CHAPTER 12

Bidirectional Forwarding Detection

This chapter describes the level of support that Cisco ANA provides for Bidirectional Forwarding Detection (BFD), as follows:

Technology Description

BFD

BFD provides rapid failure detection between forwarding engines while maintaining low overhead. It also provides a single, standardized method of link, device, or protocol failure detection at any protocol layer and over any media.

BFD can be used with the following protocols:

- BGP
- IS-IS
- EIGRP
- MPLS TE
- OSPF

However, Cisco ANA at present supports BFD only when used in conjunction with BGP and OSPF.

Information Model Objects (IMOs)

This section includes the following IMOs:

- BFD Service
- BFD Session

BFD Service

The BFD Service IMO contains a list of BFD Session objects.

Table 12-1 BFD Service (IBfdService)

Attribute Name	Attribute Description	Scheme	Polling Interval
Sessions	Returns a set of IBfdSession objects	Any	Configuration

BFD Session

The BFD Session IMO describes a single BFD session entry.

Table 12-2 BFD Session (IBfdSession)

Attribute Name	Attribute Description	Scheme	Polling Interval
Source IP	Source IP address of the session	Product	Configuration
Destination IP	Destination IP address of the session	Product	Configuration
Interval	The value of the requested interval	Product	Configuration
Multiplier	The value of the multiplier	Product	Configuration
Protocol	The routing protocol, such as OSPF or BGP	Product	Configuration
State	The state of the session (*Up, Down*)	Product	Configuration
Interface	OID of the physical interface	Product	Configuration
Process	Process ID of the session	Product	Configuration

Vendor-Specific Inventory and IMOs

There are no vendor-specific inventory or IMOs for this technology.

Network Topology

Cisco ANA discovers BFD topology by comparing the session parameters of potential BFD neighbors. In particular, it compares the source IP address and the destination IP address on both sides.

Service Alarms

The following alarms are supported for this technology:

- BFD Connectivity Down/BFD Connectivity Up
- BFD Neighbor Loss/BFD Neighbor Found

The BFD Connectivity Down alarm is cleared by the BFD Connectivity Up alarm. The BFD Neighbor Loss alarm is cleared by the BFD Neighbor Found alarm.

For detailed information about alarms and correlation, see the *Cisco Active Network Abstraction 3.7 User Guide*.