

# Configuring TrafficDirector to Use the NAM Card in a Catalyst Switch

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## Introduction

The Network Analysis Module (NAM) card is similar to a SwitchProbe, but it can only be configured using the TrafficDirector application. It works with the Catalyst 5000 family of LAN switches that are running software version 4.3(1a) or later. Cisco recommends using TrafficDirector 5.8 or later with the NAM, but TrafficDirector 5.6 or 5.7 will also work.

## Before You Begin

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

### Prerequisites

There are no specific prerequisites for this document.

### Components Used

This install procedure assumes you are using TrafficDirector 5.6 or 5.7.

**Note:** Since the upgrade from version 5.3 or 5.5.1 to 5.6 is free because of Y2K issues, we assume that you are not using version 5.3. If you are using versions prior to 5.6, we recommend upgrading to version 5.8.3 (available for download from Cisco.com).

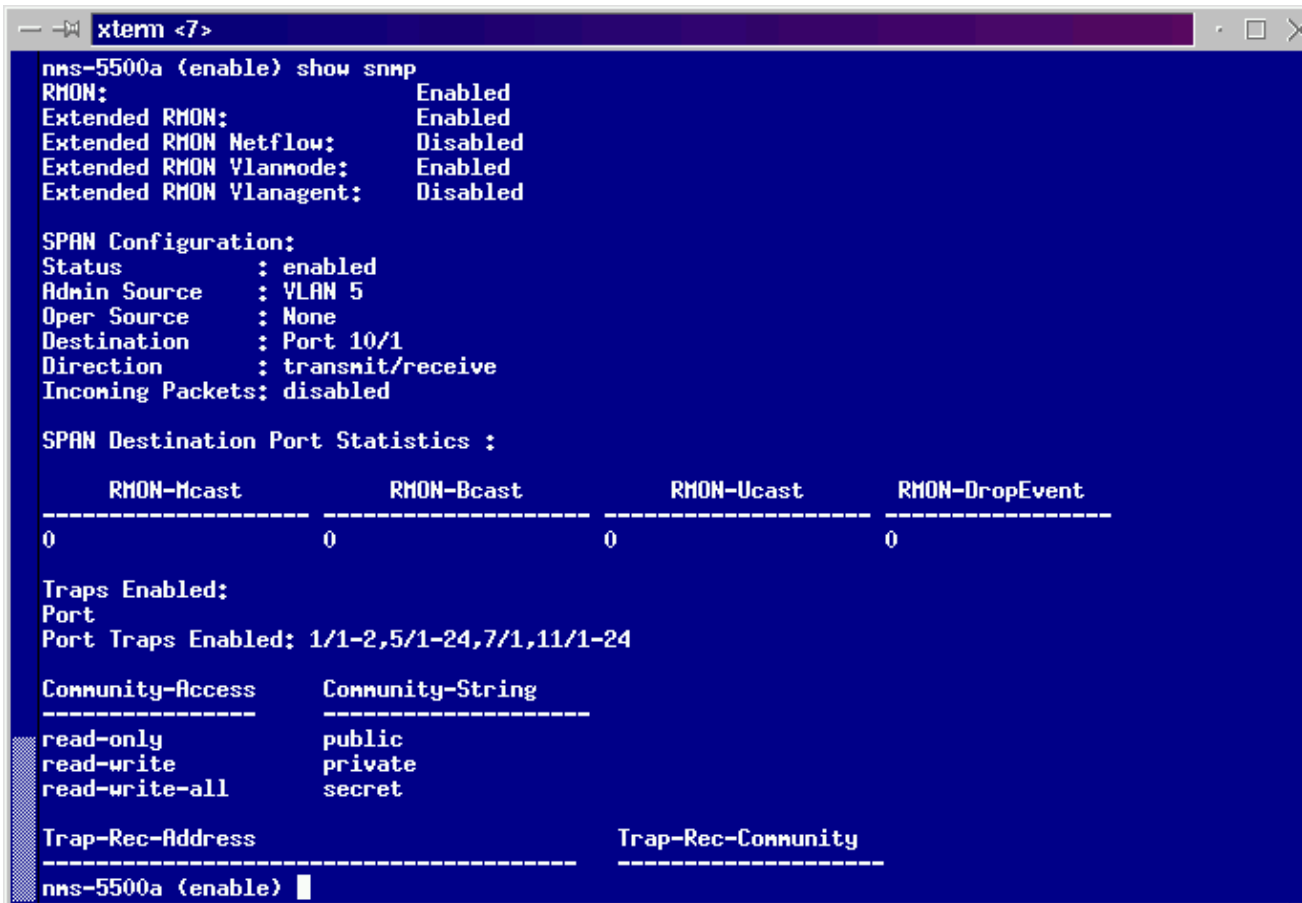
## Configuring the NAM

The steps below provide detailed guidelines on configuring the NAM to work with TrafficDirector. Be sure to note the Caveats section at the end of this document.

## Step-by-Step Instructions

Follow these steps to configure the NAM to work with TrafficDirector.

1. Telnet to the switch where the NAM card is installed. Issue a **show snmp** command. This command displays the enabled SNMP features. For the NAM to work correctly, you must have both RMON and Extended RMON enabled on the switch. The first two lines of the **show snmp** command output appear as follows:



```
xterm <7>
nms-5500a (enable) show snmp
RMON: Enabled
Extended RMON: Enabled
Extended RMON Netflow: Disabled
Extended RMON Vlanmode: Enabled
Extended RMON Vlanagent: Disabled

SPAN Configuration:
Status      : enabled
Admin Source : VLAN 5
Oper Source  : None
Destination  : Port 10/1
Direction   : transmit/receive
Incoming Packets: disabled

SPAN Destination Port Statistics :
-----
RMON-Mcast      RMON-Bcast      RMON-Ucast      RMON-DropEvent
-----
0                0                0                0

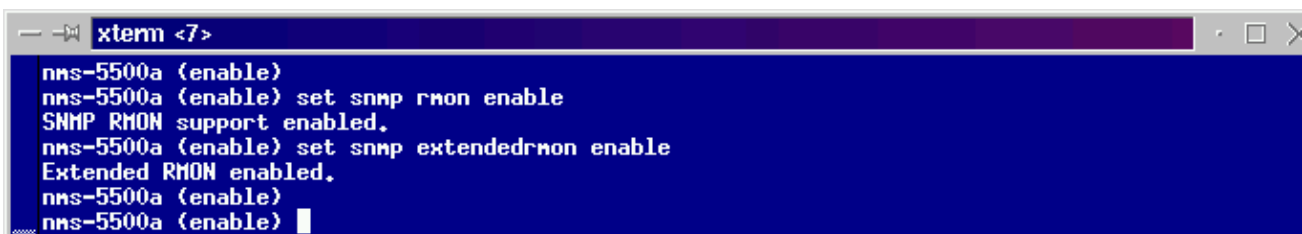
Traps Enabled:
Port
Port Traps Enabled: 1/1-2,5/1-24,7/1,11/1-24

Community-Access      Community-String
-----
read-only              public
read-write             private
read-write-all        secret

Trap-Rec-Address      Trap-Rec-Community
-----
nms-5500a (enable) █
```

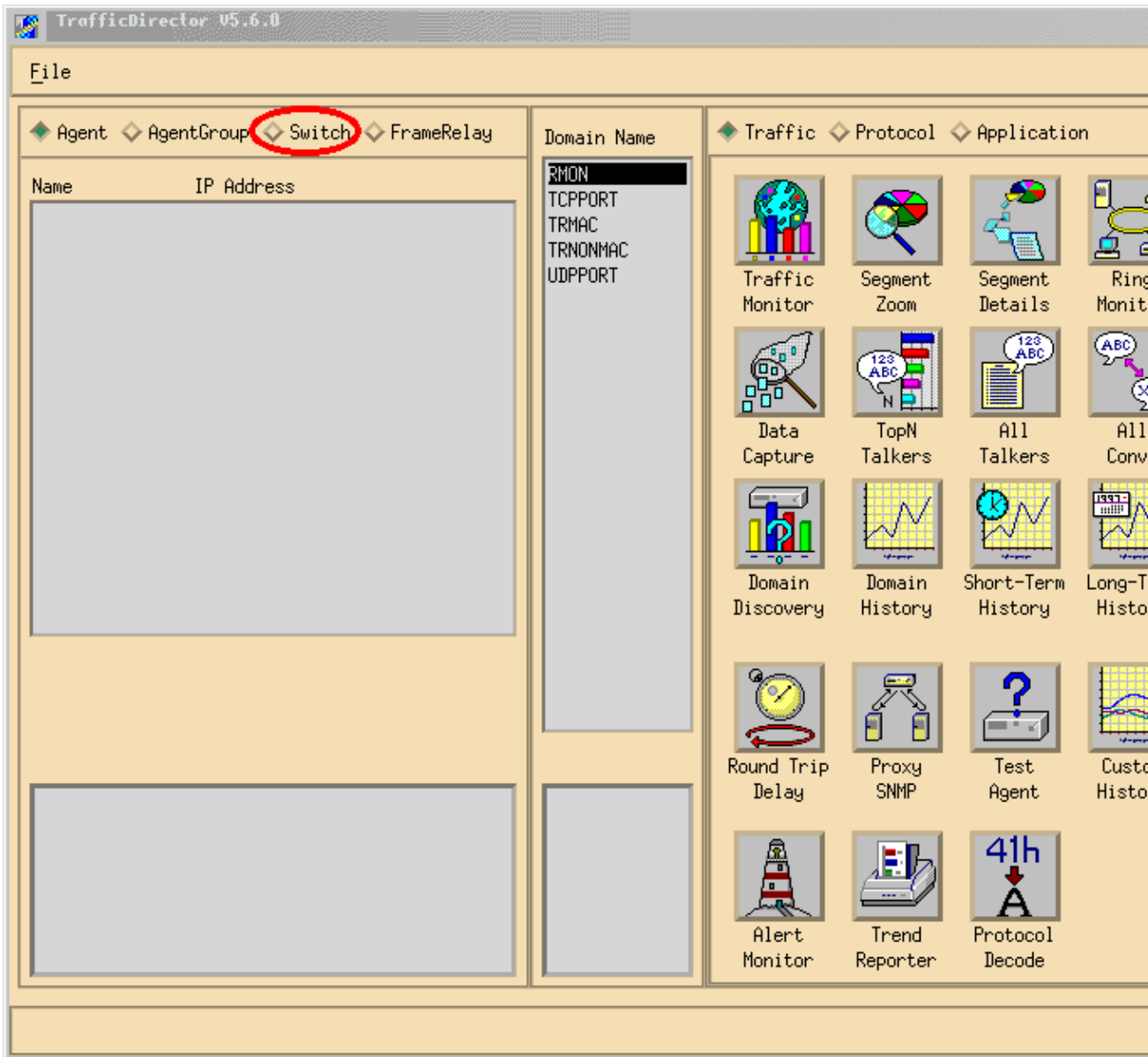
2. If either the RMON feature or Extended RMON feature are disabled, use the following commands to enable the features on the switch. An example is shown in the image below.

```
switch-prompt: set snmp rmon enable
switch-prompt: set snmp extendedrmon enable
```

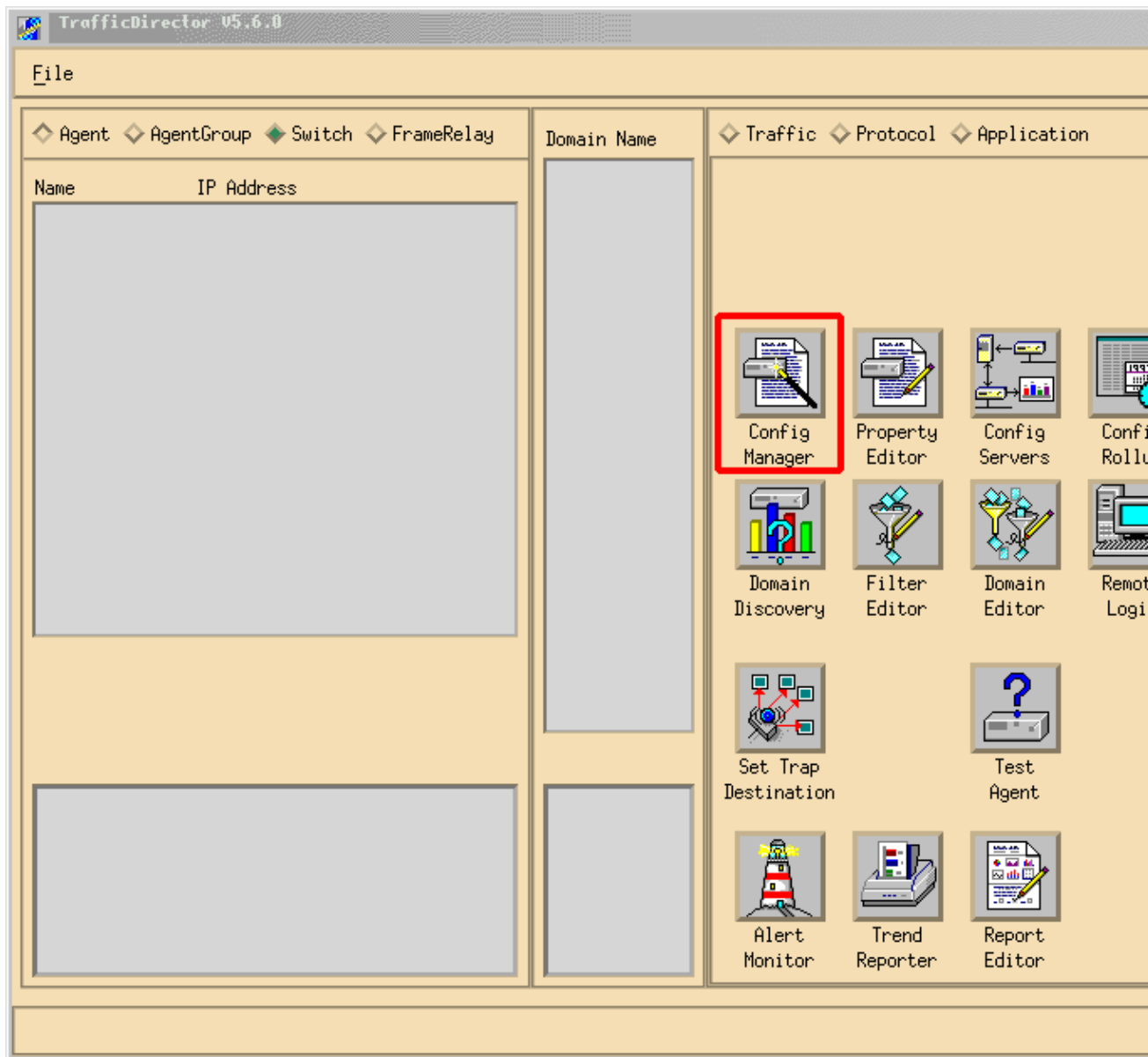


```
xterm <7>
nms-5500a (enable)
nms-5500a (enable) set snmp rmon enable
SNMP RMON support enabled.
nms-5500a (enable) set snmp extendedrmon enable
Extended RMON enabled.
nms-5500a (enable)
nms-5500a (enable) █
```

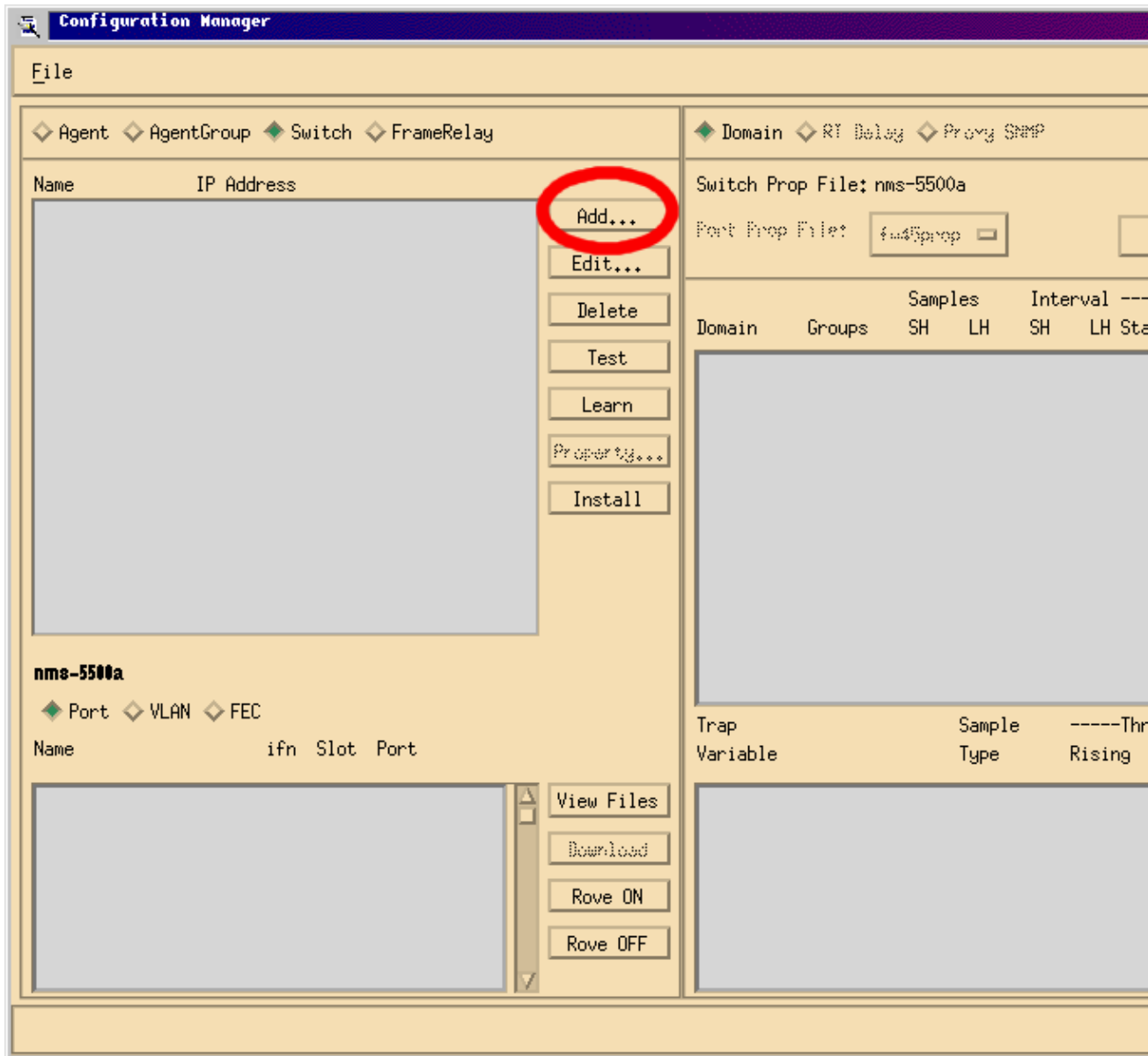
3. Start the TrafficDirector Program. The main user interface appears.
4. Click the **Switch** radio button located in the upper, left corner of the application under the **File** menu button. The **Switch** radio button is circled in the image below.
5. Click the **Admin** radio button located in the upper, right corner of the application under the **Help** menu button. The **Admin** radio button is circled in the image below.



6. Click the large **Configuration Manager** button, as shown in the image below:



The Configuration Manager window appears, as shown in the image below:



7. Click the **Add...** button, as shown in the image above. An Add Switch window appears requiring switch information, as shown in the image below. Enter the following information:

- ◆ Switch Name: This is the name of your switch.
- ◆ IP Address: This can be either an IP or a DNS name.

**Note:** IP addresses work better

- ◆ Switch Type: This must be the exact model of your switch, that is Cat\_5000, Cat\_5500, Cat\_5505, or Cat\_5509.
- ◆ Read Community: This is the read-only SNMP community string on the switch.
- ◆ Read Community: This is the read-only SNMP community string on the switch.
- ◆ Write Community: This is the read-write SNMP community string on the switch.

**Add Switch**

Switch Name:

IP Address:

Switch Type:  ...

Read Community:  Retries:

Write Community:  Timeout:

Roving:  ... Analyzer Port:

Agent1:  ... Trunk

Agent2:  ... Trunk

Agent3:  ... Trunk

Agent4:  ... Trunk

Switch Properties File:  ...

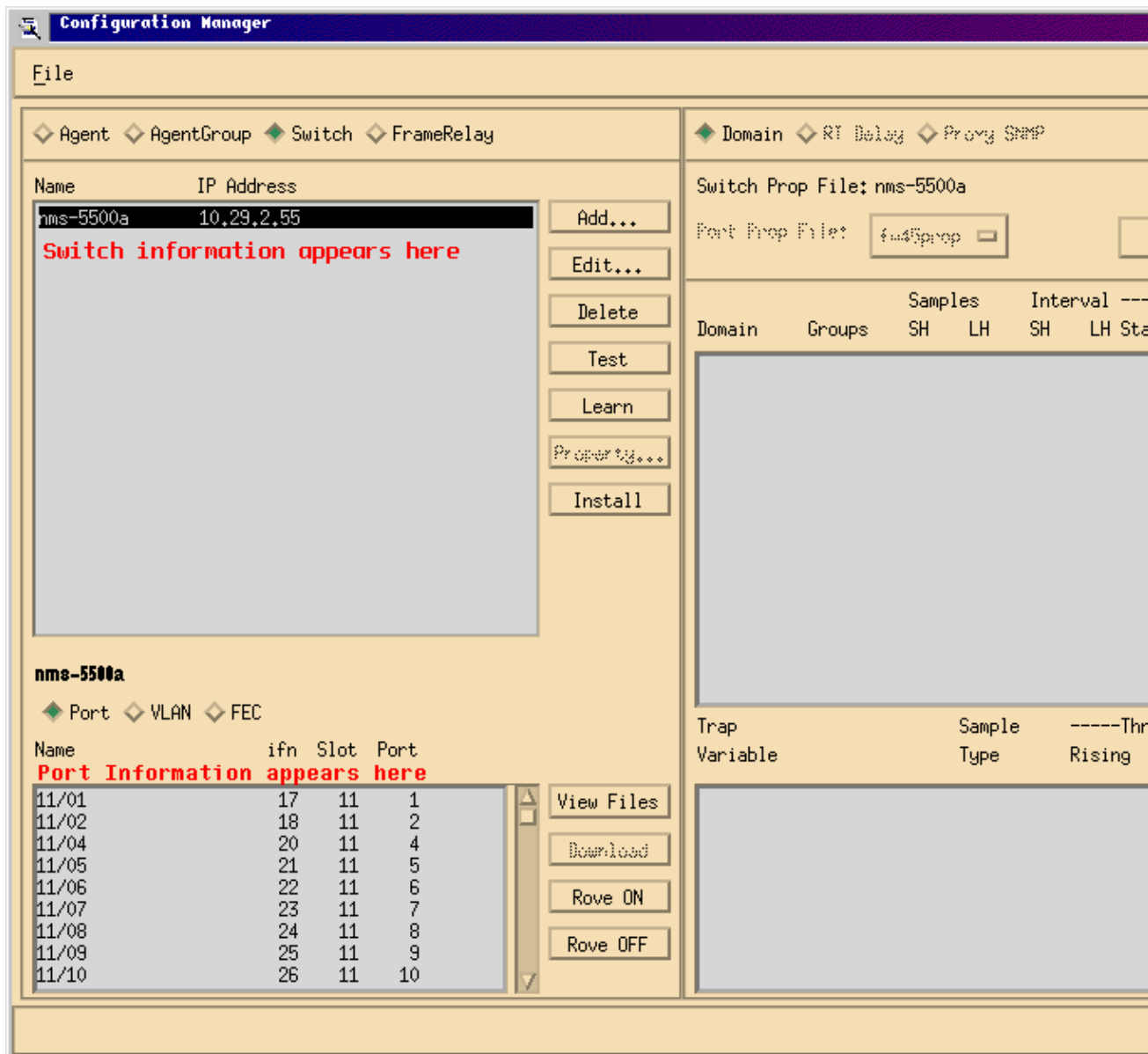
SQL Server:  ...

Apply OK Cancel

- After entering the required information, click the **OK** button. The window disappears, and reverts to the Configuration Manager Window.

**Note:** The newly configured switch appears in the upper, left window of the Configuration Manager window, as shown in the image below.

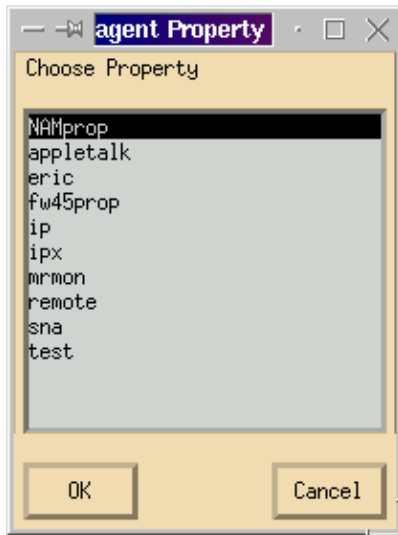
- Click the newly added switch. A list of ports appears in the bottom, left window, as shown in the image below.



- To use the NAM, you have to rove a port, VLAN, or FEC (Fast EtherChannel) to it. Roving means that you send all the data from the roved port, VLAN, or FEC to the NAM for analysis. Select the port, VLAN, or FEC you wish to rove in the bottom, left window.

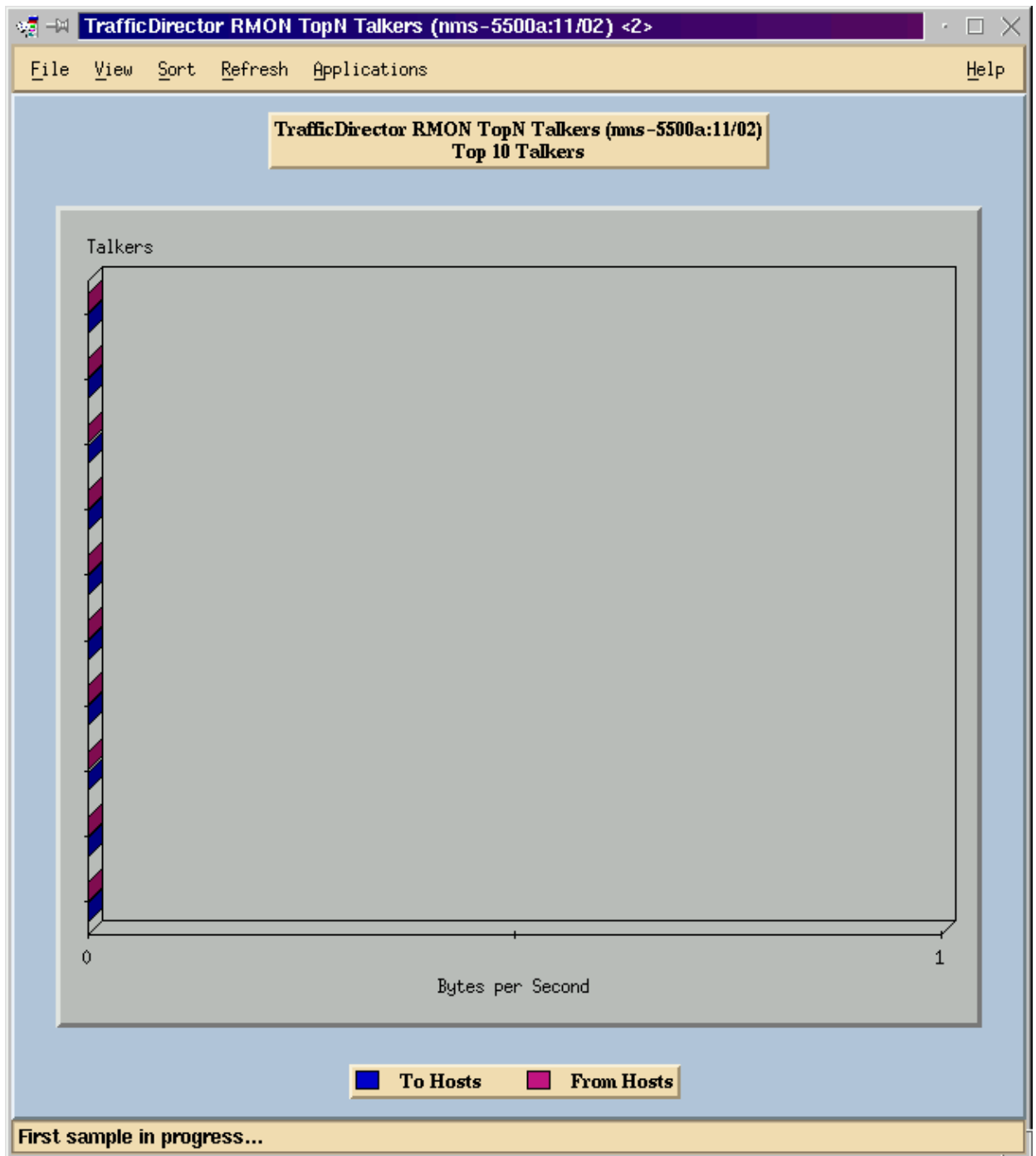
**Note:** A Port list is shown by default, but you can view VLANs or FECs by clicking the appropriate radio button.

- When you select the object you wish to rove, click the **Rove On** button. A window appears allowing you to select a property file to install, as shown in the image below.



12. Select the **NAMprop** property file and then click the **OK** button.
13. After the **NAMprop** file is installed on the NAM, close the Configuration Manager window, and click the **Protocol** radio button at the top of the TrafficDirector window. You should be able to analyze TopN Talkers, All Talkers, Protocol Monitor, and Protocol Zoom by default for the port/VLAN that was roved in the Configuration Manager window. Currently, ports/VLANs/FECs may be roved only from the Configuration Manager window.





**Note:** Other features require editing the **NAMProp.asd** file. See the online help on Editing Property Files for more information.

## NetFlow and the NAM

To view NetFlow data using the NAM card in TrafficDirector, use the steps below. There are steps for the Catalyst command line interface and steps for TrafficDirector

### Catalyst Command Line Interface

1. Issue the **set snmp extended rmon netflow enable <password>** command. The password can be obtained by purchasing WS-PB-NFM
2. Enable multilayer switching NetFlow data export by issuing the **set mls nde enable** command.

## TrafficDirector 5.7

1. Launch Configuration Manager.
2. Add an Agent
3. Fill in the Agent name, IP address, interface 3000 (note that 3000 is for NetFlow), read/write community strings, and the property file, which is NAMProp.
4. Install the property file for the Agent by clicking the Install button in Configuration Manager.
5. Launch Domain Discovery against the newly created agent to see NetFlows.

## Caveats

### Network Analysis Module Release 4.3(1a) Only

- The Network Analysis Module supports the roving of only one port; therefore, adding a port to a list of roved ports is not supported.
- Running Domain Discovery against a switch port, VLAN, or FEC that is roved to a Network Analysis Module results in an error retrieving alarm events.

### All NAM Versions, 4.3(1a) to 4.5(1)

- The upgrade does not delete the external agent for the NAM that was created with Traffic Director 5.3. (CSCdk79994). To work around this problem, you must manually delete the agent entry.

You must change the description in the Roving Agent field to Internal for any switches where a NAM is installed. If you do not do this,

- ◆ roving operations with the NAM fail;
- ◆ installation of properties files on the switch might not work.

This happens because the TrafficDirector Release 5.3 software used to maintain the name of the switch to define the roving agent; TrafficDirector 5.6, 5.7, or 5.8 uses the name Internal for the roving agent field.

- Cannot start All IP Talkers for Traffic Monitor using the NAM (CSCdm52292).

When selecting a non-roved port and starting an application such as TopN Talkers, you must use the Configuration Manager to rove to the selected port and enable the correct domain required for TopN Talkers. You must then return to Traffic Monitor and start the application. This problem has been observed on switches using the NAM because when a port is roved, a default properties file is installed on the roving agent. Because there are fewer domains enabled in the default properties file for the NAM than there are on SwitchProbes, the NAM is more likely to exhibit these symptoms.

- Mini-RMON is not supported for VLANs and FECs on the Catalyst 5000 family of switches. Trying to use a mini-RMON application (such as Traffic Monitor, Short- and Long-Term History, Segment Details, Segment Zoom, and so on) against a roved VLAN with the NAM produces an error.

Cannot generate reports using roved VLANs or FECs with the NAM (CSCdm57988).

TrafficDirector can collect and display the data for the roved port using the NAM. However, Trend Reporter cannot display the data for the roved VLAN or FEC.

## Verify

There is currently no verification procedure available for this configuration.

# Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

## Related Information

- **Cisco Traffic Director**
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