Connecting Cisco Integrated Storage System Enhanced Network Modules to the Network

This guide describes how to connect Cisco Integrated Storage System enhanced network modules to your network. It contains the following sections:

Cisco Integrated Storage System Enhanced Network Modules

The Cisco Integrated Storage System enhanced network module is a network video recorder for Cisco integrated services routers, which archives video captured by the Cisco Analog Video Gateway network module (EVM-IPVS-16A) or other cameras connected to your network.

All models ship from the factory with the following hardware preinstalled. (See Table 1.)

Table 1 Preinstalled Hardware in Cisco Integrated Storage System Enhanced Network Modules

Model	Processor	Hard Disk	Memory
NME-ISS	1.0 GHz	500 GB (SATA)	512 MB

The Cisco Integrated Storage System enhanced network module LEDs are shown in Figure 1 and described in Table 2.

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Figure 1 NME-ISS Faceplate

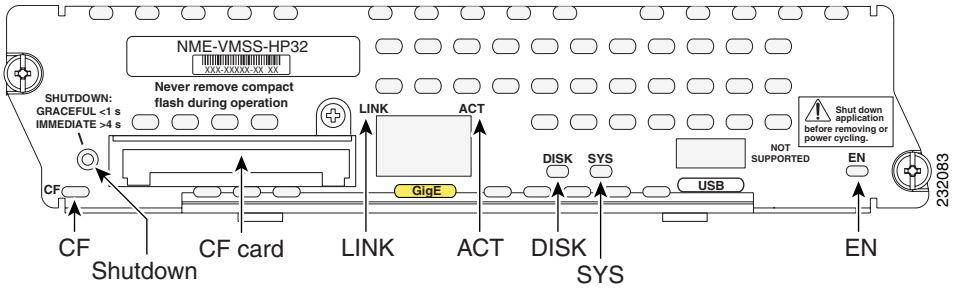

Table 2 NME-ISS LED Description

CF	The Compact Flash slot is not used on the NME-ISS module.
SHUTDOWN	Press the SHUTDOWN button for less than 2 seconds to gracefully shut down the module. Press the SHUTDOWN button for more than 4 seconds to cause an immediate module shutdown, which may affect file operations that are in progress.
LINK	Status of Gigabit Ethernet link On—Link is enabled Off—Link is disabled
ACT	Status of Gigabit Ethernet activity On—Active Off—Inactive
DISK	Status of hard drive activity On—Active Off—Inactive
SYS	Status of system shutdown **Note** Do not remove power without first shutting down the application. On—Application is stable. Off—System is shut down and ready for host power-down Flashing—System shutdown is in progress
EN	Status of the network module On—Detected by the host Cisco IOS software and enabled. Off—Disabled.

Shutting Down Cisco Integrated Storage System Enhanced Network Modules

Press the SHUTDOWN button on the network module faceplate for less than 2 seconds to perform a graceful shutdown of the network module before removing power from the router or before starting an online insertion and removal (OIR) sequence on the router. The application may take up to 2 minutes to fully shut down.

Caution If you press the SHUTDOWN button for *more than 4 seconds*, a nongraceful shutdown of the hard disk will occur and may corrupt files on the network module's hard disk. After a nongraceful shutdown, the HD and SYS LEDs remain lit. Press the SHUTDOWN button for *less than 2 seconds* to gracefully reboot the network module.

Connecting Cisco Integrated Storage System Network Modules

To connect Cisco Integrated Storage System network modules to an external device, use a straight-through two-pair Category 5e unshielded twisted-pair (UTP) cable, and connect the RJ-45 Gigabit Ethernet port on the network module to a switch, hub, repeater, server, or other Gigabit Ethernet network device.

Note RJ-45 cables are not available from Cisco. These cables are widely available and must be Category 5e cables.

Online Insertion and Removal of Cisco Network Modules Procedure

Some Cisco routers allow you to replace network modules without switching off the router or affecting the operation of other interfaces. This feature is called *online insertion and removal* (OIR). OIR of a module provides uninterrupted operation to network users, maintains routing information, and ensures session preservation.

Caution Unlike other network modules, Cisco Integrated Storage System enhanced network modules use hard disks. Online removal of network modules without proper shutdown can cause file system corruption and might render the disk unusable. You must shut down the operating system on the network module in an orderly way before removing or powering down the module.

Caution Cisco routers support OIR with identical modules only. If you remove a module, install in its place another module exactly like the one you removed. If you remove a 2-slot module (along with any installed WAN or voice interface cards), install another module and card combination exactly like the one you removed.

For a description of informational and error messages that may appear on the console during this procedure, see the hardware installation guide for your router.

To perform online removal of a network module and insertion of a replacement, follow these steps, with the router in privileged EXEC mode:

Step 1 Initiate a network module session by using the following command:

```
Router# service-module integrated-Service-Engine slot/unit session

Trying 10.10.10.1, 2065 ... Open
```

```
SE-Module> enable
SE-Module#
```

Step 2 Save the running configuration of the network module by using the following command from the `SE-Module#` **prompt**:

```
SE-Module# copy running-config tftp tftp-server-address filename
```

Step 3 Exit the network module session by pressing **Control-Shift-6**, followed by pressing **x**.

Step 4 On the router, clear the integrated-Service-Engine console session by using the following command:

```
Router# service-module integrated-Service-Engine slot/unit session clear
```

Step 5 Perform a graceful shutdown of the network module disk drive by using the following command:

```
Router# service-module integrated-Service-Engine slot/unit shutdown
```

Step 6 Shut down the network module interface:

```
Router (config)# interface integrated-Service-Engine slot/unit
Router (config-if)# shutdown
Router (config-if)# exit
```

Step 7 Unplug all network interface cables from the network module.

Step 8 Loosen the two captive screws that are holding the network module in the chassis slot.

Step 9 Slide the network module out of the slot.

Step 10 Align the replacement network module with the guides in the chassis slot, and slide it gently into the slot.

Note If the router is not fully configured with network modules, make sure that blank panels fill the unoccupied chassis slots to provide proper airflow.

Step 11 Push the module into place until you feel its edge connector mate securely with the connector on the backplane.

Step 12 Reconnect the network interface cables that you removed in Step 7.

Step 13 Check that the network module LEDs are on. This inspection ensures that connections are secure and that the new unit is operational.

Step 14 Initiate a network module session by using the following command:

```
Router# service-module integrated-Service-Engine slot/unit session

Trying 10.10.10.1, 2129 ... Open

SE-Module> enable
SE-Module#
```

Step 15 Restore the running configuration of the network module by using the following command from the service module prompt:

```
SE-Module# copy tftp running-config tftp-server-address filename
```

Step 16 Exit the network module session by pressing **Control-Shift-6**, followed by pressing **x**.

Step 17 On the router, clear the network module session by using the following command:

```
Router# service-module integrated-Service-Engine slot/unit session clear
```

Additional References

For additional information, see the following documents and resources.

Related Topic	Document Title
Cisco Video Management and Storage and the Cisco Video Surveillance Solution	• *Release Notes for the Cisco Video Management and Storage System* • *Connecting Cisco Video Management and Storage System Enhanced Network Modules to the Network* • *Cisco Video Management and Storage System Installation and Upgrade Guide* • *Cisco Video Management and Storage System CLI Administrator Guide* • *Connecting Cisco Integrated Storage System Enhanced Network Modules to the Network* • *Cisco Integrated Storage System Installation and Upgrade Guide* • *Cisco Integrated Storage System CLI Administrator Guide* • *Connecting Cisco Analog Video Gateway Network Modules to the Network* • *Cisco Analog Video Gateway Installation and Upgrade Guide* • *Cisco Analog Video Gateway CLI Administrator Guide* • *Cisco Analog Video Gateway XML API Guide* • *Open Source License Notice*
Regulatory compliance and safety information	*Cisco Network Modules and Interface Cards Regulatory Compliance and Safety Information*
Cisco IOS software	*Cisco IOS Software*
Network modules	*Installing Cisco Network Modules in Cisco Access Routers*
Technical documentation, including feedback and assistance	*What's New in Cisco Product Documentation* (including monthly listings of new and revised documents)