Device Name	Y	Y
System Name	Y	Y
System Description	Y	Y
Up Time	Y	Y
Software Version	Y	Y
Vendor Identity	Y	Y
Memory and CPU Usage		
IMO Name—IContext		
Name	Y	Y
Bounded Connections		
IP Address Pools		
Forwarding Components List		
Traffic Descriptors List		
Tunnel Containers List		
Data Link Aggregation Containers List		
IMO Name—ISystemService		
Type		
Status		
Up Time		Y

Common

Table 9-18 Common Attribute Support on Redback Devices—Cisco ANA 3.6.5

Attribute	SE 800	SMS
IMO Name—IPhysicalLayer		
Media Type	Y	Y
Clocking Source	Y ³	Y
Maximum Speed	Y	Y
Is Internal Port	Y	Y
Discarded Bandwidth		
Dropped Bandwidth		
Input Bandwidth		
Output Bandwidth		
Discarded and Received Input Data Counters	Y	
Dropped and Forward Output Data Counters	Y	
Administrative Status	Y	Y
Operational Status	Y	Y
Last Changed	Y	Y
IANA Type	Y	Y
Containing CTPs		
Contained CTPs		
IMO Name—IBridge		
Bridge Table	Y	Y
Type	Y	Y
MAC Address		Y
IP Interface		Y
Name	Y	Y
Logical Sons		Y
IMO Name—IBridgeEntry		
Destination MAC	Y	Y
Outgoing Interface	Y	Y
IMO Name—IVcSwitchingEntity		
Cross Connect Table		
Logical Sons		

³Supported for Sonet Interfaces only



CHAPTER 10

Support Information for Generic Devices

This chapter contains support information for Virtual Network Elements (VNEs) that manage generic devices in Cisco ANA 3.6.5, and contains the following topics:

- [Understanding the Generic VNE, page 10-1](#)
- [Supported Technologies on Generic Devices, page 10-5](#)



Note

For more information about the objects and attributes described in this chapter, see the [Cisco Active Network Abstraction 3.6.5 Technology Support and Information Model Reference Manual](#). For information about which NE types are supported in Cisco ANA 3.6.5, see [Generic VNE](#).

Understanding the Generic VNE

The generic VNE can be used to model any NE that is not currently supported by Cisco ANA. The generic VNE provides a basic level of network management that provides information such as the physical interfaces available on the device and their status, rudimentary logical modeling, and parsing of basic traps.

The generic VNE models NEs using SNMP MIB2, which is the most generic and widely used management interface. The generic VNE does not consider the device vendor, device type, or software version of the NE that it models.

This section includes the following information about the generic VNE:

- [Physical Inventory Model, page 10-2](#)
- [Logical Inventory Model, page 10-2](#)
- [Generic VNE—Supported Traps, page 10-3](#)
- [Generic VNE—Supported Service Events, page 10-4](#)
- [Limitations, page 10-4](#)

Physical Inventory Model

The generic VNE uses a static model for the device chassis. The rest of the physical inventory is modeled using the ifTable. Since modules are not modeled, the generic VNE creates a single generic module on which all of the physical interfaces reside.

Table 10-1 describes which MIB tables are used to model the physical inventory components that are supported by the generic VNE.

Table 10-1 MIBs Used for Physical Inventory Model of Generic VNE—Cisco ANA 3.6.5

Logical Component	MIB Table	Columns/Tables Used For Modeling
Interfaces	ifTable	- ifDescr - ifType - ifOperStatus
Ports		
Port status	ifTable	ifOperStatus and ifAdminStatus
Port speed	ifTable	ifSpeed
MAC address	ifTable	ifPhysAddress (Ethernet ports)



Note

Certain general properties on the managed element, such as system description, are modeled using the system MIB.

Logical Inventory Model

Table 10-2 describes which MIB tables are used to model the logical inventory components that are supported by the generic VNE.

Table 10-2 MIBs Used for Logical Inventory Model of Generic VNE—Cisco ANA 3.6.5

Logical Component	MIB Table	Columns/Tables Used For Modeling
IP interfaces	ipAddrTable	- ipAdEntIfIndex - ipAdEntNetMask
ARP table	ipNetToMediaTable	- ipNetToMediaPhysAddress - ipNetToMediaType
Routing table	ipRouteTable	- ipRouteDest - ipRouteIfIndex - ipRouteNextHop - ipRouteType - ipRouteMask

Table 10-2 MIBs Used for Logical Inventory Model of Generic VNE—Cisco ANA 3.6.5 (Continued)

Logical Component	MIB Table	Columns/Tables Used For Modeling
Bridging table	dot1dTpFdbTable	---
Default bridge	dot1dBridge	- dot1dBaseBridgeAddress - dot1dBaseType

Generic VNE—Supported Traps

The generic VNE can parse the standard MIB2 traps listed in [Table 10-3](#).

Table 10-3 Supported Traps for Generic VNE—Cisco ANA 3.6.5

bgpBackwardTransition	mplsLdpInitSessionThresholdExceeded
bgpEstablished	mplsLdpSessionDown
ospfIfAuthFailure	mplsLdpSessionUp
ospfIfConfigError	mplsTunnelDown
ospfIfRxBadPacket	mplsTunnelUp
ospfIfStateChange	mplsTunnelReoptimized
ospfMaxAgeLsa	mplsTunnelRerouted
ospfNbrStateChange	authenticationFailure
ospfOriginateLsa	coldStart
ospfTxRetransmit	warmStart
mplsL3VpnVrfDown	entConfigChange
mplsL3VpnVrfUp	linkDown
mplsL3VpnVrfNumVrfRouteMaxThreshExceeded	linkUp
mplsL3VpnVrfRouteMidThreshExceeded	

The generic VNE can identify traps, but it cannot correlate them. This is because the generic VNE does not include the model entities required by higher trap parsing levels.

For example, if Cisco ANA receives an mplsTunnelDown trap from a device modeled with the generic VNE, Cisco ANA can identify the Tunnel Down trap, but it cannot perform correlation on the trap. The reason is that the generic VNE does not investigate tunnels, which means that there is no Device Component in the model to which Cisco ANA can attach a correlation flow.

Generic VNE—Supported Service Events

The generic VNE supports the service events listed in [Table 10-4](#).

Table 10-4 Supported Service Events for Generic VNE—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Device Unreachable	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Port Flapping	3.6.0	N
Port Down	3.6.0	N



Note

For more information on supported service events, see the [Cisco Active Network Abstraction 3.6.5 User Guide](#), Chapter 16, “Supported Service Alarms”.

Limitations

The generic VNE uses MIB2 to cover the widest possible range of NEs. Although MIB2 is a widely accepted industry standard, most network equipment vendors augment MIB2 with other Management Interfaces such as private MIBs, Telnet, XML, and so on. In addition, different vendors sometimes have different implementations of standard MIBs. As a result, even the limited model created by the generic VNE is dependent on the vendor’s adherence to general network management standards.

Generic VNE—Supported Technologies

The following technologies are supported by the Generic VNE in Cisco ANA 3.6.5:

- [IP, page 10-5](#)
- [Ethernet \(IEEE 802.3\), page 10-8](#)
- [Base Logical Components, page 10-11](#)
- [Common, page 10-12](#)

Generic VNE—Supported Service Events

Table 10-5 Supported Service Events for Generic VNE—Cisco ANA 3.6.5

Event Name	ANA Version	Expedited
Device Unreachable	3.6.0	N
Discard Packets	3.6.0	N
Dropped Packets	3.6.0	N
Port Flapping	3.6.0	N

Table 10-5 Supported Service Events for Generic VNE—Cisco ANA 3.6.5 (Continued)

Event Name	ANA Version	Expedited
Port Down	3.6.0	N

Supported Technologies on Generic Devices

The following sections list the objects and attributes that are supported on Generic devices in Cisco ANA 3.6.5 per technology:

- [IP, page 10-5](#)
- [Ethernet \(IEEE 802.3\), page 10-8](#)
- [Base Logical Components, page 10-11](#)
- [Common, page 10-12](#)

IP

Table 10-6 IP Attribute Support on Generic Devices—Cisco ANA 3.6.5

Attribute	Generic
IMO Name—IIPInterface	
IP Address	Y
Subnetwork Mask	Y
IP Interface Addresses Array	
Interface Name	
Interface Description	Y
IP Interface State	Y
OSPF Interface Cost	
Broadcast Address	
MTU	
Lookup Method	
Address Resolution Type	
ARP Timeout	
Secured ARP	
ICMP Mask Reply	
IGMP Proxy	
HSRP Groups	
IP Multiplexing Table	
IANA Type	

Table 10-6 IP Attribute Support on Generic Devices—Cisco ANA 3.6.5 (Continued)

Attribute	Generic
Containing CTPs	
Contained CTPs	
IMO Name—IIPMuxEntry	
Termination Point	
Destination IP Subnet	
IMO Name—IRoutingEntity	
Routing Table	Y
ARP Entity	Y
Routing Table Changes	
Name	Y
Logical Sons	Y
IMO Name—IRoutingEntry	
Destination IP Subnet	Y
Next Hop IP Address	Y
Type	Y
Routing Protocol Type	Y
Outgoing Interface Name	Y
IMO Name—IARPEntity	
ARP Table	Y
IMO Name—IARPEntity	
IP Address	Y
MAC Address	Y
Port	Y
Entry Type	Y
IMO Name—IIPPool	
IP Address Pool Entries	
Name	
Index	
IMO Name—IIPRangeBasedIPPoolEntry	
Start IP Address	
End IP Address	
Unused Addresses	
Used Addresses	
Reserved Addresses	

Table 10-6 IP Attribute Support on Generic Devices—Cisco ANA 3.6.5 (Continued)

Attribute	Generic
IMO Name—IIPSubnetBasedIPPoolEntry	
IP Subnet	
Unused Addresses	
Used Addresses	
Reserved Addresses	
IMO Name—HSRPGroupEntry	
Group Number	
Port Description	
Priority	
Coupled Router	
State	
Tracking Interfaces	
Virtual IP Address	
Virtual MAC Address	
IMO Name—ITunnelGRE	
Name	
Tunnel Destination and Source	
IP Address	
IP Interface State	
IANA Type	
Containing CTPs	
Contained CTPs	

Ethernet (IEEE 802.3)

Table 10-7 Ethernet (IEEE 802.3) Attribute Support on Generic Devices—Cisco ANA 3.6.5

Attribute	Generic
IMO Name—I^{LagPortEntry}	
Actor and Partner Admin Keys	
Actor and Partner Oper Keys	
Selected and Attached Aggregation Identification	
Actor Port	
Actor Port Priority	
Partner Admin and Oper Port	
Partner Admin and Oper Port Priority	
Actor and Partner Admin States	
Actor and Partner Oper States	
IMO Name—I^{Ethernet}	
MAC Address	Y
Duplex Mode	
Output Flow Control	
Input Flow Control	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—I^{VlanInterface}	
Mode	
Native VLAN Identification	
Virtual LAN Table	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—I^{VlanEncapMux}	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—I^{IEEE802}	
VLAN Identification	
Binding Information	
Binding Status	

Table 10-7 Ethernet (IEEE 802.3) Attribute Support on Generic Devices—Cisco ANA 3.6.5

Attribute	Generic
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IStpService	
Protocol Type	
Current and Bridge Max Age	
Current and Bridge Hello Time	
Current and Bridge Forward Delay	
Instance Information Table	
Same as ISystemService	
IMO Name—IMstService	
Protocol Properties	
Same as IStpService	
IMO Name—IMstProperties	
Force Version	
Configuration format, Region Name and Revision Level	
External Root Cost	
Maximum Instances	
IMO Name—IStpInstanceInfo	
Object Identification	
Identification	
Priority	
Designated Parent and Root Bridges	
Root Cost	
Is Root	
Root Port Identification	
Port Information Table	
IMO Name—IMstInstanceInfo	
Instance Identification	
same as IStpInstanceInfo	
IMO Name—IPvstpInstanceInfo	
Protocol Type	
Current and Bridg Maximum Age	
Current and Bridge Hello Time	
Current and Bridge Forward Delay	

Table 10-7 Ethernet (IEEE 802.3) Attribute Support on Generic Devices—Cisco ANA 3.6.5

Attribute	Generic
same as IStpInstanceInfo	
IMO Name—IRstpInstanceInfo	
Force Version	
same as IStpInstanceInfo	
IMO Name—IStpPortInfo	
Object Identification	
Priority	
State	
Path Cost	
Is Edge	
Is Point to Point	
Role	
IMO Name—IMstPortInfo	
Hello Time	
same as IStpPortInfo	
IMO Name—IEthernetChannel	
Group Number	
Bandwidth	
Aggregation Protocol	
IANA Type	
Containing CTPs	
Contained CTPs	

Base Logical Components

Table 10-8 Base Logical Components Attribute Support on Generic Devices—Cisco ANA 3.6.5

Attribute	Generic
IMO Name—IManagedElement	
IP Address	Y
Communication State	Y
Investigation State	Y
Element Category	Y
Element Type and Key	Y
Device Name	Y
System Name	Y
System Description	Y
Up Time	Y
Software Version	Y
Mempry and CPU Usage	
Vendor Identity	Y
IMO Name—IContext	
Name	
Bounded Connections	
IP Address Pools	
Forwarding Componets List	
Traffic Descriptors List	
Tunnel Containers List	
Data Link Aggregation Containers List	
IMO Name—ISystemService	
Type	
Status	
Up Time	

Common

Table 10-9 Common Attribute Support on Generic Devices—Cisco ANA 3.6.5

Attribute	Generic
IMO Name—IPhysicalLayer	
Media Type	
Clocking Source	
Maximum Speed	Y
Is Internal Port	
Discarded Bandwidth	
Dropped Bandwidth	
Input Bandwidth	
Output Bandwidth	
Discarded and Received Input Data Counters	Y
Dropped and Forward Output Data Counters	Y
Administrative Status	Y
Operational Status	Y
Last Changed	Y
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IBridge	
Bridge Table	
Type	
MAC Address	
IP Interface	
Name	
Logical Sons	
IMO Name—IBridgeEntry	
Destination MAC	Y
Outgoing Interface	Y
IMO Name—IVcSwitchingEntity	
Cross Connect Table	
Logical Sons	



CHAPTER 11

Support Information for Cisco Traps

This chapter provides detailed information about the traps supported in Cisco ANA. It presents this information in:

- A section devoted to the supported traps for a MIB (e.g., [Cisco IOS V1 Traps](#)). Each of these sections contains a table listing the name of each ANA-supported trap in that MIB, along with its OID, varbinds, and a short description. The trap's short description is what you see in a ticket's **Trap** tabs in Cisco ANA EventVision.
- The [Registry Parameters for the Trap Events](#) section. This section provides tables of all the event subtypes, grouped according to the event type they share. The event subtypes represent the states an alarm can be in. For example, the [cisco bgp trap](#) can have multiple event subtypes, or states, including [Cisco BGP backward transition trap](#), [Cisco BGP down trap](#), and [Cisco BGP established trap](#). The event subtypes tables also describe when these traps are generated, and information about how Cisco ANA processes them (such as their severity, and whether they are ticketable, can be correlated, are autocleared, and so on).

This chapter includes the following sections:

- [Cisco ASR 9000 Traps, page 11-2](#)
- [Cisco IOS V1 Traps, page 11-6](#)
- [Cisco IOS V2 Traps, page 11-9](#)
- [Cisco MIB2 Traps, page 11-27](#)
- [Registry Parameters for the Trap Events, page 11-33](#)



Note

Cisco IOS devices, Cisco XR 12000 Series and the Cisco CRS-1 Carrier Routing System must be configured to send traps in SNMP V2.

Cisco ASR 9000 Traps

Table 11-1 lists the Cisco ASR 9000 traps supported in Cisco ANA.

Table 11-1 Cisco ASR 9000 Traps

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ciscoNtpSrvStatusChange	.1.3.6.1.4.1.9.9.168.0.1	1.3.6.1.4.1.9.9.168.1.1.11	=1	Sent whenever the value of cntpSysSrvStatus changes.	NTP Server Status Changes to Unknown
ciscoNtpSrvStatusChange	.1.3.6.1.4.1.9.9.168.0.1	1.3.6.1.4.1.9.9.168.1.1.11	=2	Sent whenever the value of cntpSysSrvStatus changes.	NTP Server Status Changes to notRunning
ciscoNtpSrvStatusChange	.1.3.6.1.4.1.9.9.168.0.1	1.3.6.1.4.1.9.9.168.1.1.11	=3	Sent whenever the value of cntpSysSrvStatus changes.	NTP Server Status Changes to notSynchronized
ciscoNtpSrvStatusChange	1.3.6.1.4.1.9.9.168.0.1	1.3.6.1.4.1.9.9.168.1.1.11	=4	Sent whenever the value of cntpSysSrvStatus changes.	NTP Server Status Changes to syncToLocal
ciscoNtpSrvStatusChange	1.3.6.1.4.1.9.9.168.0.1	1.3.6.1.4.1.9.9.168.1.1.11	=5	Sent whenever the value of cntpSysSrvStatus changes.	NTP Server Status Changes to syncToRefclock
ciscoNtpSrvStatusChange	1.3.6.1.4.1.9.9.168.0.1	1.3.6.1.4.1.9.9.168.1.1.11	=6	Sent whenever the value of cntpSysSrvStatus changes.	NTP Server Status Changes to syncToRemoteServer
topologyChange	1.3.6.1.2.1.17.0.2	NA	NA	Sent by a bridge when any of its configured ports transitions from the Learning state to the Forwarding state, or from the Forwarding state to the Blocking state. The trap is not sent if a newRoot trap is sent for the same transition. Implementation of this trap is optional.	Spanning Tree Topology Changed
warmStart	1.3.6.1.6.3.1.1.5.2	NA	NA	Indicates that the SNMP entity supporting a notification originator application is reinitializing itself such that its configuration is unaltered.	Warm start trap

Table 11-1 Cisco ASR 9000 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
dot1agCfmFaultAlarm	1.0.8802.1.1.3.0.1	NA	NA	Indicates that a MEP has lost contact with one or more MEPs. A fault alarm is sent to the management entity with the OID of the MEP that detected the fault. Whenever a MEP loses contact with one or more other MEPs, it may or may not generate a fault alarm to warn the system administrator of the problem, as controlled by the MEP Fault Notification Generator State Machine and associated Managed Objects. Only the highest-priority defect is reported in the Fault Alarm. (802.1ag clause 12.14.7.7)	dot1ag CFM Fault Alarm
csbSourceAlertEvent	1.3.6.1.4.1.9.9.658.0.1	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when, after SIP/H.248 call establishment with one party, media packets are received from an unexpected source or party (or wrong or unexpected IP address). Warns that the system is receiving unwanted data packets from an undesirable IP or port.	Cisco SBC source alert off trap
csbSourceAlertEvent	1.3.6.1.4.1.9.9.658.0.1	1.3.6.1.4.1.9.9.658.1.2	!= (1 or 7)	Sent when, after SIP/H.248 call establishment with one party, media packets are received from an unexpected source or party (or wrong or unexpected IP address). Warns that the system is receiving unwanted data packets from an undesirable IP or port.	Cisco SBC source alert on trap
csbSourceAlertEvent	1.3.6.1.4.1.9.9.658.0.1	1.3.6.1.4.1.9.9.658.1.2	= 7	Sent when, after SIP/H.248 call establishment with one party, media packets are received from an unexpected source or party (or wrong or unexpected IP address). Warns that the system is receiving unwanted data packets from an undesirable IP or port.	Cisco SBC source alert informational trap

Table 11-1 Cisco ASR 9000 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
csbDynamicBlackListEvent	1.3.6.1.4.1.9.9.658.0.2	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when a source is added to or removed from the blacklist table. The SBC puts in place dynamic blacklists automatically (subject to a set of configurable constraints) when it detects an attempt to disrupt traffic flowing through it. Dynamic blacklisting does not require management interference. The blacklist table is restricted only to SBC service and is not made available to NM. For more information on dynamic blacklisting, search cisco.com using the keywords “DoS Prevention and Dynamic Blacklisting”.	Cisco SBC dynamic blacklist trap
csbAdjacencyStatus	1.3.6.1.4.1.9.9.658.0.3	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when an Adjacency is attached to (or detached from) the SBC.	Cisco SBC adjacency state up trap
csbAdjacencyStatus	1.3.6.1.4.1.9.9.658.0.3	1.3.6.1.4.1.9.9.658.1.2	!= (1 or 7)	Sent when an Adjacency is attached to (or detached from) the SBC.	Cisco SBC adjacency state down trap
csbAdjacencyStatus	1.3.6.1.4.1.9.9.658.0.3	1.3.6.1.4.1.9.9.658.1.2	= 7	Sent when an Adjacency is attached to (or detached from) the SBC.	Cisco SBC adjacency state informational trap
csbServiceStateEvent	1.3.6.1.4.1.9.9.658.0.4	1.3.6.1.4.1.9.9.658.1.28	= 1	Sent when there is a change in the state of a service card. The changes in the service state are: “Active”, “Standby”.	Cisco SBC service state up trap
csbServiceStateEvent	1.3.6.1.4.1.9.9.658.0.4	1.3.6.1.4.1.9.9.658.1.28	= 3	Sent when there is a change in the state of a service card. The changes in the service state are: “Active”, “Standby”.	Cisco SBC service state down trap
csbServiceStateEvent	1.3.6.1.4.1.9.9.658.0.4	1.3.6.1.4.1.9.9.658.1.28	= 2	Sent when there is a change in the state of a service card. The changes in the service state are: “Active”, “Standby”.	Cisco SBC service state informational trap
csbSystemCongestionAlarmEvent	1.3.6.1.4.1.9.9.658.0.5	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when CPU/Memory congestion in SBC is raised or cleared.	Cisco SBC system congestion cleared trap
csbSystemCongestionAlarmEvent	1.3.6.1.4.1.9.9.658.0.5	1.3.6.1.4.1.9.9.658.1.2	!= (1 or 7)	Sent when CPU/Memory congestion in SBC is raised or cleared.	Cisco SBC system congestion raised trap
csbSystemCongestionAlarmEvent	1.3.6.1.4.1.9.9.658.0.5	1.3.6.1.4.1.9.9.658.1.2	= 7	Sent when CPU/Memory congestion in SBC is raised or cleared.	Cisco SBC system congestion informational trap

Table 11-1 Cisco ASR 9000 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
csbSLAViolationRev1	1.3.6.1.4.1.9.9.658.0.10	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when there is a violation of a Service Level Agreement (SLA) as described in the policy tables. Typical SLAs include maximum number of calls allowed, max call rate, max bandwidth, etc. This trap replaces csbSLAViolation.	Cisco SBC SLA violation off trap
csbSLAViolationRev1	1.3.6.1.4.1.9.9.658.0.10	1.3.6.1.4.1.9.9.658.1.2	!= (1 or 7)	Sent when there is a violation of a Service Level Agreement (SLA) as described in the policy tables. Typical SLAs include maximum number of calls allowed, max call rate, max bandwidth, etc. This trap replaces csbSLAViolation.	Cisco SBC SLA violation on trap
csbSLAViolationRev1	1.3.6.1.4.1.9.9.658.0.10	1.3.6.1.4.1.9.9.658.1.2	= 7	Sent when there is a violation of a Service Level Agreement (SLA) as described in the policy tables. Typical SLAs include maximum number of calls allowed, max call rate, max bandwidth, etc. This trap replaces csbSLAViolation.	Cisco SBC SLA violation informational trap
csbRadiusConnectionStatus	1.3.6.1.4.1.9.9.658.0.7	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when the connection to the RADIUS server changes (connected or disconnected).	Cisco SBC radius connection state up trap
csbRadiusConnectionStatus	1.3.6.1.4.1.9.9.658.0.7	1.3.6.1.4.1.9.9.658.1.2	!= (1 or 7)	Sent when the connection to the RADIUS server changes (connected or disconnected).	Cisco SBC radius connection state down trap
csbRadiusConnectionStatus	1.3.6.1.4.1.9.9.658.0.7	1.3.6.1.4.1.9.9.658.1.2	= 7	Sent when the connection to the RADIUS server changes (connected or disconnected).	Cisco SBC radius connection state informational trap
csbH248ControllerStatus	1.3.6.1.4.1.9.9.658.0.9	1.3.6.1.4.1.9.9.658.1.2	= 1	Sent when, in distributed deployment model, a DBE is attached or detached from the SBC.	Cisco SBC H248 controller state up trap
csbH248ControllerStatus	1.3.6.1.4.1.9.9.658.0.9	1.3.6.1.4.1.9.9.658.1.2	!= (1 or 7)	Sent when, in distributed deployment model, a DBE is attached or detached from the SBC.	Cisco SBC H248 controller state down trap
csbH248ControllerStatus	1.3.6.1.4.1.9.9.658.0.9	1.3.6.1.4.1.9.9.658.1.2	= 7	Sent when, in distributed deployment model, a DBE is attached or detached from the SBC.	Cisco SBC H248 controller state informational trap

Cisco IOS V1 Traps

Table 11-2 lists the Cisco IOS V1 traps supported in Cisco ANA.

Table 11-2 Cisco IOS V1 Traps

Trap Name	Generic Type	Specific Type	Enterprise OID	Description	SubType Varbind OID	SubType Varbind Value	Short Description
ciscoEnvMonTemperatureNotification	6	3	1.3.6.1.4.1.9.9.13.3.0	cisco Environment Monitoring Temperature Notification	1.3.6.1.4.1.9.9.13.1.3.1.6	3	Critical Temperature
ciscoEnvMonTemperatureNotification	6	3	1.3.6.1.4.1.9.9.13.3.0	cisco Environment Monitoring Temperature Notification	1.3.6.1.4.1.9.9.13.1.3.1.6	1	Normal Temperature
ciscoEnvMonTemperatureNotification	6	3	1.3.6.1.4.1.9.9.13.3.0	cisco Environment Monitoring Temperature Notification	1.3.6.1.4.1.9.9.13.1.3.1.6	6	Not Functioning
ciscoEnvMonTemperatureNotification	6	3	1.3.6.1.4.1.9.9.13.3.0	cisco Environment Monitoring Temperature Notification	1.3.6.1.4.1.9.9.13.1.3.1.6	5	Not Present
ciscoEnvMonTemperatureNotification	6	3	1.3.6.1.4.1.9.9.13.3.0	cisco Environment Monitoring Temperature Notification	1.3.6.1.4.1.9.9.13.1.3.1.6	4	Critical Temperature - Device Shutdown
ciscoEnvMonTemperatureNotification	6	3	1.3.6.1.4.1.9.9.13.3.0	cisco Environment Monitoring Temperature Notification	1.3.6.1.4.1.9.9.13.1.3.1.6	2	Temperature Rising
ciscoEnvMonSupplyStatusChangeNotif	6	9	1.3.6.1.4.1.9.9.13.3.0	cisco EnvMon Supply State Notification Trap	1.3.6.1.4.1.9.9.13.1.5.1.3	3	Power Supply - Critical
ciscoEnvMonSupplyStatusChangeNotif	6	9	1.3.6.1.4.1.9.9.13.3.0	cisco EnvMon Supply State Notification Trap	1.3.6.1.4.1.9.9.13.1.5.1.3	1	Power Supply - Normal
ciscoEnvMonSupplyStatusChangeNotif	6	9	1.3.6.1.4.1.9.9.13.3.0	cisco EnvMon Supply State Notification Trap	1.3.6.1.4.1.9.9.13.1.5.1.3	6	Power Supply - Not Functioning
ciscoEnvMonSupplyStatusChangeNotif	6	9	1.3.6.1.4.1.9.9.13.3.0	cisco EnvMon Supply State Notification Trap	1.3.6.1.4.1.9.9.13.1.5.1.3	5	Power Supply - Not Present
ciscoEnvMonSupplyStatusChangeNotif	6	9	1.3.6.1.4.1.9.9.13.3.0	cisco EnvMon Supply State Notification Trap	1.3.6.1.4.1.9.9.13.1.5.1.3	4	Power Supply - Shutdown

Table 11-2 Cisco IOS V1 Traps (Continued)

Trap Name	Generic Type	Specific Type	Enterprise OID	Description	SubType Varbind OID	SubType Varbind Value	Short Description
ciscoEnvMonSuppStatusChangeNotif	6	9	1.3.6.1.4.1.9.9.13.3.0	cisco EnvMon Supply State Notification Trap	1.3.6.1.4.1.9.9.13.1.5.1.3	2	Power Supply - Warning
ciscoEnvMonFanNotification	6	4	1.3.6.1.4.1.9.9.13.3.0	cisco private fan down trap	1.3.6.1.4.1.9.9.13.1.4.1.3	!= 1	Fan down trap
ciscoEnvMonFanNotification	6	4	1.3.6.1.4.1.9.9.13.3.0	cisco private fan down trap	1.3.6.1.4.1.9.9.13.1.4.1.3	1	Fan up trap
rttMonTimeoutNotification	6	2	1.3.6.1.4.1.9.9.42.2.0	Indicates the occurrence of a timeout for an RTT operation	N/A	N/A	RTT Operation Timeout
rttMonThresholdNotification	6	3	1.3.6.1.4.1.9.9.42.2.0	Indicates the occurrence of a threshold violation for an RTT operation	N/A	N/A	RTT Operation Threshold Violation
topologyChange	6	2	1.3.6.1.2.1.17	Sent by a bridge when any of its configured ports transitions from the Learning state to the Forwarding state, or from the Forwarding state to the Blocking state.	N/A	N/A	dot1qBridge trap

Table 11-2 Cisco IOS V1 Traps (Continued)

Trap Name	Generic Type	Specific Type	Enterprise OID	Description	SubType Varbind OID	SubType Varbind Value	Short Description
cEtherCfmCcMep Up	6	1	1.3.6.1.4.1.9.9.461	Sent when: • A remote MEP first comes up (i.e., when we receive a CC message from that MEP for the first time). • The device receives a CC message from a MEP for which it has an expired CCDB entry. • A CC message is received for a remote MEP for which the device already has a CCDB entry and the port state in the received CC message is different from the cached previous state.	N/A	N/A	Mep up trap
cEtherCfmCcMep Down	6	2	1.3.6.1.4.1.9.9.461	Sent when a remote MEP goes down, namely, the entry in CCDB corresponding to this MEP times out or the device receives a CC message with zero hold-time	N/A	N/A	Mep down trap
coldStart	6	0	1.3.6.1.2.1.11.0	Indicates that the sending protocol entity is reinitializing itself such that the agent's configuration or the protocol entity implementation may be altered.	N/A	N/A	Cold start trap

Cisco IOS V2 Traps

Table 11-3 lists the Cisco IOS V2 traps supported in Cisco ANA.

Table 11-3 Cisco IOS V2 Traps

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
cbfDefineFileCompletion	.1.3.6.1.4.1.9.9.81.2.0.1	N/A	N/A	A cbfDefineFileCompletion notification is sent on the following conditions: - Completion of a file consumption operation in case of ephemeral files. - Completion of file creation operation in case of volatile or permanent files. - Any error during file creation.	CBF File operation state indicator
cbgpBackwardTransition	.1.3.6.1.4.1.9.9.187.0.2	NA	NA	The cbgpBackwardTransition Event is generated when the BGP FSM moves from a higher numbered state to a lower numbered state. The bgpPeerRemoteAddr value is attached to the notification object ID.	Cisco BGP backward transition trap
cbgpFsmStateChange	.1.3.6.1.4.1.9.9.187.0.1	1.3.6.1.4.1.9.9.187.0.2	= 1	The BGP cbgpFsmStateChange notification is generated for every BGP FSM state change.	Cisco BGP down trap
cbgpFsmStateChange	.1.3.6.1.4.1.9.9.187.0.1	1.3.6.1.4.1.9.9.187.0.2	= 6	The BGP cbgpFsmStateChange notification is generated for every BGP FSM state change.	Cisco BGP established trap
cbgpFsmStateChange	.1.3.6.1.4.1.9.9.187.0.1	1.3.6.1.4.1.9.9.187.0.2	!= (1 or 6)	The BGP cbgpFsmStateChange notification is generated for every BGP FSM state change.	Cisco BGP FSM state changed trap
cbgpPrefixThresholdExceeded	.1.3.6.1.4.1.9.9.187.0.3	NA	NA	Sent when prefix count exceeds the configured warning threshold on a session for an address family	Cisco BGP prefix threshold exceeded

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
cbgpPrefixThresholdClear	.1.3.6.1.4.1.9.9.187.0.4	NA	NA	The cbgpPrefixThresholdClear notification is generated when prefix count drops below the configured clear threshold on a session for an address family once cbgpPrefixThresholdExceeded is generated. This won't be generated if the peer session goes down after the generation of bgpPrefixThresholdExceeded. The bgpPeerRemoteAddr, bgpPeerAddrFamilyAfi and cbgpPeerAddrFamilySafi values are attached to the notification object ID.	Cisco BGP prefix threshold clear
ccCopyCompletion	.1.3.6.1.4.1.9.9.96.2.1.1	N/A	N/A	A ccCopyCompletion trap is sent at the completion of a config-copy request. The ccCopyFailCause is not instantiated, and hence not included in a trap, when the ccCopyState is success	Config-copy request completion
ciscoConfigManagement	.1.3.6.1.4.1.9.9.43.2.0.1	N/A	N/A	Notification of a configuration management event as recorded in ccmHistoryEventTable.	Cisco Configuration management event notification
cefcFanTrayStatusChange	.1.3.6.1.4.1.9.9.117.2.0.6	1.3.6.1.4.1.9.9.117.1.4.1.1	!=2	Sent when the value of cefcFanTrayOperStatus changes.	cefc Fan-tray oper status down
cefcFanTrayStatusChange	.1.3.6.1.4.1.9.9.117.2.0.6	1.3.6.1.4.1.9.9.117.1.4.1.1	=2	Sent when the value of cefcFanTrayOperStatus changes.	cefc fan-tray oper status up
cefcFRUInserted	.1.3.6.1.4.1.9.9.117.2.0.3	N/A	N/A	The cefcFRUInserted notification indicates that an FRU was inserted. The varbind for this notification indicates the entPhysicalIndex of the inserted FRU, and the entPhysicalIndex of the FRU's container.	cefc FRU inserted
cefcFRURemoved	.1.3.6.1.4.1.9.9.117.2.0.4	N/A	N/A	The cefcFRURemoved notification indicates that an FRU was removed. The varbind for this notification indicates the entPhysicalIndex of the removed FRU, and the entPhysicalIndex of the FRU's container.	cefc FRU removed

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
cefcModuleStatusChange	.1.3.6.1.4.1.9.9.117.2.0.1	1.3.6.1.4.1.9.9.117.1.2.1.1.2	!=2	Sent when the value of cefcModuleOperStatus changes. It can be used by an NMS to update the status of the module it is managing.	cefc module oper status down
cefcModuleStatusChange	.1.3.6.1.4.1.9.9.117.2.0.1	1.3.6.1.4.1.9.9.117.1.2.1.1.2	=2	Sent when the value of cefcModuleOperStatus changes. It can be used by an NMS to update the status of the module it is managing.	cefc module oper status up
cefcPowerStatusChange	.1.3.6.1.4.1.9.9.117.2.0.2	1.3.6.1.4.1.9.9.117.1.1.2.1.2	!=2	The cefcFRUPowerStatusChange notification indicates that the power status of an FRU has changed. The varbind for this notification indicates the entPhysicalIndex of the FRU, and the new operational-status of the FRU.	cefc Power status down
cefcPowerStatusChange	.1.3.6.1.4.1.9.9.117.2.0.2	1.3.6.1.4.1.9.9.117.1.1.2.1.2	=2	The cefcFRUPowerStatusChange notification indicates that the power status of an FRU has changed. The varbind for this notification indicates the entPhysicalIndex of the FRU, and the new operational-status of the FRU.	cefc Power status up
entSensorThresholdNotification	.1.3.6.1.4.1.9.9.91.2.0.1	N/A	N/A	The sensor value crossed the threshold listed in entSensorThresholdTable. Sent once each time the sensor value crosses the threshold	sensor value crossed threshold in entSensorThresholdTable
ciscoFlashCopyCompletionTrap	.1.3.6.1.4.1.9.9.10.1.3.0.1	1.3.6.1.4.1.9.9.10.1.2.1.1.8	!= (0 or 1 or 2)	A ciscoFlashCopyCompletionTrap is sent at the completion of a flash copy operation if such a trap was requested when the operation was initiated.	Cisco flash copy failed
ciscoFlashCopyCompletionTrap	.1.3.6.1.4.1.9.9.10.1.3.0.1	1.3.6.1.4.1.9.9.10.1.2.1.1.8	=2	A ciscoFlashCopyCompletionTrap is sent at the completion of a flash copy operation if such a trap was requested when the operation was initiated.	Cisco flash copy completion
ciscoFlashCopyCompletionTrap	.1.3.6.1.4.1.9.9.10.1.3.0.1	1.3.6.1.4.1.9.9.10.1.2.1.1.8	= (0 or 1)	A ciscoFlashCopyCompletionTrap is sent at the completion of a flash copy operation if such a trap was requested when the operation was initiated.	Cisco flash copy in progress
ciscoFlashDeviceChangeTrap	.1.3.6.1.4.1.9.9.10.1.3.0.4	N/A	N/A	A ciscoFlashDeviceChangeTrap is sent whenever a removable Flash device is inserted or removed.	Cisco Flash device changed

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ciscoFlashDeviceInsertedNotif	.1.3.6.1.4.1.9.9.10.1.3.0.5	N/A	N/A	A ciscoFlashDeviceInsertedNotif notification is sent whenever a removable Flash device is inserted.	Cisco Flash device inserted
ciscoFlashDeviceRemovedNotif	.1.3.6.1.4.1.9.9.10.1.3.0.6	N/A	N/A	A ciscoFlashDeviceRemovedNotif notification is sent whenever a removable Flash device is removed.	Cisco Flash device removed
ciscoFlashDeviceInsertedNotifRev1	.1.3.6.1.4.1.9.9.10.1.3.0.7	N/A	N/A	This notification is sent whenever a removable Flash device is inserted. The notification deprecates ciscoFlashDeviceInsertedNotif since it uses ciscoFlashDeviceName as a varbind, which is deprecated.	Cisco Flash device inserted
ciscoFlashDeviceRemovedNotifRev1	.1.3.6.1.4.1.9.9.10.1.3.0.8	N/A	N/A	This notification is sent whenever a removable Flash device is removed. It deprecates ciscoFlashDeviceRemovedNotif since it uses ciscoFlashDeviceName as a varbind which is deprecated.	Cisco Flash device removed
ciscoFlashMiscOpCompletionTrap	.1.3.6.1.4.1.9.9.10.1.3.0.3	1.3.6.1.4.1.9.9.10.1.2.3.1.4	=2	This notification is sent at the completion of a miscellaneous flash operation (enumerated in ciscoFlashMiscOpCommand) if such a trap was requested when the operation was initiated.	Cisco Flash miscellaneous operation completed
ciscoFlashMiscOpCompletionTrap	.1.3.6.1.4.1.9.9.10.1.3.0.3	1.3.6.1.4.1.9.9.10.1.2.3.1.4	=2	This notification is sent at the completion of a miscellaneous flash operation (enumerated in ciscoFlashMiscOpCommand) if such a trap was requested when the operation was initiated.	Cisco Flash partitioning Completed
ciscoFlashMiscOpCompletionTrap	.1.3.6.1.4.1.9.9.10.1.3.0.3	1.3.6.1.4.1.9.9.10.1.2.3.1.4	=1	This notification is sent at the completion of a miscellaneous flash operation (enumerated in ciscoFlashMiscOpCommand) if such a trap was requested when the operation was initiated.	Cisco Flash miscellaneous operation in progress
chassisAlarmOff	1.3.6.1.4.1.9.5.0.6	N/A	N/A	Chassis alarm trap	chassis alarm off
chassisAlarmOn	1.3.6.1.4.1.9.5.0.5	N/A	N/A	Chassis alarm trap	chassis alarm on

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
cPimNbrLoss	.1.3.6.1.4.1.9.10.119.0.2	N/A	N/A	A cPimNbrLoss trap signifies the loss of an adjacency with a neighbor. This trap should be generated when the neighbor timer expires, and the router has no other neighbors on the same interface with a lower IP address than itself.	Cisco PIM neighbor lost
ciscoPingCompletion	.1.3.6.1.4.1.9.9.16.2.0.1	N/A	N/A	A ciscoPingCompleted trap is sent at the completion of a sequence of pings if such a trap was requested when the sequence was initiated.	Cisco ping completion
rttMonNotification	.1.3.6.1.4.1.9.9.42.2.0.5	N/A	N/A	Indicates the occurrence of a threshold violation, and that the previous violation has subsided for a subsequent operation.	RTT threshold violation or clearance
ciscoSonetSectionStatusChange	.1.3.6.1.4.1.9.9.126.0.1	1.3.6.1.2.1.1.0.39.1.2.1.1.1	!=1	Sent whenever the value of sonetSectionCurrentStatus changes to value more than 1.	Cisco Sonet section status changed to error
ciscoSonetSectionStatusChange	.1.3.6.1.4.1.9.9.126.0.1	1.3.6.1.2.1.1.0.39.1.2.1.1.1	=1	Sent whenever the value of sonetSectionCurrentStatus changes to value 1.	Cisco Sonet section status changed to error
ciscoSonetLineStatusChange	.1.3.6.1.4.1.9.9.126.0.2	1.3.6.1.2.1.1.0.39.1.3.1.1.1	!=1	Sent whenever the value of sonetLineCurrentStatus changes to value more than 1.	Cisco Sonet line status changed to error
ciscoSonetLineStatusChange	.1.3.6.1.4.1.9.9.126.0.2	1.3.6.1.2.1.1.0.39.1.3.1.1.1	=1	Sent whenever the value of sonetLineCurrentStatus changes to value 1.	Cisco Sonet line status changed to clear
ciscoSonetPathStatusChange	.1.3.6.1.4.1.9.9.126.0.3	1.3.6.1.2.1.1.0.39.2.1.1.1.2	!=1	Sent whenever the value of sonetPathCurrentStatus changes to value more than 1.	Cisco Sonet path status changed to error
ciscoSonetPathStatusChange	.1.3.6.1.4.1.9.9.126.0.3	1.3.6.1.2.1.1.0.39.2.1.1.1.2	=1	Sent whenever the value of sonetPathCurrentStatus changes to value 1.	Cisco Sonet path status changed to clear
mplsLdpFailedInitSessionThreshold Exceeded	.1.3.6.1.4.1.9.10.65.2.0.1	N/A	N/A	Sent when the value of the mplsLdpEntityPVLimitMismatchTrapEnable object is enabled (1) and mplsLdpEntityFailedInitSessionThreshold object has been exceeded.	MPLS LDP init session threshold exceeded Trap
mplsLdpSessionDown	.1.3.6.1.4.1.9.10.65.2.0.4	N/A	N/A	Generation of this trap occurs when the 'mplsLdpSessionUpDownTrapEnable' object is 'enabled(1)' and the value of mplsLdpSessionState changes from 'operational(5)' to any other state.	MPLS LDP session down Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
mplsLdpSessionUp	.1.3.6.1.4.1.9.10.65.2.0.3	N/A	N/A	Generation of this trap occurs when the 'mplsLdpSessionUpDownTrapEnable' object is 'enabled(1)' and the value of mplsLdpSessionState changes from any state except 'nonexistent(1)' to 'operational'.	MPLS LDP session up Trap
mplsTunnelUp	.1.3.6.1.3.95.3.0.1	N/A	N/A	Sent when a mplsTunnelOperStatus object for one of the configured tunnels is about to leave the down state and transition into some other state (but not into the notPresent state). This other state is indicated by the included value of mplsTunnelOperStatus.	MPLS-TE tunnel up
mplsTunnelDown	.1.3.6.1.3.95.3.0.2	N/A	N/A	Sent when a mplsTunnelOperStatus object for one of the configured tunnels is about to enter the down state from some other state (but not from the notPresent state). This other state is indicated by the included value of mplsTunnelOperStatus.	MPLS-TE tunnel down
mplsTunnelRerouted	.1.3.6.1.3.95.3.0.3	N/A	N/A	Sent when a tunnel is rerouted or re-optimized. If the Actual Path is used, then this object MAY contain the new path for this tunnel some time after this trap is issued by the agent	MPLS-TE tunnel reoptimized
ciscoIpMRouteMissingHeartBeats	.1.3.6.1.4.1.9.10.2.3.1.0.1	N/A	N/A	A notification is sent if a multicast router with this feature enabled failed to receive configured number of heartbeat packets from heartbeat sources within a configured time interval	Failed receive multicast router heartbeat
ciscoRFProgressionNotif	1.3.6.1.4.1.9.176.2.0.2	N/A	N/A	VSL link goes down or one of the chassis reloads	Cisco VSS Shelf 1 is Disabled
ciscoRFProgressionNotif	1.3.6.1.4.1.9.176.2.0.2	N/A	N/A	VSL link goes down or one of the chassis reloads	Cisco VSS Shelf 1 is Standby Cold
ciscoRFProgressionNotif	1.3.6.1.4.1.9.176.2.0.2	N/A	N/A	VSL link goes down or one of the chassis reloads	Cisco VSS Shelf 1 is Standby Hot
ciscoRFProgressionNotif	1.3.6.1.4.1.9.176.2.0.2	N/A	N/A	VSL link goes down or one of the chassis reloads	Cisco VSS Shelf 2 is Disabled
ciscoRFProgressionNotif	1.3.6.1.4.1.9.176.2.0.2	N/A	N/A	VSL link goes down or one of the chassis reloads	Cisco VSS Shelf 2 is Standby Cold

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ciscoRFProgressionNotif	1.3.6.1.4.1.9.176.2.0.2	N/A	N/A	VSL link goes down or one of the chassis reloads	Cisco VSS Shelf 2 is Standby Hot
cvsVSLConnectionChangeNotif	1.3.6.1.4.1.9.388.0.1	N/A	N/A	When VSL connection is down	VSL Connection Changed: Down
cvsVSLConnectionChangeNotif	1.3.6.1.4.1.9.388.0.1	N/A	N/A	When VSL connection is up	VSL Connection Changed: Up
rttMonTimeoutNotification	1.3.6.1.4.1.9.9.42.2.0.2	N/A	N/A	Indicates the occurrence of a timeout for a RTT operation	RTT Operation Timeout
rttMonThresholdNotification	1.3.6.1.4.1.9.9.42.2.0.3	N/A	N/A	Indicates the occurrence of a threshold violation for a RTT operation	RTT Operation Threshold Violation
topologyChange	1.3.6.1.2.1.17.0.2	N/A	N/A	Sent by a bridge when any of its configured ports transitions from the Learning state to the Forwarding state, or from the Forwarding state to the Blocking state.	dot1qBridge trap
cEtherCfmCcMepUp	1.3.6.1.4.1.9.9.461.0.0.1	N/A	N/A	Sent in the following cases: - When a remote MEP first comes up, that is when we receive CC message from that MEP for the first time. - When the device receives a CC message from a MEP for which it has an expired CCDB entry. - When a CC message is received for a remote MEP for which the device already has a CCDB entry and the port-state in the received CC message is different from the cached previous state	Mep up trap
cEtherCfmCcMepDown	1.3.6.1.4.1.9.9.461.0.0.2	N/A	N/A	Sent when a remote MEP goes down, namely, the entry in CCDB corresponding to this MEP times out or the device receives a CC message with zero hold-time	Mep down trap
coldStart	1.3.6.1.2.1.11.0.0	N/A	N/A	Indicates that the sending protocol entity is reinitializing itself such that the agent's configuration or the protocol entity implementation may be altered.	Cold start trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
cHsrpStateChange	1.3.6.1.4.1.9.106.2.0.1	1.3.6.1.4.1.9.106.1.2.1.1.15	= 5	Sent when a cHsrpGrpStandbyState transitions to either active or standby state, or leaves active or standby state. There will be only one notification issued when the state change is from standby to active and vice versa.	Cisco hsrp state standby
cHsrpStateChange	1.3.6.1.4.1.9.106.2.0.1	1.3.6.1.4.1.9.106.1.2.1.1.15	= ^	Sent when a cHsrpGrpStandbyState transitions to either active or standby state, or leaves active or standby state. There will be only one notification issued when the state change is from standby to active and vice versa.	Cisco hsrp state non active
cHsrpStateChange	1.3.6.1.4.1.9.106.2.0.1	1.3.6.1.4.1.9.106.1.2.1.1.15	= 6	Sent when a cHsrpGrpStandbyState transitions to either active or standby state, or leaves active or standby state. There will be only one notification issued when the state change is from standby to active and vice versa.	Cisco hsrp state active
ciscoEnvMonFan Notification	1.3.6.1.4.1.9.13.3.0.4	1.3.6.1.4.1.9.13.1.4.1.3	= 3	Sent if any one of the fans in the fan array (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Fan Critical Trap
ciscoEnvMonFan Notification	1.3.6.1.4.1.9.13.3.0.4	1.3.6.1.4.1.9.13.1.4.1.3	= 1	Sent if any one of the fans in the fan array (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Fan Normal Trap
ciscoEnvMonFan Notification	1.3.6.1.4.1.9.13.3.0.4	1.3.6.1.4.1.9.13.1.4.1.3	= 6	Sent if any one of the fans in the fan array (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Fan Not Functioning Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ciscoEnvMonFan Notification	1.3.6.1.4.1.9.9.13.3.0.4	1.3.6.1.4.1.9.9.13.1.4.1.3	= 5	Sent if any one of the fans in the fan array (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Fan Not Present Trap
ciscoEnvMonFan Notification	1.3.6.1.4.1.9.9.13.3.0.4	1.3.6.1.4.1.9.9.13.1.4.1.3	= 4	Sent if any one of the fans in the fan array (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Fan Shutdown Trap
ciscoEnvMonFan Notification	1.3.6.1.4.1.9.9.13.3.0.4	1.3.6.1.4.1.9.9.13.1.4.1.3	= 2	Sent if any one of the fans in the fan array (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Fan Warning Trap
ciscoEnvMonRedundantSupplyNotification	1.3.6.1.4.1.9.9.13.3.0.5	1.3.6.1.4.1.9.9.13.1.5.1.3	= 3	Sent if the redundant power supply (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Redundant PowerSupply Critical Trap
ciscoEnvMonRedundantSupplyNotification	1.3.6.1.4.1.9.9.13.3.0.5	1.3.6.1.4.1.9.9.13.1.5.1.3	= 1	Sent if the redundant power supply (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Redundant PowerSupply Normal Trap
ciscoEnvMonRedundantSupplyNotification	1.3.6.1.4.1.9.9.13.3.0.5	1.3.6.1.4.1.9.9.13.1.5.1.3	= 6	Sent if the redundant power supply (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Redundant PowerSupply Not Functioning Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ciscoEnvMonRedundantSupplyNotification	1.3.6.1.4.1.9.9.13.3.0.5	1.3.6.1.4.1.9.9.13.1.5.1.3	= 5	Sent if the redundant power supply (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Redundant PowerSupply Not Present Trap
ciscoEnvMonRedundantSupplyNotification	1.3.6.1.4.1.9.9.13.3.0.5	1.3.6.1.4.1.9.9.13.1.5.1.3	= 4	Sent if the redundant power supply (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Redundant PowerSupply Shutdown Trap
ciscoEnvMonRedundantSupplyNotification	1.3.6.1.4.1.9.9.13.3.0.5	1.3.6.1.4.1.9.9.13.1.5.1.3	= 2	Sent if the redundant power supply (where existent) fails. Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Redundant PowerSupply Warning Trap
ciscoEnvMonTemperatureNotification	1.3.6.1.4.1.9.9.13.3.0.3	1.3.6.1.4.1.9.9.13.1.3.1.6	= 3	Sent if the temperature measured at a given testpoint is outside the normal range for the testpoint (i.e., is at the warning, critical, or shutdown stage). Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Critical Temperature
ciscoEnvMonTemperatureNotification	1.3.6.1.4.1.9.9.13.3.0.3	1.3.6.1.4.1.9.9.13.1.3.1.6	= 1	Sent if the temperature measured at a given testpoint is outside the normal range for the testpoint (i.e., is at the warning, critical, or shutdown stage). Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does the ciscoEnvMonShutdownNotification.	Normal Temperature

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ciscoEnvMonTemperatureNotification	1.3.6.1.4.1.9.13.3.0.3	1.3.6.1.4.1.9.13.1.3.1.6	= 6	Sent if the temperature measured at a given testpoint is outside the normal range for the testpoint (i.e., is at the warning, critical, or shutdown stage). Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Not Functioning
ciscoEnvMonTemperatureNotification	1.3.6.1.4.1.9.13.3.0.3	1.3.6.1.4.1.9.13.1.3.1.6	= 5	Sent if the temperature measured at a given testpoint is outside the normal range for the testpoint (i.e. is at the warning, critical, or shutdown stage). Since such a Notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does the ciscoEnvMonShutdownNotification.	Not Present
ciscoEnvMonTemperatureNotification	1.3.6.1.4.1.9.13.3.0.3	1.3.6.1.4.1.9.13.1.3.1.6	= 4	Sent if the temperature measured at a given testpoint is outside the normal range for the testpoint (i.e. is at the warning, critical, or shutdown stage). Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	Critical Temperature-Device Shutdown
ciscoEnvMonTemperatureNotification	1.3.6.1.4.1.9.13.3.0.3	1.3.6.1.4.1.9.13.1.3.1.6	= 2	Sent if the temperature measured at a given testpoint is outside the normal range for the testpoint (i.e. is at the warning, critical, or shutdown stage). Since this notification is usually generated before the shutdown state is reached, it can convey more data and has a better chance of being sent than does ciscoEnvMonShutdownNotification.	temperatureRising

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
newRoot	1.3.6.1.2.1.17.0.1	NA	NA	Indicates that the sending agent has become the new root of the Spanning Tree. The trap is sent by a bridge soon after its election as the new root, e.g., upon expiration of the Topology Change Timer, immediately subsequent to its election. Implementation of this trap is optional.	STP New Root Trap
stpInconsistency Update	1.3.6.1.4.1.9.9.82.2.0.1	1.3.6.1.4.1.9.9.82.1.3.1.1.3	=1	Sent by a bridge when an instance of stpInconsistentState is created or destroyed (i.e., when an inconsistency is discovered in the VLAN's Spanning Tree for a particular port, or when such an inconsistency disappears). The trap is not sent if the port transitions between different types of inconsistency. The stpInconsistentState value indicates the type of inconsistency which now exists (or no longer exists) for the relevant VLAN on the relevant port.	STPX Port Inconsistency discovered Trap
stpInconsistency Update	1.3.6.1.4.1.9.9.82.2.0.1	1.3.6.1.4.1.9.9.82.1.3.1.1.4	=2	Sent by a bridge when an instance of stpInconsistentState is created or destroyed (i.e., when an inconsistency is discovered in the VLAN's Spanning Tree for a particular port, or when such an inconsistency disappears). The trap is not sent if the port transitions between different types of inconsistency. The stpInconsistentState value indicates the type of inconsistency which now exists (or no longer exists) for the relevant VLAN on the relevant port.	STPX Port Inconsistency resolved Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
stpLoopInconsistencyUpdate	1.3.6.1.4.1.9.82.2.0.3	1.3.6.1.4.1.9.82.1.8.2.1.3	= 1	Sent by a bridge when an instance of stpLoopInconsistencyState is created or destroyed (i.e., when a loop-inconsistency is discovered in the VLAN's or instance's Spanning Tree for a particular port, or when such a loop-inconsistency disappears). For creation, the value of stpLoopInconsistencyState in the notification is true (1). For deletion, the value is false (2). The stpSpanningTreeType object value indicates which Spanning Tree protocol is running when an instance of stpLoopInconsistencyState is created or destroyed.	STPX Loop Inconsistency Discovered Trap
stpLoopInconsistencyUpdate	1.3.6.1.4.1.9.82.2.0.3	1.3.6.1.4.1.9.82.1.8.2.1.3	= 2	Sent by a bridge when an instance of stpLoopInconsistencyState is created or destroyed (i.e., when a loop-inconsistency is discovered in the VLAN's or instance's Spanning Tree for a particular port, or when such a loop-inconsistency disappears). For creation, the value of stpLoopInconsistencyState in the notification is true (1). For deletion, the value is false (2). The stpSpanningTreeType object value indicates which Spanning Tree protocol is running when an instance of stpLoopInconsistencyState is created or destroyed.	STPX Loop Inconsistency Discovered Trap
stpRootInconsistencyUpdate	1.3.6.1.4.1.9.82.2.0.2	1.3.6.1.4.1.9.82.1.5.2.1.3	= 1	Sent by a bridge when an instance of stpRootInconsistencyState is created or destroyed (i.e., when a root-inconsistency is discovered in the VLAN's or instance's Spanning Tree for a particular port, or when such a root-inconsistency disappears). For creation, the value of stpRootInconsistencyState in the notification is true (1). For deletion, the value is false (2). The object value of stpSpanningTreeType indicates which Spanning Tree protocol is running when an instance of stpRootInconsistencyState is created or destroyed.	STPX Root Inconsistency Discovered Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
stpRootInconsistencyUpdate	1.3.6.1.4.1.9.82.2.0.2	1.3.6.1.4.1.9.82.1.5.2.1.3	= 2	Sent by a bridge when an instance of stpRootInconsistencyState is created or destroyed (i.e., when a root-inconsistency is discovered in the VLAN's or instance's Spanning Tree for a particular port, or when such a root-inconsistency disappears). For creation, the value of stpRootInconsistencyState in the notification is true (1). For deletion the value is false (2). The object value of stpSpanningTreeType indicates which Spanning Tree protocol is running when an instance of stpRootInconsistencyState is created or destroyed.	STPX Root Inconsistency Resolved Trap
vtp Config Rev Number Error	1.3.6.1.4.1.9.46.2.0.1	NA	NA	Indicates that a device has incremented its vtpConfigRevNumberErrors counter. Suppressed if the vtpNotificationsEnabled has the value "false". The device must throttle generation of consecutive vtpConfigRevNumberError traps so that there is at least a five-second gap between them. Throttled traps are dropped, not queued for sending at a future time. Note that "generating" a trap means sending to all configured recipients.	vtp configuration revision number error trap
vtpConfigDigestError	1.3.6.1.4.1.9.46.2.0.2	NA	NA	Indicates that a device has incremented its vtpConfigDigestErrors counter. Suppressed if the vtpNotificationsEnabled has the value "false". The device must throttle generation of consecutive vtpConfigDigestError traps so that there is at least a five-second gap between them. Throttled traps are dropped, not queued for sending at a future time. Note that "generating" a trap means sending to all configured recipients.	vtp configuration digest error trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
cisco-EnvMon-Shutdown-Notification-Trap	1.3.6.1.4.1.9.13.3.0.1	NA	NA	Sent if the environmental monitor detects a testpoint reaching a critical state and is about to initiate a shutdown. This trap contains no objects so that it may be encoded and sent in the shortest amount of time possible. Even so, management applications should not rely on receiving such a trap as it may not be sent before the shutdown completes.	cisco EnvMon Shutdown Notification Trap
caem Temperature Notification	1.3.6.1.4.1.9.61.2.0.1	NA	NA	A caemTemperatureNotification is sent if the over-temperature condition is detected in the managed system. This is a replacement for the ciscoEnvMonTemperatureNotification trap because the information ciscoEnvMonTemperatureStatusValue required by the trap is not available in the managed system.	caem Temperature Notification Trap
caem Voltage Notification	1.3.6.1.4.1.9.61.2.0.2	NA	NA	Sent if the over-voltage condition is detected and ciscoEnvMonVoltageState is not set to “notPresent” in the managed system. This is a replacement for the ciscoEnvMonVoltageNotification trap because the information ciscoEnvMonVoltageStatusValue required by the trap is not available in the managed system.	caem Voltage Notification Trap
cmn-Mac-Changed-Notification-Trap	1.3.6.1.4.1.9.215.2.0.1	NA	NA	Sent when there is enough MAC address information to fully occupy a maximum size SNMP trap message. This trap is also sent when there is at least one MAC address changed or removed and the amount of time elapsed from the previous trap is greater than the maximum wait time denoted by the cmnNotificationInterval object. If there are more MAC addresses than can fit into a cmmHistTrapContent object, multiple traps are sent.	cmn Mac Changed Notification Trap
cmn-Mac-Move-Notification-Trap	1.3.6.1.4.1.9.215.2.0.2	NA	NA	Sent when a MAC address is moved between two interfaces.	cmn Mac Move Notification Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
vtp VersionOne Device Detected	1.3.6.1.4.1.9.46.2.0.6	NA	NA	Sent by a device when: 1. A management domain has been put into version 2 mode (as accessed by managementDomainVersionIn Use). 2. 15 minutes has passed since (1). 3. A version 1 PDU is detected on a trunk on the device that is in that management domain which has a lower revision number than the current configuration.	vtp VersionOne Device Detected trap
vtp Local Mode Changed	1.3.6.1.4.1.9.46.2.0.8	NA	NA	Sent by a device when the value of the managementDomainLocalMode object is changed.	vtp Local Mode Changed trap
vtp VersionInUse Changed	1.3.6.1.4.1.9.46.2.0.9	NA	NA	Sent by a device when the value of managementDomainVersionInUse object is changed.	vtp VersionInUse Changed trap
trunking	1.3.6.1.4.1.9.46.2.0.7	1.3.6.1.4.1.9.46.1.6.1.1.14	= 1	Sent by a device when the value of the vlanTrunkPortDynamicStatus object is changed.	Vlan trunk port dynamic status changed to trunking
not trunking	1.3.6.1.4.1.9.46.2.0.7	1.3.6.1.4.1.9.46.1.6.1.1.14	2	Sent by a device when the value of vlanTrunkPortDynamicStatus object has been changed.	Vlan trunk port dynamic status changed to not trunking
cps-Secure-MacAddr-Violation-Trap	1.3.6.1.4.1.9.315.0.0.1	NA	NA	Sent when port security address violation is detected on a secure non-trunk, access interface (that carries a single VLAN) and the cpsIfViolationAction is set to "dropNotify".	cps Secure MacAddr Violation Trap
cps-IfVlan-Secure-MacAddr-Violation-Trap	1.3.6.1.4.1.9.315.0.0.3	NA	NA	Sent when port security address violation is detected on a multi-VLAN interface and the cpsIfViolationAction is set to 'dropNotify'.	cps IfVlan Secure MacAddr Violation Trap
clc VlanMacLimit Notif	1.3.6.1.4.1.9.313.0.1	NA	NA	Sent when the number of MAC addresses (the value of clcFdbVlanMacUsage) has risen above or fallen below the configured limit of MAC addresses (clcVlanMaxMacLimit).	cisco L2 Control VlanMacLimit Notif Trap

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
clc VlanMacLimit High Notif	1.3.6.1.4.1.9.313.0.2	NA	NA	Sent when the number of MAC addresses (the value of clcFdbVlanMacUsage) has risen above or fallen below the configured higher threshold limit of MAC addresses (clcVlanMacLimitHigh).	cisco L2 Control VlanMacLimit High Notif Trap
clc IfMacLimit Low Notif	1.3.6.1.4.1.9.313.0.3	NA	NA	Sent when the number of MAC addresses (the value of clcFdbIfMacUsage) has risen above or fallen below the configured lower threshold limit of MAC addresses (clcIfMacLimitLow).	cisco L2 Control IfMacLimit Low Notif Trap
clc IfMacLimit High Notif	1.3.6.1.4.1.9.313.0.4	NA	NA	Sent when the number of MAC addresses (the value of clcFdbIfMacUsage) has risen above or fallen below the configured higher threshold limit of MAC addresses (clcIfMacLimitHigh).	cisco L2 Control IfMacLimit High Notif Trap
clc IfVlanMacLimit Low Notif	1.3.6.1.4.1.9.313.0.5	NA	NA	Sent when the number of MAC addresses (the value of clcFdbIfVlanMacUsage) has risen above or fallen below the configured lower threshold limit of MAC addresses (clcIfVlanMacLimitLow).	cisco L2 Control IfVlanMacLimit Low Notif Trap
clc IfVlanMacLimit High Notif	1.3.6.1.4.1.9.313.0.6	NA	NA	Sent when the number of MAC addresses (the value of clcFdbIfVlanMacUsage) has risen above or fallen below the configured higher threshold limit of MAC addresses (clcIfVlanMacLimitHigh).	cisco L2 Control IfVlanMacLimit High Notif Trap
rttMonConnectionChangeNotification	1.3.6.1.4.1.9.42.2.0.1	NA	NA	Valid only when the RttMonRttType value is "echo" or "pathEcho". Indicates that a connection to a target (not to a hop along the path to a target) has failed on establishment or been lost and when reestablished. This resulted in a change in value of rttMonCtrlOperConnectionLostOccurred.	RTT Connection Change

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
rttMonTimeoutNotification	1.3.6.1.4.1.9.9.42.2.0.2	NA	NA	Indicates that a timeout for an RTT operation has occurred and that a subsequent RTT operation cleared the condition. This resulted in a change in value of rttMonCtrlOperTimeoutOccurred. When the RttMonRttType value is “pathEcho”, this trap is sent only when the timeout occurs during an operation on the target and not to a hop along the path to the target. This also applies to the clearing of the timeout.	RTT Operation Timeout
rttMonThresholdNotification	1.3.6.1.4.1.9.9.42.2.0.3	NA	NA	Indicates that a threshold violation for an RTT operation has occurred, and that the violation has subsided for a subsequent RTT operation. This resulted in a change in value of rttMonCtrlOperOverThresholdOccurred. When the RttMonRttType value is “pathEcho”, this trap is sent only when the threshold violation occurs during an operation to the target and not to a hop along the path to the target. This also applies to the subsiding of a threshold condition.	RTT Operation Threshold Violation
rttMonVerifyErrorNotification	1.3.6.1.4.1.9.9.42.2.0.4	NA	NA	Indicates the occurrence of data corruption in an RTT operation.	RTT Verify Error
rttMonNotification	1.3.6.1.4.1.9.9.42.2.0.5	NA	NA	Indicates the occurrence of a threshold violation, and that the previous violation has subsided for a subsequent operation.	RTT threshold violation or clearance

Table 11-3 Cisco IOS V2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
rttMonLpdDiscoveryNotification	1.3.6.1.4.1.9.42.2.0.6	NA	NA	Indicates that the LSP Path Discovery to the target PE has failed, and the clearing of this condition. This resulted in a change in value of rttMonLpdGrpStatsLPDFailOccurred. When the value of rttMonLpdGrpStatsLPDFailOccurred is “false”, the instance value for rttMonLpdGrpStatsLPDFailCause is not valid.	RTT Lpd Discovery
rttMonLpdGrpStatusNotification	1.3.6.1.4.1.9.42.2.0.7	NA	NA	Indicates that the LPD Group status rttMonLpdGrpStatsGroupStatus has changed, indicating some connectivity change to the target PE. This resulted in a change in value of rttMonLpdGrpStatsGroupStatus.	RTT Lpd Grp Status

Cisco MIB2 Traps

[Table 11-4](#) lists the Cisco MIB2 traps supported in Cisco ANA.

Table 11-4 Cisco MIB2 Traps

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
bgpBackwardTransition	1.3.6.1.2.1.15.7.2	NA	NA	Sent when the BGP FSM moves from a higher numbered state to a lower numbered state.	BGP down trap
bgpEstablished	1.3.6.1.2.1.15.7.1	1.3.6.1.2.1.15.3.1.2	= 6	Sent when when the BGP FSM enters the ESTABLISHED state.	BGP established trap
mteEventSetFailure	1.3.6.1.2.1.88.2.0.5	NA	NA	Indicates that an attempt to do a set in response to an event has failed.	mte event set failure
mteTriggerFalling	1.3.6.1.2.1.88.2.0.3	NA	NA	Indicates that the falling threshold was met for triggers with mteTriggerType 'threshold'	mte trigger falling
mteTriggerFired	1.3.6.1.2.1.88.2.0.1	NA	NA	Indicates that the trigger indicated by the object instances has fired, for triggers with mteTriggerType “boolean” or “existence”.	mte trigger fired
mteTriggerRising	1.3.6.1.2.1.88.2.0.2	NA	NA	Indicates that the rising threshold was met for triggers with mteTriggerType 'threshold'	mte trigger rising

Table 11-4 Cisco MIB2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
coldStart	.1.3.6.1.6.3.1.1.5.1	NA	NA	Indicates that the SNMP entity supporting a notification originator application is reinitializing and its configuration may have been altered.	Cold start trap
warmStart	1.3.6.1.6.3.1.1.5.2	NA	NA	Indicates that the SNMP entity supporting a notification originator application is reinitializing and that its configuration is unaltered	Warm start trap
authenticationFailure	.1.3.6.1.6.3.1.1.5.5	NA	NA	Indicates that the SNMP entity has received a protocol message that is not properly authenticated. All SNMP entity implementations may be capable of generating this trap, but the snmpEnableAuthenTraps object indicates whether this trap is sent.	SNMP authentication failure
linkDown	.1.3.6.1.6.3.1.1.5.3	NA	NA	Indicates that the SNMP entity, acting in an agent role, has detected that the ifOperStatus object for one of its communication links is about to enter the down state from some state other than notPresent. This other state is indicated by the included value of ifOperStatus.	SNMP Link down
linkUp	.1.3.6.1.6.3.1.1.5.4	NA	NA	Indicates that the SNMP entity, acting in an agent role, has detected that the ifOperStatus object for one of its communication links left the down state and transitioned into a state other than notPresent. This other state is indicated by the included value of ifOperStatus.	SNMP Link up
ipv6IfStateChange	1.3.6.1.2.1.55.2.0.1	1.3.6.1.2.1.55.2.0.1		Indicates that there has been a change in the state of an ipv6 interface. This notification should be generated when the interface's operational status transitions to or from the up (1) state	ipv6 interface state changed
ospfIfStateChange	.1.3.6.1.2.1.14.16.2.16	1.3.6.1.2.1.14.7.1.12	= 1	Indicates that there has been a change in the state of a non-virtual OSPF interface. This trap should be sent when the interface state regresses (e.g., goes from Dr to Down) or progresses to a terminal state (i.e., Point-to-Point, DR Other, Dr, or Backup)	OSPF interface state changed to Down

Table 11-4 Cisco MIB2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ospfIfStateChange	.1.3.6.1.2.1.14.16.2.16	1.3.6.1.2.1.14.7.1.12	!= 1	Indicates that there has been a change in the state of a non-virtual OSPF interface. This trap should be sent when the interface state regresses (e.g., goes from Dr to Down) or progresses to a terminal state (i.e., Point-to-Point, DR Other, Dr, or Backup).	OSPF interface state changed to Up
ospfVirtIfStateChange	.1.3.6.1.2.1.14.16.2.1	NA	NA	Indicates that there has been a change in the state of an OSPF virtual interface. This trap should be sent when the interface state regresses (e.g., goes from Point-to-Point to Down) or progresses to a terminal state (i.e., Point-to-Point).	OSPF virtual interface state changed
ospfNbrStateChange	.1.3.6.1.2.1.14.16.2.2	1.3.6.1.2.1.14.10.1.6	!= 8	Indicates that there has been a change in the state of a non-virtual OSPF neighbor. This trap should be sent when the neighbor state regresses (e.g., goes from Attempt or Full to 1-Way or Down) or progresses to a terminal state (e.g., 2-Way or Full).	OSPF neighbor state down
ospfNbrStateChange	.1.3.6.1.2.1.14.16.2.2	1.3.6.1.2.1.14.10.1.6	= 8	Indicates that there has been a change in the state of a non-virtual OSPF neighbor. This trap should be sent when the neighbor state regresses (e.g., goes from Attempt or Full to 1-Way or Down) or progresses to a terminal state (e.g., 2-Way or Full).	OSPF neighbor state up
ospfVirtNbrStateChange	.1.3.6.1.2.1.14.16.2.3	1.3.6.1.2.1.14.11.1.5	!= 8	Indicates that there has been a change in the state of an OSPF virtual neighbor. This trap should be sent when the neighbor state regresses (e.g., goes from Attempt or Full to 1-Way or Down) or progresses to a terminal state (e.g., Full).	OSPF virtual neighbor state down
ospfVirtNbrStateChange	.1.3.6.1.2.1.14.16.2.3	1.3.6.1.2.1.14.11.1.5	= 8	Indicates that there has been a change in the state of an OSPF virtual neighbor. This trap should be sent when the neighbor state regresses (e.g., goes from Attempt or Full to 1-Way or Down) or progresses to a terminal state (e.g., Full).	OSPF virtual neighbor state up

Table 11-4 Cisco MIB2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ospfIfConfigError	.1.3.6.1.2.1.14.16.2.4	NA	NA	Indicates that a packet has been received on a non-virtual interface from a router whose configuration parameters conflict with this router's configuration parameters.	OSPF interface configuration error
ospfVirtIfConfigError	.1.3.6.1.2.1.14.16.2.5	NA	NA	Indicates that a packet has been received on a virtual interface from a router whose configuration parameters conflict with this router's configuration parameters.	OSPF virtual interface configuration error
ospfIfAuthFailure	.1.3.6.1.2.1.14.16.2.6	NA	NA	Indicates that a packet has been received on a non-virtual interface from a router whose authentication key or authentication type conflicts with this router's authentication key or authentication type.	OSPF interface configuration error
ospfVirtIfAuthFailure	.1.3.6.1.2.1.14.16.2.7	NA	NA	Indicates that a packet has been received on a virtual interface from a router whose authentication key or authentication type conflicts with this router's authentication key or authentication type.	XR OSPF virtual interface authentication failure
ospfIfRxBadPacket	.1.3.6.1.2.1.14.16.2.8	NA	NA	Indicates that a non-virtual interface has received an OSPF packet that cannot be parsed.	XR OSPF bad packet received
ospfVirtIfRxBadPacket	.1.3.6.1.2.1.14.16.2.9	NA	NA	Indicates that a virtual interface has received an OSPF packet that cannot be parsed.	XR OSPF bad packet received on virtual interface
ospfTxRetransmit	.1.3.6.1.2.1.14.16.2.10	NA	NA	Indicates that an OSPF packet has been retransmitted on a non-virtual interface.	XR OSPF packet retransmitted
ospfVirtIfTxRetransmit	.1.3.6.1.2.1.14.16.2.11	NA	NA	Indicates that an OSPF packet has been retransmitted on a virtual interface.	OSPF packet retransmitted on virtual interface
ospfOriginateLsa	.1.3.6.1.2.1.14.16.2.12	NA	NA	Indicates that this router has originated a new LSA. This trap should not be invoked for simple refreshes of LSAs (which happens every 30 minutes), but instead will only be invoked when an LSA is (re)originated due to a topology change.	OSPF new LSA originated

Table 11-4 Cisco MIB2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
ospfMaxAgeLsa	.1.3.6.1.2.1.14.16.2.13	NA	NA	Indicates that one of the LSAs in the router's link-state database has aged to MaxAge.	OSPF Number of LSAs approaching overflow
mplsL3VpnNumVrfRouteMaxThresholdCleared	.1.3.6.1.2.1.10.166.11.0.6	NA	NA	Sent only after the number of routes contained by the specified VRF exceeds or attempts to exceed the maximum allowed value as indicated by mplsVrfMaxRouteThreshold, and then falls below this value.	mpls l3 vpn numvrf routemax thresh cleared Trap
mplsL3VpnVrfDown	.1.3.6.1.2.1.10.166.11.0.2	NA	NA	Sent when: 1. One interface is associated with this VRF and the ifOperStatus of this interface changes from up (1) to down (2). 2. Multiple interfaces are associated with this VRF and the ifOperStatus of all but one of them is equal to up (1), and the ifOperStatus of that interface changes from up (1) to down(2). 3. The last interface with ifOperStatus equal to up (1) is disassociated from a VRF.	mpls l3 vpn vrf Down Trap
mplsL3VpnVrfNumVrfRouteMaxThresholdExceeded	.1.3.6.1.2.1.10.166.11.0.4	NA	NA	Sent when the number of routes contained by the specified VRF exceeds or attempts to exceed the maximum allowed value indicated by mplsL3VpnVrfMaxRouteThreshold.	mpls l3 vpn vrf numvrf routemax thresh exceeded Trap
mplsL3VpnVrfRouteMidThresholdExceeded	.1.3.6.1.2.1.10.166.11.0.3	NA	NA	Sent when the number of routes contained by the specified VRF exceeds the value indicated by mplsL3VpnVrfMidRouteThreshold.	mpls l3 vpn vrf routemid thresh exceeded Trap

Table 11-4 Cisco MIB2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
mplsL3VpnVrfUp	.1.3.6.1.2.1.10.166.11.0.1	NA	NA	Sent when: 1. No interface is associated with this VRF and the first (and only the first) interface associated with it has its ifOperStatus change to up (1). 2. One interface is associated with this VRF and the ifOperStatus of that interface changes to up (1). 3. Multiple interfaces are associated with this VRF, the ifOperStatus of all interfaces is down (2), and the first of those interfaces has its ifOperStatus change to up (1).	MPLS I3 vpn vrf Notifications
mplsLdpInitSessionThresholdExceeded	.1.3.6.1.2.1.10.166.4.0.1	NA	NA	Sent when the value of mplsLdpEntityInitSessionThreshold is not zero, and the number of Session Initialization messages exceeds the value of mplsLdpEntityInitSessionThreshold.	MPLS LDP init session threshold exceeded Trap
mplsLdpSessionDown	.1.3.6.1.2.1.10.166.4.0.4	NA	NA	Sent when the value of mplsLdpSessionState leaves the operational (5) state.	MPLS LDP session down Trap
mplsLdpSessionUp	.1.3.6.1.2.1.10.166.4.0.3	NA	NA	Sent when the value of mplsLdpSessionState enters the operational (5) state.	MPLS LDP session up Trap
mplsTunnelRerouted	.1.3.6.1.2.1.10.166.3.0.3	NA	NA	Sent when a tunnel is rerouted. If the mplsTunnelARHopTable is used, this tunnel instance's entry in the mplsTunnelARHopTable may contain the new tunnel's path some time after the agent issues this trap.	MPLS-TE tunnel rerouted
mplsTunnelReoptimized	.1.3.6.1.2.1.10.166.3.0.4	NA	NA	Sent when a tunnel is reoptimized. If the mplsTunnelARHopTable is used, tunnel instance's entry in the mplsTunnelARHopTable may contain the new tunnel's path some time after the agent issues this trap.	MPLS-TE tunnel reoptimized

Table 11-4 Cisco MIB2 Traps (Continued)

Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Description	Short Description
mplsTunnelDown	.1.3.6.1.2.1.10.166.3.0.2	NA	NA	Sent when a mplsTunnelOperStatus object for one of the configured tunnels is about to enter the down state from some state other than notPresent. This other state is indicated by the included value of mplsTunnelOperStatus.	MPLS-TE tunnel down
mplsTunnelUp	.1.3.6.1.2.1.10.166.3.0.1	NA	NA	Sent when a mplsTunnelOperStatus object for one of the configured tunnels is about to leave the down state and transition into some state other than notPresent. This other state is indicated by the included value of mplsTunnelOperStatus.	MPLS-TE tunnel up

Registry Parameters for the Trap Events

This section lists the event subtypes and registry parameters for the following trap event types:

- [bgp trap](#)
- [caem-MIB-Notifications-Tray](#)
- [cbf define file completion](#)
- [cc copy completion](#)
- [cefc fan tray status changed](#)
- [cefc fru removed](#)
- [cefc module oper status changed](#)
- [cefc power status changed](#)
- [cefc power supply output changed](#)
- [cefc unrecognized fru inserted](#)
- [cfh bundle link status notification](#)
- [cfh bundle state notification](#)
- [cfh plane state notification](#)
- [chassis alarm trap](#)
- [cisco bgp trap](#)
- [cisco bgp prefix threshold exceeded](#)
- [cisco config man event](#)
- [cisco-Environment-Monitoring-Fan-Notification](#)
- [cisco-Environment-Monitoring-Redundant-PowerSupply-Notification](#)

- [cisco-Environment-Monitoring-Temperature-Notification \(V1\)](#)
- [cisco-Environment-Monitoring-Temperature-Notification \(V2\)](#)
- [cisco-EnvMon-Shutdown-Notification](#)
- [cisco-EnvMon-Supply-State-Notification-Trap](#)
- [cisco flash copy completed](#)
- [cisco flash device changed](#)
- [cisco flash device removed](#)
- [cisco flash operation completed](#)
- [cisco hsrp state change](#)
- [cisco-L2-Control-IfMacLimit-Notifs-Trap](#)
- [cisco-L2-Control-IfVlanMacLimit-Notifs-Trap](#)
- [cisco-L2-Control-Vlan-MacLimit-Notifs-Trap](#)
- [cisco mte event set failure](#)
- [cisco mte trigger falling](#)
- [cisco mte trigger fired](#)
- [cisco mte trigger rising](#)
- [cisco multicast router heartbeat failed](#)
- [cisco ntp server notification](#)
- [cisco pim neighbor lost](#)
- [cisco ping completion](#)
- [Cisco RF SWACT Notifications](#)
- [cisco sbc adjacency state change trap](#)
- [cisco sbc dynamic blacklist trap](#)
- [cisco sbc h248 controller state change trap](#)
- [cisco sbc radius connection state change trap](#)
- [cisco sbc service state change trap](#)
- [cisco sbc sla violation trap](#)
- [cisco sbc source alert trap](#)
- [cisco sbc system congestion trap](#)
- [cisco syslog message generated](#)
- [cmn-Mac-Changed-Notification-Trap](#)
- [cmn-Mac-Move-Notification-Trap](#)
- [Cold start trap](#)
- [cps-IfVlan-Secure-MacAddr-Violation-Trap](#)
- [cps-Secure-MacAddr-Violation-Trap](#)
- [dot1ag cfm fault alarm trap](#)
- [dot1qBridge trap](#)
- [entity sensor threshold notification](#)

- fan down trap
- ipv6-if-state-changed
- mep trap
- mpls l3 vpn vrf Down
- mpls l3 vpn vrf routemid thresh exceeded
- mpls ldp session down (IOS V2)
- mpls ldp session down (MIB2)
- mpls te tunnel down
- mpls te tunnel down trap
- mpls te tunnel reoptimized
- mpls te tunnel rerouted
- mpls te tunnel rerouted trap
- new root trap
- ospf-if-authentic-fail
- ospf-if-bad-packet
- ospf-if-config-err
- ospf-if-packet-retransmit
- ospf if state down
- ospf-lsa-reached-maxage
- ospf neighbor state down
- ospf-new-lsa-originated
- ospf-virtual-if-authentic-fail
- ospf-virtual-if-bad-packet
- ospf-virtual-if-packet-retransmit
- ospf-virtual-if-state-changed
- ospf-virtual-neighbor-state-changed
- pseudo wire tunnel traps
- RTT Connection Change
- RTT Lpd Discovery
- RTT Lpd Grp Status
- RTT Operation Threshold Violation
- RTT Operation Timeout
- RTT-Operation-Trap
- rtt threshold violation or clearance
- RTT Verify Error
- snmp authentication failure
- snmp link down
- sonet line status changed

- sonet path status changed
- sonet section status changed
- Spanning-Tree-Topology-Change-Trap
- stpx loop inconsistency update
- stpx port inconsistency update
- stpx root inconsistency update
- vlan-trunk-port-dynamic-status
- VSL Connection State Change
- VSS RF State Change
- vtp notification prefix trap
- warm start trap (ASR)
- warm start trap (MIB2)

bgp trap

Table 11-5 Event Subtypes: bgp trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
BGP down trap	bgp down trap	N	IBgpNeighbourEntry	T	T	T	0	F	maj	F	T	T
BGP established trap	bgp established trap	N	IBgpNeighbourEntry	T	T	F	0	T	clr	F	T	T

caem-MIB-Notifications-Tray

Table 11-6 Event Subtypes: caem-MIB-Notifications-Tray

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
caem Temperature Notification Trap	caem Temperature Notification	N	IManagedElement	F	F	F	0	F	min	F	T	F
caem Voltage Notification Trap	caem Voltage Notification	N	IManagedElement	F	F	F	0	F	min	F	T	F

cbf define file completion

Table 11-7 Event Subtypes: cbf define file completion

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
CBF File operation state indicator	cbf define file completion	N	IManagedElement	F	F	F	0	T	info	F	T	F

cc copy completion

Table 11-8 Event Subtypes: cc copy completion

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Config-copy request completion	cc copy completion	N	IManagedElement	F	F	F	0	T	info	F	T	F

cefc fan tray status changed

Table 11-9 Event Subtypes: cefc fan tray status changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cefc Fan-tray oper status down	cefc fan status down	physical-command	IModule	F	T	F	0	T	critical	T	T	T
cefc fan-tray oper status up	cefc fan status up	physical-command	IModule	F	F	F	0	T	cleared	F	T	T

cefc fru removed

Table 11-10 Event Subtypes: cefc fru removed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cefc FRU inserted	cefc fru inserted	physical-command	IModule	F	F	T	0	F	cleared	F	T	T
cefc FRU removed	cefc fru removed	physical-command	IModule	F	T	F	0	F	major	T	T	T

cefc module oper status changed

Table 11-11 Event Subtypes: cefc module oper status changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cefc module oper status down	cefc module oper down	physical-command	IModule	F	T	F	0	T	major	F	T	T
cefc module oper status up	cefc module oper up	physical-command	IModule	F	F	F	0	F	cleared	F	T	T

cefc power status changed

Table 11-12 Event Subtypes: cefc power status changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cefc Power status down	cefc power status down	physical-command	IModule	F	T	F	0	F	major	F	T	T
cefc Power status up	cefc power status up	physical-command	IModule	F	F	F	0	F	cleared	F	T	T

cefc power supply output changed

Table 11-13 Event Subtypes: cefc power supply output changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
cefc Power supply output capacity changed	cefc power supply output changed	N	IModule	F	T	F	0	F	info	T	T	F

cefc unrecognized fru inserted

Table 11-14 Event Subtypes: cefc unrecognized fru inserted

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate	Correlate	Is Correlation	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
cefc FRU inserted with unsupported product ID	cefc unrecognized fru inserted	N	IModule	F	T	F	0	F	info	T	T	F

cfh bundle link status notification

Table 11-15 Event Subtypes: cfh bundle link status notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cfh bundle link status down	cfh bundle link status down	N	IManaged Element	F	F	F	0	F	major	F	T	F
cfh bundle link status up	cfh bundle link status up	N	IManaged Element	F	F	F	0	F	cleared	F	F	T

cfh bundle state notification

Table 11-16 Event Subtypes: cfh bundle state notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cfh Fabric bundle operational state changed to down	cfh bundle state down	N	IManaged Element	F	F	F	0	T	major	F	T	F
cfh Fabric bundle operational state changed to up	cfh bundle state up	N	IManaged Element	F	F	F	0	T	cleared	F	T	F

cfh plane state notification

Table 11-17 Event Subtypes: cfh plane state notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cfh Fabric plane status down	cfh plane status down	N	IManaged Element	F	F	F	0	F	major	F	T	T
cfh Fabric plane status up	cfh plane status up	N	IManaged Element	F	F	F	0	F	cleared	F	T	T

chassis alarm trap

Table 11-18 Event Subtypes: chassis alarm trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
chassis alarm off	chassis alarm off	N	IManaged Element	F	F	F	0	F	cleared	F	T	F
chassis alarm on	chassis alarm on	N	IManaged Element	F	T	F	0	T	minor	F	T	F

cisco bgp trap

Table 11-19 Event Subtypes: cisco bgp trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco BGP backward transition trap	cisco bgp backward transition trap	N	IBgpNeigh bourEntry	F	T	F	0	T	info	F	T	T
Cisco BGP down trap	cisco bgp down trap	N	IBgpNeigh bourEntry	T	T	T	0	F	maj	F	T	T
Cisco BGP established trap	cisco bgp established trap	N	IBgpNeigh bourEntry	T	T	F	0	T	clr	F	T	T
Cisco BGP FSM state changed trap	cisco bgp state changed trap	N	IBgpNeigh bourEntry	F	T	F	0	T	info	F	T	T

cisco bgp prefix threshold exceeded

Table 11-20 Event Subtypes: cisco bgp prefix threshold exceeded

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco BGP prefix threshold exceeded	cisco bgp prefix threshold exceeded	N	IProfileC ontainer (BGP)	F	T	F	0	T	wrn	T	F	T
Cisco BGP prefix threshold clear	cisco bgp prefix threshold clear	N	IProfileC ontainer (BGP)	F	T	F	0	F	clr	T	F	T

cisco config man event

Table 11-21 Event Subtypes: cisco config man event

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Configuration management event notification	cisco config man event	N	IManagedElement	F	F	F	0	F	info	F	T	F

cisco-Environment-Monitoring-Fan-Notification

Table 11-22 Event Subtypes: cisco-Environment-Monitoring-Fan-Notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Fan Critical Trap	critical	N	IManagedElement+identifier index	F	F	F	0	F	cri	T	T	F
Fan Normal Trap	normal	N	IManagedElement+identifier index	F	F	F	0	F	clr	T	T	F
Fan Not Functioning Trap	notFunctioning	N	IManagedElement+identifier index	F	F	F	0	F	maj	T	T	F
Fan Not Present Trap	notPresent	N	IManagedElement+identifier index	F	F	F	0	F	maj	T	T	F
Fan Shutdown Trap	shutdown	N	IManagedElement+identifier index	F	F	F	0	F	cri	T	T	F
Fan Warning Trap	warning	N	IManagedElement+identifier index	F	F	F	0	F	wrn	T	T	F

cisco-Environment-Monitoring-Redundant-PowerSupply-Notification

Table 11-23 Event Subtypes: cisco-Environment-Monitoring-Redundant-PowerSupply-Notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Redundant PowerSupply Critical Trap	critical	N	IManagedElement +identifier index	F	F	F	0	F	cri	F	T	F
Redundant PowerSupply Normal Trap	normal	N	IManagedElement +identifier index	F	F	F	0	F	clr	T	T	F
Redundant PowerSupply Not Functioning Trap	notFunctioning	N	IManagedElement +identifier index	F	F	F	0	F	maj	T	T	F
Redundant PowerSupply Not Present Trap	notPresent	N	IManagedElement +identifier index	F	F	F	0	F	maj	T	T	F
Redundant PowerSupply Shutdown Trap	shutdown	N	IManagedElement +identifier index	F	F	F	0	F	cri	T	T	F
Redundant PowerSupply Warning Trap	warning	N	IManagedElement +identifier index	F	F	F	0	F	wrn	T	T	F

cisco-Environment-Monitoring-Temperature-Notification (V1)

Table 11-24 Event Subtypes: cisco-Environment-Monitoring-Temperature-Notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Critical Temperature	critical	N	IManagedElement	F	F	F	0	T	critical	F	T	F
Normal Temperature	normal	N	IManagedElement	F	F	F	0	F	cleared	F	T	F
Not Functioning	notFunctioning	N	IManagedElement	F	F	F	0	T	major	F	T	F
Not Present	notPresent	N	IManagedElement	F	F	F	0	T	major	F	T	F
Critical Temperature - Device Shutdown	shutdown	N	IManagedElement	F	F	F	0	T	critical	F	T	F
Temperature Rising	warning	N	IManagedElement	F	F	F	0	T	warning	F	T	F

cisco-Environment-Monitoring-Temperature-Notification (V2)

Table 11-25 Event Subtypes: cisco-Environment-Monitoring-Temperature-Notification (V2)

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Critical Temperature	critical	N	IManagedElement+identifier index	F	F	F	0	F	cri	T	T	F
Normal Temperature	normal	N	IManagedElement+identifier index	F	F	F	0	F	clr	T	T	F
Not Functioning	notFunctioning	N	IManagedElement+identifier index	F	F	F	0	F	maj	T	T	F
Not Present	notPresent	N	IManagedElement+identifier index	F	F	F	0	F	maj	T	T	F
Critical Temperature-Device Shutdown	shutdown	N	IManagedElement+identifier index	F	F	F	0	F	cri	T	T	F
temperatureRising	warning	N	IManagedElement+identifier index	F	F	F	0	F	wrn	T	T	F

cisco-EnvMon-Shutdown-Notification

Table 11-26 Event Subtypes: Cisco EnvMonShutdown Notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cisco EnvMon Shutdown Notification Trap	cisco-EnvMon-Shutdown-Notification-Trap	N	IManagedElement	F	F	F	0	F	info	F	T	F

cisco-EnvMon-Supply-State-Notification-Trap

Table 11-27 Event Subtypes: cisco-EnvMon-Supply-State-Notification-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Power Supply - Critical	critical	N	IManaged Element	F	F	F	0	T	critical	T	T	F
Power Supply - Normal	normal	N	IManaged Element	F	F	F	0	F	cleared	T	T	F
Power Supply - Not Functioning	notFunctioning	N	IManaged Element	F	F	F	0	T	major	T	T	F
Power Supply - Not Present	notPresent	N	IManaged Element	T	F	F	0	T	major	T	T	F
Power Supply - Shutdown	shutdown	N	IManaged Element	F	F	F	0	T	critical	T	T	F
Power Supply - Warning	warning	N	IManaged Element	F	F	F	0	T	warning	T	T	F

cisco flash copy completed

Table 11-28 Event Subtypes: cisco flash copy completed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco flash copy failed	cisco flash copy failed	N	IManaged Element	F	F	F	0	T	info	F	T	F
Cisco flash copy completion	cisco flash copy completed	N	IManaged Element	F	F	F	0	T	info	F	T	F
Cisco flash copy in progress	cisco flash copy in progress	N	IManaged Element	F	F	F	0	T	info	F	T	F

cisco flash device changed

Table 11-29 Event Subtypes: cisco flash device changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Flash device changed	cisco flash device changed	N	IManaged Element	F	F	F	0	F	info	F	T	F

cisco flash device removed

Table 11-30 Event Subtypes: cisco flash device removed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Flash device inserted	cisco flash device inserted	N	IManaged Element	F	F	F	0	F	cleared	F	T	T
Cisco Flash device removed	cisco flash device removed	N	IManaged Element	F	F	F	0	F	warning	F	T	T

cisco flash operation completed

Table 11-31 Event Subtypes: cisco flash operation completed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Flash miscellaneous operation completed	cisco flash operation failed	N	IManaged Element	F	F	F	0	T	info	F	T	F
Cisco Flash partitioning Completed	cisco flash operation completed	N	IManaged Element	F	F	F	0	T	info	F	T	F
Cisco Flash miscellaneous operation in progress	cisco flash operation in progress	N	IManaged Element	F	F	F	0	T	info	F	T	F

cisco hsrp state change

Table 11-32 Event Subtypes: cisco hsrp state change

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco hsrp state standby	cisco hsrp state standby	hsrp information (command under forwarding investigator)	IIPInterface	F	T	F	0	F	info	T	T	T
Cisco hsrp state non active	cisco hsrp state non active	hsrp information (command under affording investigator)	IIPInterface	F	T	F	0	F	info	T	T	T
Cisco hsrp state active	cisco hsrp state active	hsrp information (command under affording investigator)	IIPInterface	F	T	F	0	F	info	T	T	T

cisco-L2-Control-IfMacLimit-Notifs-Trap

Table 11-33 Event Subtypes: cisco-L2-Control-IfMacLimit-Notifs-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cisco L2 Control IfMacLimit Low Notif Trap	clc IfMacLimit Low Notif	N	IPortLayer1	F	F	F	0	F	info	F	T	F
cisco L2 Control IfMacLimit High Notif Trap	clc IfMacLimit High Notif	N	IPortLayer1	F	F	F	0	F	info	F	T	F

cisco-L2-Control-IfVlanMacLimit-Notifs-Trap

Table 11-34 Event Subtypes: cisco-L2-Control-IfVlanMacLimit-Notifs-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cisco L2 Control IfVlanMacLimit Low Notif Trap	clc IfVlanMacLimit Low Notif	N	IPortLayer1	F	F	F	0	F	info	F	T	F
cisco L2 Control IfVlanMacLimit High Notif Trap	clc IfVlanMacLimit High Notif	N	IPortLayer1	F	F	F	0	F	info	F	T	F

cisco-L2-Control-Vlan-MacLimit-Notifs-Trap

Table 11-35 Event Subtypes: cisco-L2-Control-Vlan-MacLimit-Notifs-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cisco L2 Control VlanMacLimit Notif Trap	clc VlanMacLimit Notif	N	IPortLayer1	F	F	F	0	F	info	F	T	F
cisco L2 Control VlanMacLimit High Notif Trap	clc VlanMacLimit High Notif	N	IPortLayer1	F	F	F	0	F	info	F	T	F

cisco mte event set failure

Table 11-36 Event Subtypes: cisco mte event set failure

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
mte event set failure	cisco mte event set failure	N	IManagedElement	F	F	F	0	F	wrn	T	T	T

cisco mte trigger falling

Table 11-37 Event Subtypes: cisco mte trigger falling

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
mte trigger falling	cisco mte trigger falling	N	IManagedElement	F	F	F	0	F	clr	T	T	T

cisco mte trigger fired

Table 11-38 Event Subtypes: cisco mte trigger fired

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
mte trigger fired	cisco mte trigger fired	N	IManagedElement	F	F	F	0	F	info	T	T	T

cisco mte trigger rising

Table 11-39 Event Subtypes: cisco mte trigger rising

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
mte trigger rising	cisco mte trigger rising	N	IManagedElement	F	F	F	0	F	wrn	T	T	T

cisco multicast router heartbeat failed

Table 11-40 Event Subtypes: cisco multicast router heartbeat failed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Failed receive multicast router heartbeat	cisco multicast router heartbeat failed	N	IManagedElement	F	T	N	0	F	info	F	T	F

cisco ntp server notification

Table 11-41 Event Subtypes: cisco ntp server notification

Short Description	Event Subtype	Expedites	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
NTP Server Status Changes to Unknown	unknown	N	IManagedElement	F	F	F	0	F	info	F	T	F
NTP Server Status Changes to notRunning	notRunning	N	IManagedElement	F	F	F	0	F	info	F	T	F
NTP Server Status Changes to notSynchronized	notSynchronized	N	IManagedElement	F	F	F	0	F	info	F	T	F
NTP Server Status Changes to syncToLocal	syncToLocal	N	IManagedElement	F	F	F	0	F	info	F	T	F
NTP Server Status Changes to syncToRefclock	syncToRefclock	N	IManagedElement	F	F	F	0	F	info	F	T	F
NTP Server Status Changes to syncToRemoteServer	syncToRemoteServer	N	IManagedElement	F	F	F	0	F	info	F	T	F

cisco pim neighbor lost

Table 11-42 Event Subtypes: cisco pim neighbor lost

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco PIM neighbor lost	cisco pim neighbor lost	N	IRoutingEntry	F	T	T	0	F	info	F	T	T

cisco ping completion

Table 11-43 Event Subtypes: cisco ping completion

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco ping completion	cisco ping completion	N	IManaged Element	F	F	F	0	F	info	F	T	F

Cisco RF SWACT Notifications

Table 11-44 Event Subtypes: Cisco RF Status Changes

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco RF Swap Status - Unsupported	cisco RF status is unsupported	N	IManaged Element	F	F	F	0	F	info	F	T	F
Cisco RF Swap Status - None	cisco RF status is none	N	IManaged Element	F	F	F	0	F	info	F	T	F
Cisco RF Swap Status - Not Known	cisco RF status is notknown	N	IManaged Element	F	F	F	0	F	info	F	T	F
Cisco RF Swap Status - UserInitiated	cisco RF status is userInitiated	N	IManaged Element	F	F	F	0	F	info	F	T	F
Cisco RF Swap Status - UserForced	cisco RF status is userForced	N	IManaged Element	F	F	F	0	F	info	F	T	F
Cisco RF Swap Status - ActiveUnitFailed	cisco RF status is activeUnitFailed	N	IManaged Element	F	F	F	0	F	info	F	T	F
Cisco RF Swap Status - ActiveUnitRemoved	cisco RF status is activeUnitRemoved	N	IManaged Element	F	F	F	0	F	info	F	T	F

cisco sbc adjacency state change trap

Table 11-45 Event Subtypes: cisco sbc adjacency state change trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC adjacency state up trap	up	N	IsbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC adjacency state down trap	down	N	IsbcService	F	F	F	0	F	maj	T	T	F
Cisco SBC adjacency state informational trap	informational	N	ISbcService	F	F	F	0	F	info	F	T	F

cisco sbc dynamic blacklist trap

Table 11-46 Event Subtypes: cisco sbc dynamic blacklist trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC dynamic blacklist trap	cisco sbc dynamic blacklist trap	N	ISbcService	F	F	F	0	F	info	F	T	F

cisco sbc h248 controller state change trap

Table 11-47 Event Subtypes: cisco sbc h248 controller state change trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC H248 controller state up trap	up	N	IsbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC H248 controller state down trap	down	N	IsbcService	F	F	F	0	F	wrn	T	T	F
Cisco SBC H248 controller state informational trap	informational	N	IsbcService	F	F	F	0	F	info	F	T	F

cisco sbc radius connection state change trap

Table 11-48 Event Subtypes: cisco sbc radius connection state change trap

Short Description	Event Subtype	Expedited Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC radius connection state up trap	up	N	ISbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC radius connection state down trap	down	N	ISbcService	F	F	F	0	F	maj	T	T	F
Cisco SBC radius connection state informational trap	informational	N	ISbcService	F	F	F	0	F	info	F	T	F

cisco sbc service state change trap

Table 11-49 Event Subtypes: cisco sbc service state change trap

Short Description	Event Subtype	Expedited Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC service state up trap	up	sbc	ISbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC service state down trap	down	sbc	ISbcService	F	F	F	0	F	cri	T	T	F
Cisco SBC service state informational trap	informational	sbc	ISbcService	F	F	F	0	F	info	F	T	F

cisco sbc sla violation trap

Table 11-50 Event Subtypes: cisco sbc sla violation trap

Short Description	Event Subtype	Expedited Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC SLA violation off trap	off	N	ISbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC SLA violation on trap	on	N	ISbcService	F	F	F	0	F	min	T	T	F
Cisco SBC SLA violation informational trap	informational	N	ISbcService	F	F	F	0	F	info	F	T	F

cisco sbc source alert trap

Table 11-51 Event Subtypes: cisco sbc source alert trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC source alert off trap	off	N	ISbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC source alert on trap	on	N	ISbcService	F	F	F	0	F	wrn	T	T	F
Cisco SBC source alert informational trap	informational	N	ISbcService	F	F	F	0	F	info	F	T	F

cisco sbc system congestion trap

Table 11-52 Event Subtypes: cisco sbc system congestion trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco SBC system congestion cleared trap	cleared	N	ISbcService	F	F	F	0	F	clr	T	T	F
Cisco SBC system congestion raised trap	raised	N	ISbcService	F	F	F	0	F	wrn	T	T	F
Cisco SBC system congestion informational trap	informational	N	ISbcService	F	F	F	0	F	info	F	T	F

cisco syslog message generated


Note

The *cisco syslog message generated* event is dropped without further handling by the system.

Table 11-53 Event Subtypes: *cisco syslog message generated*

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco syslog message generated	cisco syslog message generated	N	IManagedElement	F	N/A	N/A	N/A	N/A	N/A	F	T	F

cmn-Mac-Changed-Notification-Trap

Table 11-54 Event Subtypes: *cmn-Mac-Changed-Notification-Trap*

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cmn Mac Changed Notification Trap	cmn-Mac-Changed-Notification-Trap	N	IManagedElement	F	F	F	0	F	info	F	T	F

cmn-Mac-Move-Notification-Trap

Table 11-55 Event Subtypes: *cmn-Mac-Move-Notification-Trap*

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cmn Mac Move Notification Trap	cmn-Mac-Move-Notification-Trap	N	IManagedElement+identifier index	F	F	F	0	F	info	F	T	F

cold start trap

Table 11-56 Event Subtypes: cold start trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cold start trap	cold start trap	N	IManagedElement	F	F	T	190000	F	info	T	T	F

cps-IfVlan-Secure-MacAddr-Violation-Trap

Table 11-57 Event Subtypes: cps-IfVlan-Secure-MacAddr-Violation-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cps IfVlan Secure MacAddr Violation Trap	cps-IfVlan-Secure-MacAddr-Violation-Trap	N	IPortLayer1	F	F	F	0	F	maj	T	T	F

cps-Secure-MacAddr-Violation-Trap

Table 11-58 Event Subtypes: cps-Secure-MacAddr-Violation-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
cps Secure MacAddr Violation Trap	cps-Secure-MacAddr-Violation-Trap	N	IPortLayer1	F	F	F	0	F	maj	T	T	F

dot1ag cfm fault alarm trap

Table 11-59 Event Subtypes: dot1ag cfm fault alarm trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
dot1ag CFM Fault Alarm	dot1ag cfm fault alarm trap	N	IManaged Element	F	F	F	0	F	info	T	T	F

dot1qBridge trap

Table 11-60 Event Subtypes: dot1qBridge trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
dot1qBridge trap	dot1qBridge trap	N	IManaged Element	F	T	F	0	T	info	F	T	F

entity sensor threshold notification

Table 11-61 Event Subtypes: entity sensor threshold notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
sensor value crossed threshold in entSensorThreshold Table	entity sensor threshold notification	N	IManaged Element	F	F	F	0	F	major	T	T	F

fan down trap

Table 11-62 Event Subtypes: fan down trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Fan down trap	fan down trap	N	IManaged Element	F	T	F	0	T	major	F	T	F
Fan up trap	fan up trap	N	IManaged Element	F	F	F	0	F	cleared	F	T	F

ipv6-if-state-changed

Table 11-63 Event Subtypes: ipv6-if-state-changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
ipv6 interface state changed	ipv6-if-state-changed	N	IManagedElement	F	F	F	0	T	min	T	T	F

mep trap

Table 11-64 Event Subtypes: mep trap-Notification

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Mep up trap	mep up	N	IManaged Element	F	F	F	0	F	cleared	F	T	F
Mep down trap	mep down	N	IManaged Element	F	F	F	0	T	major	F	T	F

mpls l3 vpn vrf Down

Table 11-65 Event Subtypes: mpls l3 vpn vrf Down

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
mpls l3 vpn vrf Down Trap	mpls l3 vpn vrf Down	N	IVrf	T	T	T	0	T	maj	T	T	F
MPLS l3 vpn vrf Notifications	mpls l3 vpn vrf Up	N	IVrf	F	T	F	0	F	clr	F	T	F

mpls l3 vpn vrf routemid thresh exceeded

Table 11-66 Event Subtypes: mpls l3 vpn vrf routemid thresh exceeded

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
mpls l3 vpn numvrf routemax thresh cleared Trap	mpls l3 vpn numvrf routemax thresh cleared	N	IVrf	F	T	F	0	F	clr	F	T	F
mpls l3 vpn vrf numvrf routemax thresh exceeded Trap	mpls l3 vpn vrf numvrf routemax thresh exceeded	N	IVrf	F	T	F	0	F	wrn	F	T	F
mpls l3 vpn vrf routemid thresh exceeded Trap	mpls l3 vpn vrf routemid thresh exceeded	N	IVrf	F	T	F	0	F	wrn	F	T	F

mpls ldp session down (IOS V2)

Table 11-67 Event Subtypes: mpls ldp session down (IOS V2)

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS LDP init session threshold exceeded Trap	mpls ldp init session thresh exceeded	N	IPortLayer1	F	T	F	0	F	warning	F	T	T

Table 11-67 Event Subtypes: mpls ldp session down (IOS V2) (Continued)

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS LDP session down Trap	mpls ldp session down	mpls interfaces + label switching table	IPortLayer1	T	T	T	0	F	minor	T	T	T
MPLS LDP session up Trap	mpls ldp session up	mpls interfaces + label switching table	IPortLayer1	T	T	F	0	F	clear	F	T	T

mpls ldp session down (MIB2)

Table 11-68 Event Subtypes: mpls ldp session down (MIB2)

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS LDP init session threshold exceeded Trap	mpls ldp init session thresh exceeded	mpls interfaces + label switching table	IPortLayer1	F	T	F	0	F	wrn	F	T	T
MPLS LDP session down Trap	mpls ldp session down	mpls interfaces + label switching table	IPortLayer1	T	T	T	0	F	min	T	T	T
MPLS LDP session up Trap	mpls ldp session up	mpls interfaces + label switching table	IPortLayer1	F	F	F	0	F	clr	F	T	T

mpls te tunnel down

Table 11-69 Event Subtypes: mpls te tunnel down

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS-TE tunnel down	mpls te tunnel down	Y	IMplsTETunnel	T	T	F	800	T	maj	F	T	T
MPLS-TE tunnel up	mpls te tunnel up	Y	IMplsTETunnel	F	F	F	0	F	clr	F	T	T

mpls te tunnel down trap

Table 11-70 Event Subtypes: mpls te tunnel down trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS-TE tunnel up	mpls te tunnel up trap	mpls traffic engineering tunnel information	IMplsTE Tunnel	F	T	F	0	F	clear	F	T	T
MPLS-TE tunnel down	mpls te tunnel down trap	mpls traffic engineering tunnel information	IMplsTE Tunnel	F	T	F	800	F	major	F	T	T

mpls te tunnel reoptimized

Table 11-71 Event Subtypes: mpls te tunnel reoptimized

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS-TE tunnel reoptimized	mpls te tunnel reoptimized	N	IMplsTETunnel	F	T	F	0	F	info	F	T	T

mpls te tunnel rerouted

Table 11-72 Event Subtypes: mpls te tunnel rerouted

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS-TE tunnel rerouted	mpls te tunnel rerouted	N	IMplsTETunnel	F	T	F	0	F	info	T	T	T

mpls te tunnel rerouted trap

Table 11-73 Event Subtypes: mpls te tunnel rerouted trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
MPLS-TE tunnel reoptimized	mpls te tunnel rerouted trap	N	IMplsTETunnel	F	T	F	0	F	info	F	T	T

new root trap

Table 11-74 Event Subtypes: new root trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
STP New Root Trap	new root trap	N	IStpService	F	F	F	0	F	info	F	T	F

ospf-if-authentic-fail

Table 11-75 Event Subtypes: ospf-if-authentic-fail

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF interface authentication failure	ospf-if-authentic-fail	N	IIPInterface	F	T	F	0	F	wrn	T	T	F

ospf-if-bad-packet

Table 11-76 Event Subtypes: ospf-if-bad-packet

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
XR OSPF bad packet received	ospf-if-bad-packet	N	IIPInterface	F	T	F	0	T	min	F	T	F

ospf-if-config-err

Table 11-77 Event Subtypes: ospf-if-config-err

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF interface configuration error	ospf-if-config-err	N	IIPInterface	F	T	F	0	F	wrn	T	T	F
OSPF virtual interface configuration error	ospf-virtual-if-config-err	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	info	F	T	F

ospf-if-packet-retransmit

Table 11-78 Event Subtypes: ospf-if-packet-retransmit

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
XR OSPF packet retransmitted	ospf-if-packet-retransmit	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	info	F	T	F

ospf if state down

Table 11-79 Event Subtypes: ospf if state down

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF interface state changed to Down	ospf if state down	N	IIPInterface	F	T	F	0	T	info	F	T	F
OSPF interface state changed to Up	ospf if state up	N	IIPInterface	F	F	F	0	F	clr	F	T	F

ospf-lsa-reached-maxage

Table 11-80 Event Subtypes: ospf-lsa-reached-maxage

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF Number of LSAs approaching overflow	ospf-lsa-reached-maxage	N	IManagedElement	F	F	F	0	T	info	F	T	F

ospf neighbor state down

Table 11-81 Event Subtypes: ospf neighbor state down

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF neighbor state down	ospf neighbor state down	N	IIPInterface	F	T	F	0	F	maj	T	T	F
OSPF neighbor state up	ospf neighbor state up	N	IIPInterface	F	F	F	0	F	clr	F	T	F

ospf-new-lsa-originated

Table 11-82 Event Subtypes: ospf-new-lsa-originated

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF new LSA originated	ospf-new-lsa-originated	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	info	F	T	F

ospf-virtual-if-authentic-fail

Table 11-83 Event Subtypes: ospf-virtual-if-authentic-fail

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
XR OSPF virtual interface authentication failure	ospf-virtual-if-authentic-fail	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	wrn	T	T	F

ospf-virtual-if-bad-packet

Table 11-84 Event Subtypes: ospf-virtual-if-bad-packet

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
XR OSPF bad packet received on virtual interface	ospf-virtual-if-bad-packet	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	info	F	T	F

ospf-virtual-if-packet-retransmit

Table 11-85 Event Subtypes: ospf-virtual-if-packet-retransmit

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF packet retransmitted on virtual interface	ospf-virtual-if-packet-retransmit	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	info	F	T	F

ospf-virtual-if-state-changed

Table 11-86 Event Subtypes: ospf-virtual-if-state-changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF virtual interface state changed	ospf-virtual-if-state-changed	N	IProfileContainer (OSPF)FTF	F	T	F	0	T	min	F	T	F

ospf-virtual-neighbor-state-changed

Table 11-87 Event Subtypes: ospf-virtual-neighbor-state-changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
OSPF virtual neighbor state down	ospf-virtual-neighb or-state-down	N	IOspfEntry	F	T	F	0	F	min	T	T	F
OSPF virtual neighbor state up	ospf-virtual-neighb or-state-up	N	IOspfEntry	F	F	F	0	F	clr	F	T	F

pseudo wire tunnel traps

Table 11-88 Event Subtypes: pseudo wire tunnel traps

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Pseudo wire tunnel up	Pseudo wire tunnel up	martini	IPTPLayer2MplsTunnel	F	F	F	0	F	cleared	F	T	F
Pseudo wire tunnel down	Pseudo wire tunnel down	martini	IPTPLayer2MplsTunnel	F	T	F	0	T	major	F	T	F

RTT Connection Change

Table 11-89 Event Subtypes: RTT Connection Change

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Connection Change	RTT Connection Change	N	IManagedElement	F	F	F	0	F	info	T	T	F

RTT Lpd Discovery

Table 11-90 Event Subtypes: RTT Lpd Discovery

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Lpd Discovery	RTT Lpd Discovery	N	IManagedElement	F	F	F	0	F	info	T	T	F

RTT Lpd Grp Status

Table 11-91 Event Subtypes: RTT Lpd Grp Status

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Lpd Grp Status	RTT Lpd Grp Status	N	IManagedElement	F	F	F	0	F	info	T	T	F

RTT Operation Threshold Violation

Table 11-92 Event Subtypes: RTT Operation Threshold Violation

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Operation Threshold Violation	RTT Operation Threshold Violation	N	IManagedElement	F	F	F	0	F	info	T	T	F

RTT Operation Timeout

Table 11-93 Event Subtypes: RTT Operation Timeout

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Operation Timeout	RTT Operation Timeout	N	ImanagedElement	F	F	F	0	F	info	T	T	F

RTT-Operation-Trap

Table 11-94 Event Subtypes: RTT-Operation-Trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Operation Timeout	RTT Operation Timeout	N	ImanagedElement	F	F	F	0	T	warning	F	T	F
RTT Operation Threshold Violation	RTT Operation Threshold Violation	N	ImanagedElement	F	F	F	0	T	warning	F	T	F

rtt threshold violation or clearance

Table 11-95 Event Subtypes: rtt threshold violation or clearance

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT threshold violation or clearance	rtt threshold violation or clearance	N	ImanagedElement	F	T	F	0	F	info	T	T	F

RTT Verify Error

Table 11-96 Event Subtypes: RTT Verify Error

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
RTT Verify Error	RTT Verify Error	N	IManagedElement	F	F	F	0	F	info	T	T	F

snmp authentication failure

Table 11-97 Event Subtypes: snmp authentication failure

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
SNMP authentication failure	snmp authentication failure	N	IManagedElement	F	F	F	0	T	info	F	T	F

snmp link down

Table 11-98 Event Subtypes: snmp link down

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
SNMP Link down	snmp link down	ip interface oper status	IPhysicalLayer	F	T	T	0	T	maj	T	T	T
SNMP Link up	snmp link up	ip interface oper status	IPhysicalLayer	F	T	F	0	F	clr	F	T	T

sonet line status changed

Table 11-99 Event Subtypes: sonet line status changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Sonet line status changed to error	sonet line status changed to error	N	IPortLayer1	F	T	F	0	F	major	F	T	T
Cisco Sonet line status changed to clear	sonet line status changed to clear	N	IPortLayer1	F	T	F	0	T	cleared	F	T	T

sonet path status changed

Table 11-100 Event Subtypes: sonet path status changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Sonet path status changed to error	sonet path status changed to error	N	IPortLayer1	F	T	F	0	F	major	F	T	T
Cisco Sonet path status changed to clear	sonet path status changed to clear	N	IPortLayer1	F	T	F	0	T	cleared	F	T	T

sonet section status changed

Table 11-101 Event Subtypes: sonet section status changed

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco Sonet section status changed to error	sonet section status changed to error	N	IPortLayer1	F	T	F	0	F	major	F	T	T
Cisco Sonet section status changed to clear	sonet section status changed to clear	N	IPortLayer1	F	T	F	0	T	cleared	F	T	T

Spanning-Tree-Topology-Change-Trap

Table 11-102 Event Subtypes: Spanning-Tree-Topology-Change-Trap

Short Description	Event Subtype	Expedites	Event Source (IMO Name)	Activate	Correlate	Is Correlation	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
Spanning Tree Topology Changed	Spanning-Tree-Topology-Change	N	IManagedElement	F	F	F	0	F	info	F	T	F

stpx loop inconsistency update

Table 11-103 Event Subtypes: stpx loop inconsistency update

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
STPX Loop Inconsistency Discovered Trap	stpx loop inconsistency discovered	N	IStpService	F	F	F	0	T	maj	T	T	F
STPX Loop Inconsistency Resolved Trap	stpx loop inconsistency resolved	N	IStpService	F	F	F	0	T	clr	T	T	F

stpx port inconsistency update

Table 11-104 Event Subtypes: stpx port inconsistency update

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
STPX Port Inconsistency discovered Trap	stpx port inconsistency discovered	N	IStpService	F	F	F	0	T	maj	T	T	F
STPX Port Inconsistency resolved Trap	stpx port inconsistency resolved	N	IStpService	F	F	F	0	T	clr	T	T	F

stp root inconsistency update

Table 11-105 Event Subtypes: stp root inconsistency update

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
STPX Root Inconsistency Discovered Trap	stp root inconsistency discovered	N	IStpService	F	F	F	0	T	maj	T	T	F
STPX Root Inconsistency Resolved Trap	stp root inconsistency resolved	N	IStpService	F	F	F	0	T	clr	T	T	F

vlan-trunk-port-dynamic-status

Table 11-106 Event Subtypes: vlan-trunk-port-dynamic-status

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Vlan trunk port dynamic status changed to trunking	trunking	N	IPortLayer1	F	F	F	0	F	wrn	F	T	F
Vlan trunk port dynamic status changed to not trunking	not trunking	N	IPortLayer1	F	F	F	0	F	wrn	F	T	F

VSL Connection State Change

Table 11-107 Event Subtypes: VSL Connection State Change

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
VSL Connection Changed: Down	VSL Connection State Down	Y	IShelf	F	F	F	0	T	info	T	T	F
VSL Connection Changed: Up	VSL Connection State Up	Y	IShelf	F	F	F	0	T	cleared	T	T	F

VSS RF State Change

Table 11-108 Event Subtypes: VSS RF State Change

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Cisco VSS Shelf 1 is Disabled	Shelf 1 is Disabled	Y	IShelf	F	F	F	0	T	info	T	T	F
Cisco VSS Shelf 1 is Standby Cold	Shelf 1 is Standby Cold	Y	IShelf	F	F	F	0	T	info	T	T	F
Cisco VSS Shelf 1 is Standby Hot	Shelf 1 is Standby Hot	Y	IShelf	F	F	F	0	T	info	T	T	F
Cisco VSS Shelf 2 is Disabled	Shelf 2 is Disabled	Y	IShelf	F	F	F	0	T	info	T	T	F
Cisco VSS Shelf 2 is Standby Cold	Shelf 2 is Standby Cold	Y	IShelf	F	F	F	0	T	info	T	T	F
Cisco VSS Shelf 2 is Standby Hot	Shelf 2 is Standby Hot	Y	IShelf	F	F	F	0	T	info	T	T	F

vtp notification prefix trap

Table 11-109 Event Subtypes: vtp notification prefix trap

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto	Flapping
vtp configuration revision number error trap	vtp Config Rev Number Error	N	IManagedElement	F	F	F	0	F	wrn	F	T	F
vtp configuration digest error trap	vtp Config Digest Error	N	IManagedElement	F	F	F	0	F	maj	F	T	F
vtp VersionOne Device Detected trap	vtp VersionOne Device Detected	N	IManagedElement	F	F	F	0	F	info	F	T	F
vtp Local Mode Changed trap	vtp Local Mode Changed	N	IManagedElement	F	F	F	0	F	min	F	T	F
vtp VersionInUse Changed trap	vtp VersionInUse Changed	N	IManagedElement	F	F	F	0	F	info	F	T	F

warm start trap (ASR)

Table 11-110 Event Subtypes: warm start trap (ASR)

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Warm start trap	warm start trap	N	IManagedElement	F	F	F	0	F	min	T	T	F

warm start trap (MIB2)

Table 11-111 Event Subtypes: warm start trap (MIB2)

Short Description	Event Subtype	Expedites Polling	Event Source (IMO Name)	Activate Flow	Correlate	Is Correlation Allowed	Weight	Auto Clear	Severity	Is Ticketable	Auto Remove	Flapping
Warm start trap	warm start trap	N	IManagedElement	F	F	F	0	T	min	T	T	F

