Configuring Network Devices for Management

Introduction to Device Configuration

You must configure each network device for SNMP before it can be managed by CMNM. You must configure:

- SNMP community strings
- SNMP trap destination (that is, CMNM)
- Other miscellaneous SNMP settings

You must configure SNMP for the following devices:

- Cisco MGC
- Cisco SLT (2611)
- LAN switch (Catalyst 2900XL and Catalyst 5500)
- Cisco MGX 8260
- BAMS

Configuring the Cisco MGC

To configure a Cisco MGC for network management:

Step 1 Access the Cisco MGC by entering the command:

telnet *Cisco-MGC-IP-address*

Step 2 Type **su - root** to become the root user.

Step 3 Type **cd /etc/srconf/agt**.

Step 4 Use a text editor to edit the snmpd.cnf file.

Step 5 Search for the keyword sysName and change the system name to the hostname of the Cisco MGC. The entry should be:

sysName *Cisco-MGC-hostname*

Step 6 Add the following line after the existing snmpNotifyEntry lines:

snmpNotifyEntry 32 rambler trap nonVolatile

> ![note icon]
>
> **Note** The second field on the line (32 in the example) must be a value that is unique in the snmpNotifyEntry section.

Step 7 Add the following line after the existing snmpTargetAddrEntry lines:

```
snmpTargetAddrEntry 34 snmpUDPDomain 10.1.1.1:0 100 3 rambler \
v2cExampleParams nonVolatile 255.255.255.255:0
```

> ![note icon]
>
> **Note** The second field on the line (34 in the example) must be a value that is unique in the TargetAddrEntry section.

Step 8 Save the changes you made to the snmpd.cnf file.

Step 9 Determine the process ID. From the Sun Solaris command line, enter the command:

ps -ef | grep snmpdm

You see information that resembles the following:

```
root 565 1 0 Mar 20 ? 0:01 /opt/CiscoMGC/bin/snmpdm -d
```

```
mgcusr 7463 23729 0 12:33:04 pts/13 0:00 grep snmpdm
```

The process ID of the snmpdm daemon is the second field on the line that ends with snmpdm -d. In this example, the process ID of the SNMP daemon is 565.

Step 10 Terminate and restart the SNMP daemon. Enter the command:

kill -9 *SNMP-daemon-process-ID*

> ![note icon]
>
> **Note** The SNMP daemon restarts automatically after termination.

Configuring a Cisco SLT (2611)

To configure a Cisco SLT (a Cisco 2611 router) for network management:

Step 1 Access the Cisco SLT by entering the command:

telnet *Cisco-SLT-IP-address*

You see the password prompt.

Step 2 Enter the login password for the Cisco SLT.

You see the slt prompt.

Step 3 Enter the command **enable**.

You see the password prompt.

Step 4 Enter the enable password for the Cisco SLT.

You see the slt prompt.

Step 5 Enter the command **configure terminal**.

You see the `slt(config)` prompt.

Step 6 Configure SNMP community strings. For example, to set the read-only community string to public and the read-write community string to private, enter the commands:

```
snmp-server community public RO
```

```
snmp-server community private RW
```

Step 7 Configure traps to be sent to CMNM.

  a. To configure the Cisco SLT to send all types of traps, enter the command:

```
snmp-server enable traps
```

  b. To configure the Cisco SLT to send traps for all syslog messages with a severity of warnings or worse, enter the command (you can set this severity to the level you want):

```
logging history warnings
```

  c. To configure the IP address of the CMNM to which traps are sent, enter the command (in this example the IP address of the CMNM is 10.1.1.1):

```
snmp-server host 10.1.1.1 public
```

Step 8 Set the SNMP trap source, which specifies the Cisco SLT interface from which traps are sent. The SNMP trap source should be the interface with the IP address that the CMNM is configured to use for SNMP communications.

For example, suppose that the IP address 10.2.2.2 is assigned to interface Ethernet 0/0 on the Cisco SLT. If CMNM is configured to communicate with the Cisco SLT using IP address 10.2.2.2, then the trap interface on the Cisco SLT should be Ethernet 0/0. In this example, you would enter the command:

```
snmp-server trap-source Ethernet0/0
```

Step 9 Set the maximum SNMP packet size to 2k by entering the command:

```
snmp-server packetsize 2048
```

Step 10 To exit configuration mode, press **Ctrl Z**. Then enter the **write** command to write the configuration to Flash memory.

Configuring a LAN Switch (Catalyst 2900XL)

To configure a LAN switch (Catalyst 2900XL) for network management:

Step 1 Access the LAN switch by entering the command:

telnet *LAN-switch-IP-address*

You see the `password` prompt.

Step 2 Enter the login password for the LAN switch.

You see the `2900xl` prompt.

Step 3 Enter the command **enable**.

You see the `password` prompt.

Step 4 Enter the enable password for the LAN switch.

You see the `2900xl` prompt.

Step 5   Enter the command **configure terminal**.

You see the `2900xl(config)` prompt.

Step 6   Configure SNMP community strings. For example, to set the read-only community string to public and the read-write community string to private, enter the commands:

`snmp-server community public RO`

`snmp-server community public RW`

Step 7   Configure traps to be sent to CMNM.

    a.   To configure the LAN switch to send all types of traps, enter the command:

    `snmp-server enable traps`

    b.   To configure the IP address of the CMNM to which traps are sent, enter the command (in this example the IP address of the CMNM is 10.1.1.1):

    `snmp-server host 10.1.1.1 public`

Step 8   Set the SNMP trap source, which specifies the LAN switch interface from which traps are sent. The SNMP trap source should be the interface with the IP address that the CMNM is configured to use for SNMP communications.

For example, suppose that the IP address 10.2.2.2 is assigned to interface VLAN1 on the LAN switch. If CMNM is configured to communicate with the LAN switch using IP address 10.2.2.2, then the trap interface on the LAN switch should be VLAN1. In this example, you would enter the command:

`snmp-server trap-source VLAN1`

Step 9   Set the maximum SNMP packet size to 2k by entering the command:

`snmp-server packetsize 2048`

Step 10   To exit configuration mode, press **Ctrl Z**. Then enter the **write** command to write the configuration to Flash memory.

Configuring the LAN Switch (Catalyst 5500)

To configure a LAN switch (Catalyst 5500) for network management:

Step 1   Access the LAN switch by entering the command:

`telnet` *`LAN-switch-IP-address`*

You see the `password` prompt.

Step 2   Enter the login password for the LAN switch.

You see the `cat` prompt.

Step 3   Enter the command **enable**.

You see the `password` prompt.

Step 4   Enter the enable password for the LAN switch.

You see the `cat(enable)` prompt.

Step 5   Configure SNMP community strings. For example, to set the read-only community string to public and the read-write community string to private, enter the commands:

```
set snmp-community read-only public
```

```
set snmp-community read-write private
```

Step 6   Configure traps to be sent to CMNM.

   a.   To configure the LAN switch to send all types of traps, enter the command:

```
set snmp trap enable
```

   b.   To configure the IP address of the CMNM to which traps are sent, enter the command (in this example the IP address of the CMNM is 10.1.1.1):

```
set snmp trap 10.1.1.1 public
```

Step 7   To exit enable mode, type **exit**.

Configuring the Cisco MGX 8260

To configure a Cisco MGX 8260 for network management:

Step 1   Start the Cisco MGX 8260 Web Viewer application by entering the command:

netscape *Cisco-MGX-8260-IP-address*

The Cisco MGX 8260 Web Viewer application opens in the web browser.

Step 2   In the right pane, select **Node**, then **SNMP**.

Step 3   Set the SNMP community strings:

   •   Read-only: public

   •   Read-write: private

Step 4   Configure trap registration by configuring the IP address of the CMNM to which traps are sent. For example, if the IP address of the CMNM is 10.1.1.1, register the trap receiver as 10.1.1.1.

Configuring BAMS

To configure a BAMS 2.6x for network management:

Step 1   Access the BAMS server by entering the command:

telnet *BAMS-server-IP-address* or *CiscoBAMS-server-IP-address*???

Step 2   Type **su - root** to become the root user.

Step 3   Type **cd /etc/srconf/agt**.

Step 4   Use a text editor to edit the snmpd.cnf file.

Step 5   Search for the keyword sysName and change the system name to the hostname of the BAMS. The entry should be:

```
sysName BAMS-server-hostname
```

Step 6   Add the following line after the existing snmpNotifyEntry lines:

```
snmpNotifyEntry 32 rambler trap nonVolatile
```

> **Note**   The second field on the line (32 in the example) must be a value that is unique in the snmpNotifyEntry section.

Step 7   Add the following line after the existing snmpTargetAddrEntry lines:

```
snmpTargetAddrEntry 34 snmpUDPDomain 10.1.1.1:0 100 3 rambler \
v2cExampleParams nonVolatile 255.255.255.255:0
```

> **Note**   The second field on the line (34 in the example) must be a value that is unique in the TargetAddrEntry section.

Step 8   Save the changes you made to the snmpd.cnf file.Save the changes you made to the snmpd.cnf file.

Step 9   Determine the process ID. From the Sun Solaris command line, enter the command:

ps -ef | grep snmpdm

You see information that resembles the following:

```
root 565 1 0 Mar 20 ? 0:01 /opt/BAMS/bin/snmpdm -d
```

```
mgcusr 7463 23729 0 12:33:04 pts/13 0:00 grep snmpdm
```

The process ID of the snmpdm daemon is the second field on the line that ends with snmpdm -d. In this example, the process ID of the SNMP daemon is 565.

Step 10   Terminate the SNMP daemon. Enter the command:

kill -9 *SNMP-daemon-process-ID*

> **Note**   The SNMP daemon restarts automatically after termination.