

MIB Installation

This chapter describes how to install the MIBs supplied on the Catalyst 2000 diskettes. Precompiled MIBs are supplied for the following platforms:

- SunNet Manager
- Novell NMS
- HP OpenView SNMP Management Platform

Separate procedures are included for the Catalyst 2800 and the Catalyst 2100.

Catalyst 2800

The files below are included in DOS and TAR format with your Catalyst 2800. Use the procedures on the following pages to integrate them into your environment.

<i>cat2000.mib</i>	Catalyst 2800 MIB extensions written in the ASN.1 language.
<i>module.mib</i>	Catalyst 2800 enterprise-specific MIB written in ASN.1
<i>rfc1317.mib</i>	Definitions of managed objects for RS-232-like devices as defined in RFC-1317. Also written in ASN.1.
<i>rfc1493.mib</i>	Definitions of managed objects for 802.1d bridge devices. Also written in ASN.1.
<i>rfc1512.mib</i>	Definitions of managed objects for Station Management v7.3 in ASN.1.

Install Catalyst 2800 MIB Extensions in a Novell NMS Environment

This section describes how to load and integrate the Catalyst 2800 MIB extensions into Novell's NetWare Management System (NMS). These files are located with the NMS profiles on the Catalyst 2800 DOS-formatted diskette included with the Catalyst 2800.

The files with *.prf* are NMS profiles. They are described in the section "Using the Supplied NMS Profiles" and can be integrated into Novell NMS after performing steps 1 and 2 in the following procedure. These instructions are specific to Novell NMS version 2.0 and 2.1. For other versions or for additional information, consult your Novell NMS documentation.

- Step 1** Copy the MIB files. Using the DOS copy command, transfer the *cat2000.mib*, *module.mib*, *rfc1493.mib*, *rfc1317.mib*, and *rfc1512.mib* files to the current NMS directory. For a standard NMS installation, this directory is usually *\nms\snmpmibs\current*.
- Step 2** From the NMS main window, select the **Tools>SNMP MIB Compiler** command. Confirm this action by clicking **OK** to compile all current MIB definitions. For the compilation to succeed, any existing browser windows must first be closed.
- Step 3** Select the **Tools>SNMP MIB Browser** command from the NMS main window to view and set the Catalyst 2800 MIB objects.
- Step 4** Click **Add** to invoke the Profile Editor for creating a new profile. The names of all the available Catalyst 2800 scalar and table objects should now be listed in the Group Attribute Choices box of the Profile Editor window.
- Step 5** Choose the objects or tables to be added to the new Profile's Attribute Selection box as appropriate.
- Step 6** Enter a name and description for the Profile, as well as a community string and a display attribute as needed.
- Step 7** Click **Save** to store the named Profile to disk.
- Step 8** Enable Catalyst 2800 enterprise-specific traps: to activate or deactivate the ability to receive and process any type of traps at the NMS station, the **Fault>Alarm Disposition** command must be used. Refer to the *NMS User's Guide* for detailed information.

Using the Supplied NMS Profiles

The Catalyst 2800 diskette contains a number of NMS profiles that have been set up with Catalyst 2800 MIB objects. These files are provided for convenience and can be used without change. Steps 1 and 2 in the previous section must be completed before these profiles can be used. Copy the files *.prf to the directory \nms\snmpmibs\profiles for a standard NMS installation. The supplied profiles are as follows:

<i>fs2sysin.prf</i>	sysInfo group
<i>fs2syscf.prf</i>	sysConfig group
<i>fs2port.prt</i>	port group
<i>fs2rstat.prf</i>	swPortRxStatTable
<i>fs2tstat.prf</i>	swPortTxStatTable group
<i>fs2upg.prf</i>	upgrade group
<i>fs2netma.prf</i>	netMgmt group
<i>fs2setcl.prf</i>	netMgmtSetClientTable
<i>fs2trpcl.prf</i>	netMgmtTrapClientTable
<i>fs2bwtab.prf</i>	bandwidthUsagePeakTable
<i>fs2vlan.prf</i>	vlan group
<i>fs2vltab.prf</i>	vlanTable
<i>fs2vlmem.prf</i>	vlanMemberTable
<i>fs2bandw.prf</i>	bandwidthUsage group
<i>fsmodbas.prf</i>	esModuleBasic
<i>fsmodgrp.prf</i>	esModuleGroup

<i>fsmodprt.prf</i>	esModulePortGroup
<i>fsfmcfg.prf</i>	fmCfgTable
<i>fsfmeth.prf</i>	fmXlateToEthTable
<i>fsfmfddi.prf</i>	fmXlateToFDDITable
<i>fsfmfilt.prf</i>	fmFilterTable
<i>ldstatic.prf</i>	dot1dStaticTable
<i>ldbase.prf</i>	dot1dBase group
<i>ldbasepo.prf</i>	dot1dBasePortTable
<i>ldstp.prf</i>	dot1dStp group
<i>ldstppor.prf</i>	dot1dStpPortTable
<i>ldtp.prf</i>	dot1dTp group
<i>ldtpport.prf</i>	dot1dTpPortTable
<i>ldtpfdb.prf</i>	dot1dTpFdbTable

Install Catalyst 2800 MIB Extensions in a SunNet Manager Environment

This section describes how to load, integrate and use the Catalyst 2800 MIB extensions with SunNet Manager. These files are archived in TAR format on the UNIX TAR diskette included with Catalyst 2800. The diskette contains the following files as well as their precompiled versions known as *schema* files.

The schema files can be immediately integrated into SunNet Manager without requiring additional compilation, using the following instructions. These instructions are specific to SunNet Manager versions 2.1 and 2.2. For other versions or for additional information, consult your SunNet Manager documentation.

Step 1 Insert the Catalyst 2800 UNIX TAR diskette into the floppy drive of the SunNet Manager workstation.

Step 2 Use TAR to extract the MIB files.

SunNet Manager is typically installed in the default directory `/opt/SUNWconn/snm` or in the directory designated by the environment variable `$SNMHOME`.

Using the UNIX TAR command, extract all files on the Catalyst 2800 UNIX diskette into the directory `$SNMHOME/agents` on the SunNet Manager workstation, as follows:

```
cd $SNMHOME/agents
tar xvf /dev/fd0
```

On some UNIX platforms, the name of the floppy device may be different. On SunOS 5.3, you might need to stop the Volume Manager before the TAR diskette can be read. Become the root user and type the following:

```
/etc/init.d/volmgt stop
cd $SNMHOME/agents
tar xvf /dev/rdiskette
/etc/init.d/volmgt start
```

The following schemas are also included on the diskette:

cat2000.mib.schema

cat2000.mib.oid

cat2000.mib.traps

module.mib.schema

module.mib.oid

rfc1317.mib.schema

rfc1317.mib.oid

rfc1493.mib.schema

rfc1493.mib.oid

rfc1493.mib.traps

rfc1512.mib.schema

rfc1512.mib.oid

Step 3 Set up the SunNet Manager SNMP target configuration file.

Locate the keyword **na.snmp.hostfile** in the file */etc/snm.conf*. This keyword points to the file the SNMP proxy agent and SNMP trap proxy use to obtain target-specific information. In this file, add an entry for each target Catalyst 2800 that is to be managed. The following are the relevant schema file names to be specified:

cat2000.mib.schema

cat2000.mib.traps

module.mib.schema

rfc1317.mib.schema

rfc1493.mib.traps

rfc1512.mib.schema

Refer to the *SunNet Manager Reference Manual* for a detailed specification of the file named by the keyword **na.snmp.hostfile**.

Step 4 Integrate Catalyst 2800 MIB files into SunNet Manager.

If the SunNet Manager application has not been started, start it now.

- Select the **File>Load>Management Database** command from the menu.
- Select **cat2000.mib.schema** and then **Load**.
- Select **module.mib.schema** and then **Load**.
- Select **rfc1317.mib.schema** and then **Load**.
- Select **rfc1493.mib.schema** and then **Load**.
- Select **rfc1512.mib.schema** and then **Load**.

The SunNet Manager will now recognize the Catalyst 2800 and module enterprise-specific MIB and trap schemas, and the RFC-1317, RFC-1493 and RFC-1512 MIB schemas.

Step 5 Manage Catalyst 2800 via the SunNet Manager Discover tool.

Use the SunNet Manager Discover tool to locate and map Catalyst 2800. Once Catalyst 2800 is discovered and added as an icon to the network map, set up the icon properties to process the Catalyst 2800 and module schemas, and the RFC-1317, RFC-1493 and RFC-1512 schemas. These schemas will be displayed with the names CATALYST-2000-MIB, MODULE-MIB, RFC1317-MIB, BRIDGE-MIB, and FDDI-SMT73-MIB, respectively, on the icon properties window.

Step 6 Click on the boxes to the left of CATALYST-2000-MIB, MODULE-MIB, RFC1317-MIB, BRIDGE-MIB and FDDI-SMT73-MIB to enable management using these schemas.**Step 7** Type **localhost** on the proxy line to use the local SNMP proxy agent.

Catalyst 2800 is now manageable using the various facilities provided by SunNet Manager including the Quick Dump, Data Report, Event Report and Set Request facilities.

Install MIB Extensions for HP OpenView SNMP Management Platform

This section describes how to load, integrate and use the Catalyst 2800 MIB extensions with the HP OpenView SNMP Management platform. The MIB extension files are archived on the UNIX TAR diskette included with Catalyst 2800.

These instructions are specific to version 3.31 of the HP OpenView SNMP Management platform for SunOS 4.1.x or 5.x. For other versions or additional information, consult your applicable HP OpenView documentation.

Step 1 Insert the Catalyst 2800 UNIX TAR diskette into the floppy drive of the HP OpenView workstation.**Step 2** Use TAR to extract the MIB files.

HP OpenView MIB files are typically installed in the default directory */usr/OV/snmp_mibs*. Using the UNIX TAR command, extract all files on the Catalyst 2800 UNIX diskette into the directory */usr/OV/snmp_mibs* on the HP OpenView workstation as follows:

```
cd /usr/OV/snmp_mibs
tar xvf /dev/fd0
```

On some UNIX platforms, the name of the floppy device may be different. On SunOS 5.3, you might need to stop the Volume Manager before the TAR diskette can be read. Become the root user and type:

```
/etc/init.d/volmgt stop
cd /usr/OV/snmp_mibs
tar xvf /dev/rdiskette
/etc/init.d/volmgt start
```

Step 3 Integrate Catalyst 2800 MIB files into HP OpenView.

If the HP OpenView SNMP platform application has not been started, start it now.

- Select the **Options>Load/Unload MIBs: SNMP** command from the menu.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/cat2000.mib** and click **OK**.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/module.mib** and click **OK**.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/rfc1317.mib** and click **OK**.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/rfc1493.mib** and click **OK**.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/rfc1512.mib** and click **OK**.

The HP OpenView SNMP Platform will now understand the Catalyst 2800 and module enterprise-specific MIBs, the RFC-1512 MIB, RFC-1493 MIB and the RFC-1317 MIB.

Step 4 Manage the Catalyst 2800 via the MIB Browser.

The Catalyst 2800 can now be managed using the HP OpenView MIB Browser tool. From the OpenView menu, select the **Monitor>MIB Values:Browse MIB:SNMP** command. A MIB Browser window will pop up from which MIB objects can be viewed and set for any SNMP ready device.

Catalyst 2100

The following files are included in DOS and TAR format with your Catalyst 2100. Use the procedures on the following pages to integrate them into your environment.

<i>cat2000.mib</i>	Catalyst 2100 MIB extensions written in the ASN.1 language.
<i>rfc1317.mib</i>	Definitions of managed objects for RS-232-like devices as defined in RFC-1317. Also written in ASN.1.
<i>rfc1493.mib</i>	Definitions of managed objects for 802.1d bridge devices. Also written in ASN.1.

Install Catalyst 2100 MIB Extensions in a Novell NMS Environment

This section describes how to load and integrate the Catalyst 2100 MIB extensions into Novell's NetWare Management System (NMS). These files are located with the NMS profiles on the Catalyst 2100 DOS-formatted diskette included with the Catalyst 2100.

The files with *.prf* are NMS profiles. They are described in the section "Using the Supplied NMS Profiles" and can be integrated into Novell NMS after performing step 2 in the following procedure. These instructions are specific to Novell NMS version 2.0 and 2.1. For other versions or for additional information, consult your Novell NMS documentation.

- Step 1** Copy the MIB files. Using the DOS copy command, transfer the *cat2000.mib*, *rfc1493.mib* and *rfc1317.mib* files to the current NMS directory. For a standard NMS installation, this directory is usually `\nms\snmpmibs\current`.
- Step 2** From the NMS main window, select **Tools>SNMP MIB Compiler** command. Confirm this action by selecting **OK** to compile all current MIB definitions. For the compilation to succeed, any existing browser windows must first be closed.
- Step 3** Select the **Tools>SNMP MIB Browser** command from the NMS main window to view and set the Catalyst 2100 MIB objects.
- Step 4** Select the **Add** button to invoke the Profile Editor for creating a new profile. The names of all the available Catalyst 2100 scalar and table objects should now be listed in the Group Attribute Choices box of the Profile Editor window.

- Step 5** Choose the objects or tables to be added to the new Profile's Attribute Selection box as appropriate.
- Step 6** Enter a name and a description for the Profile, a community string and a display attribute as needed.
- Step 7** Click **Save** to store the named Profile to disk.
- Step 8** Enable Catalyst 2100 enterprise-specific traps: to activate or de-activate the ability to receive and process any type of traps at the NMS station, the **Fault>Alarm Disposition** command must be used. Refer to the *NMS User's Guide* for detailed information.

With a properly configured Catalyst 2100 on an accessible local network, you are now ready to browse and set the Catalyst 2100 objects that are included in this Profile.

Using the Supplied NMS Profiles

The Catalyst 2100 diskette contains a number of NMS Profiles that have been set up with Catalyst 2100 MIB objects. These files are provided for convenience and can be used without change. Steps 1 and 2 listed above must be completed before these profiles can be used.

Copy the files *.prf to the directory \nms\snmpmibs\profiles for a standard NMS installation. The following are the supplied NMS profiles:

<i>fs2sysin.prf</i>	sysInfo group
<i>fs2syscf.prf</i>	sysConfig group
<i>fs2port.prf</i>	swPort table
<i>fs2rstat.prf</i>	swPortRxStatTable
<i>fs2tstat.prf</i>	swPortTxStatTable
<i>fs2upg.prf</i>	upgrade group
<i>fs2netma.prf</i>	netMgmt group

<i>fs2setcl.prf</i>	netMgmtSetClientTable
<i>fs2trpcl.prf</i>	netMgmtTrapClientTable
<i>fs2bwtab.prf</i>	bandwidthUsagePeakTable
<i>fs2vlan.prf</i>	vlan group
<i>fs2vltab.prf</i>	vlanTable
<i>fs2vlmem.prf</i>	vlanMemberTable
<i>fs2bandw.prf</i>	bandwidthUsage group
<i>ldstatic.prf</i>	dot1dStaticTable
<i>ldbase.prf</i>	dot1dBase
<i>ldbasepo.prf</i>	dot1dBasePortTable
<i>ldstp.prf</i>	dot1dStp group
<i>ldstppor.prf</i>	dot1dStpPortTable
<i>ldtp.prf</i>	dot1dTp group
<i>ldtpport.prf</i>	dot1dTpPortTable
<i>ldtpfdb.prf</i>	dot1dTpFdbTable

Install Catalyst 2100 MIB Extensions in a SunNet Manager Environment

This section describes how to load, integrate and use the Catalyst 2100 MIB extensions with SunNet Manager. These files are archived in TAR format on the UNIX TAR diskette included with Catalyst 2100 along with the precompiled schema files. The schema files can be immediately integrated into SunNet Manager without requiring additional compilation, following the instructions below.

Catalyst 2100

These instructions are specific to SunNet Manager versions 2.1 and 2.2. For other versions or for additional information, consult your SunNet Manager documentation.

Step 1 Insert the Catalyst 2100 UNIX TAR diskette into the floppy drive of the SunNet Manager workstation.

Step 2 Use TAR to extract the MIB files.

SunNet Manager is typically installed in the default directory */opt/SUNWconn/snm* or in the directory designated by the environment variable *\$SNMHOME*. Using the UNIX TAR command, extract all files on the Catalyst 2100 UNIX diskette into the directory *\$SNMHOME/agents* on the SunNet Manager workstation as follows:

```
cd $SNMHOME/agents
tar xvf /dev/fd0
```

On some UNIX platforms, the name of the floppy device may be different. On SunOS 5.3, you might need to stop the Volume Manager before the TAR diskette can be read. Become the root user and type the following:

```
/etc/init.d/volmgt stop
cd $SNMHOME/agents
tar xvf /dev/rdiskette
/etc/init.d/volmgt start
```

The following schemas are also included on the diskette:

cat2000.mib.schema

cat2000.mib.oid

cat2000.mib.traps

rfc1317.mib.schema

rfc1317.mib.oid

rfc1493.mib.schema

rfc1493.mib.oid

rfc1493.mib.traps

Step 3 Set up the SunNet Manager SNMP target configuration file.

Locate the keyword **na.snmp.hostfile** in the file `/etc/snm.conf`. This keyword points to the file the SNMP proxy agent and SNMP trap proxy use to obtain target-specific information. In this file, add an entry for each target Catalyst 2100 to be managed.

The following are the relevant schema file names to be specified:

- *cat2000.mib.schema*
- *cat2000.mib.traps*
- *rfc1317.mib.schema*
- *rfc1493.mib.traps*

Refer to the SunNet Manager reference documentation for detailed specification of the file named by the keyword **na.snmp.hostfile**.

Step 4 Integrate Catalyst 2100 MIB files into SunNet Manager.

If the SunNet Manager application has not been started, start it now.

- Select the **File>Load>Management Database** command from the menu.
- Select the **cat2000.mib.schema** item and then **Load**.
- Select the **rfc1317.mib.schema** item and then **Load**.
- Select the **rfc1493.mib.schema** item and then **Load**.

The SunNet Manager will now understand the Catalyst 2100 enterprise-specific MIB and trap schemas, the RFC-1317 MIB schema and the RFC-1493 MIB and trap schemas.

Step 5 Manage Catalyst 2100 via the SunNet Manager Discover tool.

Use the SunNet Manager Discover tool to locate and map Catalyst 2100. Once Catalyst 2100 is discovered and added as an icon to the network map, set up the icon properties to process the Catalyst 2100 schema, RFC-1317 schema and RFC-1493 schema. These schemas will be displayed with the names FASTSWITCH-2000-MIB, BRIDGE-MIB and RFC1317-MIB, respectively, on the icon properties window.

- Click on the boxes to the left of FASTSWITCH-2000-MIB, BRIDGE-MIB and RFC1317-MIB to enable management using these schemas.

- Type **localhost** on the proxy line to use the local SNMP proxy agent.

Catalyst 2100 is now manageable using the various facilities provided by SunNet Manager. These include the Quick Dump, Data Report, Event Report and Set Request facilities.

MIB Installation for HP OpenView SNMP Management Platform

This section describes how to load, integrate and use the Catalyst 2100 MIB extensions with the HP OpenView SNMP Management Platform. The MIB extension files are archived in TAR format on the UNIX TAR diskette that is included with the Catalyst 2100.

These instructions are specific to version 3.31 of the HP OpenView SNMP Platform for SunOS 4.1.x or 5.x. For other versions or additional information, consult your applicable HP OpenView documentation.

Step 1 Insert the Catalyst 2100 UNIX TAR diskette into the floppy drive of the HP OpenView workstation.

Step 2 Use TAR to extract the MIB files.

HP OpenView MIB files are typically installed in the default directory */usr/OV/snmp_mibs*. Using the UNIX TAR command, extract all files on the Catalyst 2100 UNIX diskette into this directory on the HP OpenView workstation:

```
cd /usr/OV/snmp_mibs
tar xvf /dev/fd0
```

On some UNIX platforms, the name of the floppy device may be different. On SunOS 5.3, it may be necessary to stop the Volume Manager before the TAR diskette can be read. Become the root user and type the following:

```
/etc/init.d/volmgt stop
cd /usr/OV/snmp_mibs
tar xvf /dev/rdiskette
/etc/init.d/volmgt start
```

Step 3 Integrate Catalyst 2100 MIB files into HP OpenView.

If the HP OpenView SNMP platform application has not been started, start it now.

- Select the **Options>Load/Unload MIBs: SNMP** command from the menu.

- Select **Load**.
- Select **/usr/OV/snmp_mibs/cat2000.mib** and click **OK**.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/rfc1317.mib** and click **OK**.
- Select **Load**.
- Select **/usr/OV/snmp_mibs/rfc1493.mib** and click **OK**.

The HP OpenView SNMP platform will now recognize the Catalyst 2100 enterprise-specific MIB, the RFC-1493 MIB and the RFC-1317 MIB.

Step 4 Manage Catalyst 2100 via the MIB Browser.

Catalyst 2100 can now be managed using the HP OpenView MIB Browser. From the OpenView menu, select **Monitor>MIB Values:Browse MIB:SNMP**. A MIB Browser window will pop up from which MIB objects can be viewed and set for any SNMP ready device.

Catalyst 2100
