



CHAPTER 4

Support Information for Cisco Access Servers

This chapter contains support information for Virtual Network Elements (VNEs) that manage Cisco access servers in Cisco ANA Version 3.7.1. For more information about the objects and attributes described in this chapter, see Part 2: Technology Support and Information Model Objects.

This chapter contains the following topics:

- [Cisco Access Server 5800 Series, page 4-1](#)
- [Supported Technologies on Cisco Access Servers, page 4-4](#)

Cisco Access Server 5800 Series

This section includes the following information about Cisco AS 5800 Series access servers (for information on the NE types supported in Cisco ANA Version 3.7.1, see [Cisco Access Server 5800 Series](#)):

This section contains the following topics:

- [Cisco AS 5800 Series—Supported Software Versions, page 4-1](#)
- [Cisco AS 5800 Series—Supported Topologies, page 4-2](#)
- [Cisco AS 5800 Series—Supported Modules, page 4-2](#)
- [Cisco AS 5800 Series—Supported Technologies, page 4-2](#)
- [Cisco AS 5800 Series—Supported Service Events, page 4-3](#)

Cisco AS 5800 Series—Supported Software Versions

Table 4-1 *Supported Software Versions for Cisco AS 5800 Series—Cisco ANA Version 3.7.1*

Software Version	ANA Version
IOS 12.1(11b)	3.7.1

Cisco AS 5800 Series—Supported Topologies

Table 4-2 *Supported Topologies for Cisco AS 5800 Series—Cisco ANA Version 3.7.1*

Topology Type	Link Type	ANA Version
Business	Business	3.7.1
Ethernet	Ethernet	3.7.1
Physical Layer	Physical Layer	3.7.1

Cisco AS 5800 Series—Supported Modules

Table 4-3 *Supported Modules for Cisco AS 5800 Series—Cisco ANA Version 3.7.1*

Module Name	ANA Version	Module Description
1.3.6.1.4.1.9.12.3.1.9.12	3.7.1	
AS5800-DSC	3.7.1	Dial Shelf Controller
1.3.6.1.4.1.9.12.3.1.9.12.10	3.7.1	
1.3.6.1.4.1.9.12.3.1.9.12.2	3.7.1	12 Port CE1
1.3.6.1.4.1.9.12.3.1.9.12.3	3.7.1	
1.3.6.1.4.1.9.12.3.1.9.12.4	3.7.1	
1.3.6.1.4.1.9.12.3.1.9.12.5	3.7.1	
1.3.6.1.4.1.9.12.3.1.9.12.6	3.7.1	
1.3.6.1.4.1.9.12.3.1.9.12.7	3.7.1	144 Port MICA Modem
1.3.6.1.4.1.9.12.3.1.9.12.8	3.7.1	
1.3.6.1.4.1.9.12.3.1.9.12.9	3.7.1	
AS5800-1FE-DSI	3.7.1	1FE Dial Shelf Interconnect

Cisco AS 5800 Series—Supported Technologies

The following technologies are supported by the Cisco AS 5800 Series in Cisco ANA Version 3.7.1:

- [IP, page 4-5](#)
- [Routing Protocols, page 4-8](#)
- [Ethernet, page 4-10](#)
- [TDM/DSx, page 4-15](#)
- [Security, page 4-18](#)
- [Hardware, page 4-19](#)
- [Serial, page 4-21](#)

Cisco AS 5800 Series—Supported Service Events

Table 4-4 Supported Service Events for Cisco AS 5800 Series—Cisco ANA Version 3.7.1

Event Name	ANA Version	Expedited
Active IP Interfaces Found	3.7.1	Y
All IP Interfaces Down	3.7.1	Y
BGP process up	3.7.1	N
Card Down	3.7.1	Y
Card In	3.7.1	Y
Card Out	3.7.1	Y
Card Up	3.7.1	Y
Cloud Problem	3.7.1	N
CPU utilization exceeded upper threshold	3.7.1	N
Device Unreachable	3.7.1	N
Device Unsupported	3.7.1	N
Interface status down flapping	3.7.1	Y
Interface status down flapping update	3.7.1	Y
Layer 2 Tunnel Down	3.7.1	N
Link Down	3.7.1	N
Link up	3.7.1	N
Memory utilization exceeded upper threshold	3.7.1	N
Module Unsupported	3.7.1	N
MPLS Black Hole found	3.7.1	N
Port Down	3.7.1	N
Port Flapping	3.7.1	N
Device Managed	3.7.1	N
Management Unreachable	3.7.1	N
Device Partially Managed	3.7.1	N
DS3 Path Link down due to Card event	3.7.1	N
DS3 Path down due to Admin	3.7.1	N
DS3 Path down due to Card	3.7.1	N
DS3 Path down due to Oper	3.7.1	N
DS3 Path up	3.7.1	N
EFP down	3.7.1	N
EFP down	3.7.1	N

Table 4-4 *Supported Service Events for Cisco AS 5800 Series—Cisco ANA Version 3.7.1*

Event Name	ANA Version	Expedited
EFP up	3.7.1	N
Interface status up	3.7.1	N
LAG down	3.7.1	N
LAG down	3.7.1	N
LAG Link down	3.7.1	N
LAG Link down	3.7.1	N
Local switching entry down	3.7.1	N
Local switching entry up	3.7.1	N
Logical port down	3.7.1	N
MPLS-TE tunnel down	3.7.1	N
Port up	3.7.1	N
rx dormant	3.7.1	N
Service down	3.7.1	N
Service up	3.7.1	N
tx dormant	3.7.1	N
VSI down	3.7.1	N
VSI up	3.7.1	N
High priority member down	3.7.1	N
Low priority member down	3.7.1	N
Medium priority member down	3.7.1	N

Supported Technologies on Cisco Access Servers

The following sections list the objects and attributes that are supported on Cisco access servers in Cisco ANA Version 3.7.1 per technology:

This section contains the following topics:

- [IP, page 4-5](#)
- [Routing Protocols, page 4-8](#)
- [Ethernet, page 4-10](#)
- [TDM/DSx, page 4-15](#)
- [Security, page 4-18](#)
- [Hardware, page 4-19](#)
- [Serial, page 4-21](#)

IP

Table 4-5 IP Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
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—IRoutingEntity	
Routing Table	Y
ARP Entity	Y
Routing Table Changes	
Name	
Logical Sons	Y
IMO Name—IRoutingEntry	
Destination IP Subnet	Y
Next Hop IP Address	Y

Table 4-5 IP Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1 (continued)

Attribute	AS5800
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—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	

Table 4-5 *IP Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1 (continued)*

Attribute	AS5800
IMO Name—I Tunnel GRE	
Name	
Tunnel Destination and Source	
IP Address	
IP Interface State	
IANA Type	
Containing CTPs	
Contained CTPs	
Keep Alive Time	
Keep Alive Retry	
IMO Name—I IPSLA Responder Service	
responderStatus	
TWAMP Responder Status	
tcpConnect	
udpEcho	
IMO Name—I IP Address Port Pair	
type	
ipAddress	
port	

Routing Protocols

Table 4-6 *Routing Protocols Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1*

Attribute	AS5800
IMO Name—IBgpNeighborEntry	
Remote Identifier	
Neighbor Type	
Distributing Interfaces	
Remote Address	
Remote Autonomous System	
Peer State	
Peer AdminState	
Hold Time	
Keep Alive Time	
VrfName	
Address family	
IMO Name—IospfEntry	
Area Identifier	Y
IP Address	Y
Type	Y
Administrative Status	Y
Ospf Entry State	Y
IMO Name—IospfProcess	
Process Id	
OSPF Version	
Router Id	
IMO Name—IospfNeighbor	
Neighbor Id	
Outgoing Interface	
State	
Neighbor Interface Address	
Area Id	
IMO Name—IospfInterface	
Area Id	
Network Type	
Cost	

Table 4-6 Routing Protocols Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1 (continued)

Attribute	AS5800
State	
Interface Address	
Type	
IF Priority	
DR Id	
BDR Id	
IMO Name—ISpfTimers	
Schedule Delay	
Min Hold Time	
Max Wait Time	
IMO Name—IISISProcess	
ISIS Version	
Manual Area Address	
IS Type	
System Id	
Process Id	
IMO Name—IISISMetric	
IS Type	
Metric Style	
Metric Value	
Address Family	
IMO Name—IISISInterface	
Interface Name	
IMO Name—IISISNeighbor	
IS Type	
System Id	
Admin State	
Hold Time	
SNPA	
Interface Name	
IP Address	
Adress Family	

Ethernet

Table 4-7 Ethernet Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
IMO	
Name—ILinkAggregationGroup802dot3ad	
dot3adAggMACAddress	
dot3adAggActorSystemPriority	
dot3adAggActorSystemID	
dot3adAggActorAdminKey	
dot3adAggActorOperKey	
dot3adAggPartnerSystemID	
dot3adAggPartnerSystemPriority	
dot3adAggPartnerOperKey	
dot3adAggCollectorMaxDelay	
GroupNumber	
AggregationProtocolType	
MacAddress	
ChannelAdminStatus	
ChannelOperStatus	
IMO Name—IEthernet	
MAC Address	Y
Duplex Mode	
Output Flow Control	Y
Input Flow Control	Y
IANA Type	
Containing CTPs	
Contained CTPs	
Port Type	
isElmiEnabled	
isLOAMEnabled	
IMO Name—IVlanInterface	
Mode	
Native VLAN Identification	
Virtual LAN Table	
IANA Type	

Table 4-7 Ethernet Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
Containing CTPs	
Contained CTPs	
vlanAdminType	
vlanencapType	
getAccess	
Allowed Vlans	
IMO Name—IVlanEncapMux	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IVlanMapping	
direction	
vlanMatchCriteria	
vlanRewriteDefinition	
Drop	
Vlan	
innerVlan	
translatedVlan	
translatedInnerVlan	
IMO Name—IIEEE802	
VLAN Identification	
Binding Information	
Binding Status	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—IStpService	
StpProtocol	
StpMaxAge	
StpHelloTime	
StpBridgeForwardDelay	
StpInstanceInfoTable	
Same as ISystemService	
StpUplinkFastState	
StpBackboneFastState	

Table 4-7 Ethernet Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
StpForwardDelay	
StpBridgeMaxAge	
StpBridgeHelloTime	
IMO Name—IMstService	
MstProperties	
Same as IStpService	
IMO Name—IPvstpService	
UpLinkFast	
BackboneFast	
IMO Name—IMstProperties	
MstForceVersion	
MstCfgIdFmtSel	
MstExternalRootCost	
MstMaxInstances	
MstCfgIdName	
MstCfgIdRevLevel	
IMO Name—IStpInstanceInfo	
Object Identification	
StpBridgeId	
BridgePriority	
Designated Parent and Root Bridges	
StpRootCost	
IsRoot	
StpRootPort	
StpPortInfoTable	
STP Instance Id	
Vlan Id	
StpDesignatedBridge	
StpDesignatedRoot	
IMO Name—IMstInstanceInfo	
MstVlanIds	
Same as IStpInstanceInfo	
IMO Name—IPvstpInstanceInfo	
Protocol Type	

Table 4-7 Ethernet Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
StpBridgeMaxAge	
StpBridgeHelloTime	
StpBridgeForwardDelay	
StpProtocolSpecification	
StpVlanId	
StpForwardDelay	
StpMaxAge	
IMO Name—IRstpInstanceInfo	
StpForceVersion	
Same as IStpInstanceInfo	
IMO Name—IStpPortInfo	
StpPort	
StpPortPriority	
StpPortState	
StpPortPathCost	
StpPortEdgePort	
StpPortPointToPoint	
StpPortRole	
StpDesignatedPortIdentifier	
StpDesignatedBridge	
StpPortIdentifier	
StpPortBpduGuardState	
StpPortBpduFilterState	
IMO Name—IMstPortInfo	
MstPortHelloTime	
Same as IStpPortInfo	
IMO Name—IPvstpPortInfo	
PvstpPortFastState	
IMO Name—IEthernetChannel	
Group Number	
Bandwidth	
Aggregation Protocol	
IANA Type	
Containing CTPs	
Contained CTPs	

Table 4-7 Ethernet Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
Mac Address	
Admin Status	
Oper Status	
IMO Name—ITokenRingLayer2	
MAC Address	
IANA Type	
Containing CTPs	
Contained CTPs	
IMO Name—ITokenRingLayer1	
Same as IPhysicalLayer	
IMO Name—IVtpService	
Version	
OperatingMode	
DomainName	
ConfigurationRevision	
isPruningEnabled	
isAuthenticationEnabled	
IMO Name—IREPService	
version	
administrativeVlan	
notificationEnabled	
IMO Name—IREPSegmentInfo	
segmentId	
segmentComplete	
IMO Name—IREPPortInfo	
portName	
portKey	
segmentId	
portType	
portRole	
operStatus	
blockedVlans	
preemptTimer	
IslAgeoutTimer	
remoteDeviceName	

Table 4-7 Ethernet Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
remoteDeviceMac	
remotePortName	
IMO Name—IBridgeLan	
Id	
IMO Name—IIBridgeEntry	
IS Id	
IBridge	
BBridge	

TDM/DSx

Table 4-8 TDM/DSx Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
IMO Name—IDS0Bundle	
Bundled Time Slots	
Bundle Location	
IANA Type	
Containing CTPs	
Contained CTPs	
AdminStatus	
OperStatus	
IMO Name—IDS1Pdh / IDS3Pdh	
Framing Type	
Cell Mapping Type	
Loopback Type	
Scrambling Mode	
Same as IPhysicalLayer	
portDescription	Y
internationalBit	
nationalBits	
framing	
lineCode	
cableLength	

Table 4-8 TDM/DSx Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
recoveredClockingId	
clocking	
loopback	
alarmState	Y
IMO Name—IClockService	
ActiveClockSource	
NcsMode	
HoldTimeout	
UseStratum4	
Mode	
NcsPriorityList	
PtpService	
IMO Name—IClockSource	
Priority	
Source	
Status	
Type	
IMO Name—IPtpService	
Mode	
ClockId	
Domain	
Priority1	
Priority2	
PtpEnabled	
PtpInterfaceList	
IMO Name—IPtpInterface	
Version	
AnnounceInterval	
AnnounceTimeout	
DestinationAddress	
SourceAddress	
DelayReq	
MasterMode	
SlaveMode	
SyncInterval	

Table 4-8 TDM/DSx Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
SyncLimit	
InterfaceXid	
IMO Name—IACRService	
RecoveredClockSource	
RecoveredClockMode	
CemInterface	
RecoveredClockList	
IMO Name—IRecoveredClock	
ClockId	
RecoveredClockMode	
Port	
Cem	
Status	
FrequencyOffset	
IMO Name—ICEMEncap	
cemIfName	
IMO Name—ICEMGroup	
IdlePattern	
IdleCAS	
DeJitter	
PayloadSize	
RTP	
RTPHeader	
TimeSlots	
AdminStatus	
OperStatus	
IMO Name—ISyncE	
synchronousMode	
equipmentClock	
clockMode	
ssmOption	
esmcMode	
holdOffTimer	
waitToRestore	
Revertive	

Table 4-8 TDM/DSx Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
IMO Name—IISyncEInterface	
selectionInput	
ingressESMCMode	
egressESMCMode	
ingressQLMode	
ingressQuality	
egressQLMode	
egressQuality	
waitToRestore	
holdOffTimer	

Security

Table 4-9 Security Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
IMO Name—IAccessList	
Type	Y
Access List Entries	Y
Name or Id	Y
Index	Y
IMO Name—IAccessListEntry	
Entry Identification	
Action Logic	
Source and Destination Address	
Source and Destination Wildcard	
Protocol Type	
Source and Destination Port Ranges	
Source and Destination Port Action	
Protocol Specific Info	
Differential Services Code Points	
Type of Service	

Table 4-9 Security Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
Precedence	
Matches	

Hardware

Table 4-10 Hardware Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
IMO Name—IChassis	
Description	
Equipment Holder Type	
Contained Equipment Holders	
Contained Equipments	
Serial Number	Y
IMO Name—IShelf	
Description	
Status	
Equipment Holder Type	
Contained Equipment Holders	
Contained Equipments	
Serial Number	
IMO Name—IModule	
Module Name	Y
Module Description	Y
Software Version	
Operational Status	Y
Hardware Type + Version	Y
Managed IP Address	
Redundant Equipment	
Configured Redundancy	
Redundancy Status	
Operational Status Last Changed	
Supported Physical Termination Points	

Table 4-10 Hardware Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
Serial Number (soft property)	
Slots Number	
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
DRAM Free	
DRAM Used	
Flash Device Size	Y
NVRAM Size	Y
Processor DRAM	
Sys Contact	Y
Sys Location	Y
Serial Number	Y
File Systems	
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 4-10 Hardware Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
Status	
Up Time	
IMO Name—IBridge	
Bridge Table	
Type	
MAC Address	
IP Interface	
Name	
Logical Sons	
Vlan Type	
IMO Name—IBridgeEntry	
Destination MAC	
Outgoing Interface	

Serial

Table 4-11 Serial Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1

Attribute	AS5800
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

Table 4-11 **Serial Attribute Support on Cisco Access Servers—Cisco ANA Version 3.7.1**

Attribute	AS5800
IANA Type	
Containing CTPs	
Contained CTPs	
Port Alias	Y
Location	Y
Sending Alarms	Y
Connector Description	
Part ID	
Connector Serial Num	
Product	Y
Status	Y
Managed	Y