



CHAPTER 6

Network Analysis Modules

This chapter describes the Network Analysis Modules (NAMs) and contains the following sections:

- [Network Analysis Module \(WS-SVC-NAM-1\)](#), page 6-1
- [Network Analysis Module \(WS-SVC-NAM-2\)](#), page 6-2

NAMs monitor and analyze network traffic for the Cisco 7600 series routers using Remote Monitoring (RMON), RMON2, and other MIBs. The RMON support that the NAM provides for Ethernet VLANs is an extension of the RMON support provided by the supervisor engine. The switched port analyzer (SPAN) selects network traffic and directs it to the NAM. TrafficDirector, or any other IETF-compliant RMON application, can analyze link characteristics, packet layers for capacity planning or departmental accounting, differentiated service deployment and policies, and filter/capture packets for debugging.



Note

Specific combinations of supervisor engines and modules may not be supported in your chassis. Refer to the release notes of the software version running on your system for specific information on modules and supervisor engine combinations that are not supported.

Network Analysis Module (WS-SVC-NAM-1)

The Network Analysis Module (WS-SVC-NAM-1) provides integrated network monitoring services within the router. The NAM collects network traffic statistics for real-time traffic analysis, performance monitoring, and troubleshooting.

The NAM monitors and analyzes network traffic for the Cisco 7600 series routers using remote monitoring (RMON), RMON extensions for switched networks (SMON), and other management information bases (MIBs). The NAM supports the following RMON groups:

- RMON groups defined in RFC 1757
- RMON2 groups defined in RFC 2021

The NAM also can monitor individual Ethernet VLANs, which allows it to serve as an extension to the basic RMON support provided by the supervisor engine.

You can use any other IETF-compliant RMON application to access link, host, protocol, and response-time statistics for capacity planning, departmental accounting, and real-time application protocol monitoring. You also can use filters and capture buffers to troubleshoot the network.

The NAM can analyze Ethernet VLAN traffic from one or both of the following sources:

- Ethernet, Fast Ethernet, Gigabit Ethernet, trunk port, or Fast EtherChannel SPAN or RSPAN source port

For more information about SPAN and RSPAN, refer to the “Configuring SPAN and RSPAN” chapter in the appropriate *Cisco 7600 Series Cisco IOS Software Configuration Guide*.



Note Cisco IOS software currently does not support RSPAN.

- Netflow Data Export (NDE)

For more information about NDE, refer to the *Cisco 7600 Series Cisco IOS Software Configuration Guide*.

The NAM-1 module has 512 MB of RAM and a 96 MB capture buffer.

The front panel LEDs are shown in [Figure 6-1](#) and described in [Table 6-1](#).

Figure 6-1 Network Analysis Module (WS-SVC-NAM-1)

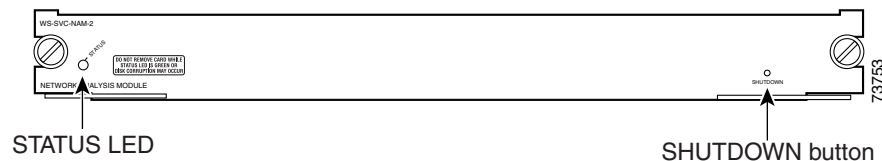


Table 6-1 NAM-1 Module STATUS LED Description

Color/State	Description
Green	All diagnostic tests pass. The NAM is operational.
Red	A diagnostic other than an individual port test failed.
Orange	Indicates one of three conditions: <ul style="list-style-type: none"> • The NAM is running through its boot and self-test diagnostic sequence. • The NAM is disabled. • The NAM is in the shutdown state.
Off	The NAM is powered off.

The SHUTDOWN button is used to manually shut down the NAM. To prevent corruption of the NAM, it is critical that the NAM run through the shutdown procedure before shutting off. If the NAM fails to respond to CLI or NAM shutdown commands, you can use the SHUTDOWN button as an alternative shutdown method.

For information on NAM module hardware and software requirements and port adapter installation and configuration, refer to the *Catalyst 6500 Series Switch and Cisco 7600 Series Router Network Analysis Module Release 3.4 Configuration Note*.

Network Analysis Module (WS-SVC-NAM-2)

The Network Analysis Module (WS-SVC-NAM-2) provides integrated network monitoring services within the router. (See [Figure 6-2](#).) The NAM collects network traffic statistics for real-time traffic analysis, performance monitoring, and troubleshooting.

The NAM monitors and analyzes network traffic for the Cisco 7600 series routers using remote monitoring (RMON), RMON extensions for switched networks (SMON), and other management information bases (MIBs). The NAM supports the following RMON groups:

- RMON groups defined in RFC 1757
- RMON2 groups defined in RFC 2021

The NAM also can monitor individual Ethernet VLANs, which allows it to serve as an extension to the basic RMON support provided by the supervisor engine.

You can use any other IETF-compliant RMON application to access link, host, protocol, and response-time statistics for capacity planning, departmental accounting, and real-time application protocol monitoring. You also can use filters and capture buffers to troubleshoot the network.

The NAM can analyze Ethernet VLAN traffic from one or both of the following sources:

- Ethernet, Fast Ethernet, Gigabit Ethernet, trunk port, or Fast EtherChannel SPAN or RSPAN source port

For more information about SPAN and RSPAN, refer to the “Configuring SPAN and RSPAN” chapter in the *Cisco 7600 Series Cisco IOS Software Configuration Guide*.



Note Cisco IOS software currently does not support RSPAN.

- Netflow Data Export (NDE)

For more information about NDE, refer to the *Cisco 7600 Series Cisco IOS Software Configuration Guide*.

The NAM-2 module has 1 GB of RAM and a 128 MB capture buffer.

The front panel LEDs are shown in [Figure 6-2](#) and described in [Table 6-2](#).

Figure 6-2 Network Analysis Module (WS-SVC-NAM-2)

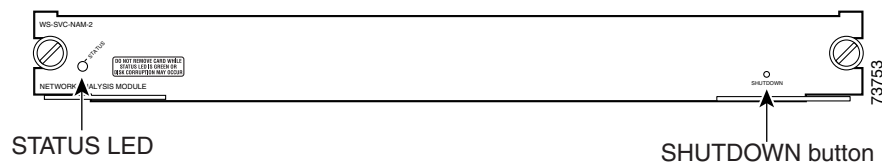


Table 6-2 NAM-2 Module STATUS LED Description

Color/State	Description
Green	All diagnostic tests pass. The NAM is operational.
Red	A diagnostic other than an individual port test failed.
Orange	Indicates one of three conditions: <ul style="list-style-type: none"> • The NAM is running through its boot and self-test diagnostic sequence. • The NAM is disabled. • The NAM is in the shutdown state.
Off	The NAM is powered off.

The SHUTDOWN button is used to manually shut down the NAM. To prevent corruption of the NAM, it is critical that the NAM run through the shutdown procedure before shutting off. If the NAM fails to respond to CLI or NAM shutdown commands, you can use the SHUTDOWN button as an alternative shutdown method.

For information on NAM module hardware and software requirements and port adapter installation and configuration, refer to the *Catalyst 6500 Series Switch and Cisco 7600 Series Router Network Analysis Module Release 3.4 Configuration Note*.