

Ethernet Management Module Release Note for Version 3.2 Software

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This Release Note describes the enhancements provided in the EMM Version 3.2 software. It also explains the known outstanding bugs with this software. Refer to the IBM 8250 Ethernet Management Module Installation and Operation Guide (IBM Form number:SA33-0209) and to the Download Information section of this Release Note for information on downloading this new version of software to your EMM. The EMM Version 3.1 Installation and Operation Guide coincides with the Version 3.2 software.

The EMM Version 3.2 now provides support for the IBM 8250 24-Port 10BASE-T Module and the Integrated Controller in the 6-Slot IBM 8250 System Concentrator. In addition, the EMM allows you to disable the display of SNMP trap messages.

Advanced and starter versions of the EMM software are available.

1. Enhancements:

The advanced EMM software provides all the capabilities of the basic version plus the following features:

- Inband software upgrades through TFTP
- Security through MAC address tracking per port
- Cross-module redundancy
- Ability to receive traps from other SNMP agents

The EMM 3.2 advanced software requires boot PROM version 2.0. EMM 3.2 basic software may use boot code Version 2.0 or any earlier boot PROM. Issue the SHOW DEVICE command to display the boot PROM version.

The starter EMM software provides the major capabilities of the basic version for modules only on one network; it cannot monitor multiple networks at the same time.

2. Download Information

You can perform the download through an inband connection using the advanced version of EMM once the new boot PROM (Version 2.0) is installed. This PROM is provided as a separate kit with the advanced software. However, since the EMM flash EPROM is still at the previous version, the download must be initiated from the boot code. Once the code is downloaded to the flash EPROM, subsequent inband downloads can be performed from the IBM 8250>> prompt, using REMOTE_LOGIN from another management module, or through SNMP.

Following is one method in which EMM Advanced customers can extract the EMM Flash code binary file from the DOS diskette to their appropriate TFTP server default directory:

1. Change directory to the place you wish to store the binary file.
2. Insert the diskette into the drive.
3. Type dos.
4. Type copy a:*.bin . (a = my 3 1/2" floppy drive).
5. Type quit to exit dos.
6. Type chmod 777 *.bin to give the file open permissions.
7. Then follow the instructions in the manual for inband download.

3. New Commands in Version 3.2

This version of the EMM enables you to display information for the Integrated Controller in the 6-Slot IBM 8250 System Concentrator by issuing the SHOW MODULE SLOT 7 command. It also provides three new commands that allow you to manage the 24-Port Module and one command to disable the display of trap messages. The new commands are described in the following command pages. You can insert these pages into the command chapter of your EMM manual.

SET MODULE AUTOPARTITION_THRESHOLD

Use the SET MODULE AUTOPARTITION_THRESHOLD command to tell the EMM how many collisions to allow before automatically partitioning a port. This command is available for the 24-Port 10BASE-T Module (FC 3829).

Format

```
SET MODULE {slot} AUTOPARTITION_THRESHOLD {threshold}
```

Parameters

{slot} = 1 - 17

{threshold} = 31_Collisions

63_Collisions

127_Collisions

255_Collisions

Example

The example shown below would set the collision threshold of the 24-Port Module in slot 7 to a maximum of 63 collisions.

```
IBM 8250>> set module 7 autopartition_threshold 63_collisions [ENTER]
```

Auto-partition threshold set to 63 COLLISIONS.

Description

Autopartition threshold tells network management how many collisions to allow before automatically partitioning a port. The factory default is 63, which is the proper setting for most environments. The 10BASE-T specification lists a minimum of 31 collisions prior to partition, but 31 collisions can cause ports to partition more frequently than necessary. The additional options (127 and 255) are for debugging purposes, and therefore not recommended for use in live networks.

SET MODULE CONNECTOR_NETWORK

Use the SET MODULE CONNECTOR_NETWORK command to assign a connector to a network. This command is available for the 24-Port 10BASE-T Module (FC 3829).

Format

```
SET MODULE {slot} CONNECTOR_{connector}_NETWORK {network}
```

Parameters

{slot} = 1 - 17

{connector} = 1 or 2

{network} = ethernet_1

ethernet_2

ethernet_3

isolated_1

isolated_2

Example

The example shown below would set all ports associated with connector 1 on the 24-Port 10BASE-T Module in slot 7 to Ethernet network 3.

```
IBM 8250>> set module 7 connector_1_network ethernet_3 [ENTER]
```

Module 7 connector 1 network ID set to ETHERNET 3.

Description

The IBM 8250 Ethernet 24-Port Module provides bank-level configuration flexibility using the IBM 8250 System Concentrator's unique TriChannel architecture. You can assign either of the two 50-pin connectors, or the entire module, to any of three networks (or isolated) on the IBM 8250 System Concentrator backplane.

For example, assigning one connector to ISOLATED_1 and the other connector to ISOLATED_2 creates two isolated 12-port subnetworks.

Assigning both connectors to the same isolated network creates a single 24-port isolated network.

SET MODULE PER_PORT_COUNTERS_CONNECTOR

Use the SET MODULE PER_PORT_COUNTERS_CONNECTOR command to select the 12-port connector for which you want the EMM to gather port-by-port counter statistics.

Format

```
SET MODULE {slot} PER_PORT_COUNTERS_CONNECTOR {connector}
```

Parameters

{slot} = 1 - 17

{connector} = 1 or 2

Example

The command shown below enables the EMM to gather statistics for connector 1 on the 24-Port Module in slot 7.

```
IBM 8250>> set module 7 per_port_counters_connector 1 [ENTER]
```

Module 7 port counters set to CONNECTOR 1.

Description

When you select a connector, network management monitors the other connector collectively, reporting statistics for all twelve ports as a single port, which displays as port 13. The MONITOR PORT and SHOW COUNTER PORT commands will function normally for the connector you have selected. If you ask for information on a port that is not being monitored individually, network management displays summed statistics along with instructions for getting more information on the port you selected.

Note:

Changing which connector you are monitoring clears all statistics counters. You should use the CLEAR COUNTER {slot} command to erase any extraneous statistics gathered during the switchover.

SET ALERT SCREEN

Use the SET ALERT SCREEN command to enable or disable the display of trap messages to the connected terminal.

Format

```
SET ALERT SCREEN {setting}
```

Parameters

{setting} = enable

disable

Example

The following example disables the display of trap messages.

```
IBM 8250>> set alert screen disable [ENTER]
```

Alert screen set to disable.

Description

You may enable or disable the display of trap messages by using the SET ALERT SCREEN command as shown in the example. The default for alert screen is enabled.

This command does not affect traps sent to the designated trap receivers defined in the community table. It only inhibits the display of traps to the terminal.

4. General Information

1. This version of software does not support FDDI modules.
2. The Alert feature will be enabled after the version 3.2 software has been downloaded. If, however, v3.2 is being downloaded as part of a Basic to Advanced upgrade, the current setting for the SET ALERT SCREEN command will not be affected.
3. You must use a master EMM to configure an EMM slave module to networks 1, 2, or 3. Configuring a slave module through the slave's RS232 port or through SNMP only allows the slave to be configured to isolated mode.
4. If there exists EMM(s) and TRMM(s) in the same hub, the TRMM must be the master so that it can perform beaconing recovery.
To allow the TRMM to perform beaconing recovery, set one TRMM to mastership priority 10, any other TRMMs to a mastership priority of 6, and all EMMs to priority 1.
5. You can establish REMOTE_DIAGNOSTICS for 50-Pin Module ports for connection to the Fault-Tolerant 10BASE-T Transceiver only if the microcontroller version is 003 or higher. The version can be displayed by entering the SHOW MODULE command for the 50-Pin Module.

5. Version 3.2 EMM Software Bugs

1. You must disable redundancy (MODE NON_REDUNDANT) on a port prior to removing the module from the concentrator if the port has been set to redundancy to a port on another module. If you remove the module first, the redundant pair in the concentrator will remain set for redundancy, even if the first module is never replaced in the empty slot.

2. IBM MIB II change traps are not being sent for changes in terminal settings.
3. The EMM enables you to set Token Ring modules that are on the same network to different ring speeds, which will take down the ring. Make sure you verify the ring speed for a particular network before adding a new module to the ring.
4. If you perform any activity that generates over 50 traps simultaneously, the EMM may run out of dynamic memory and reboot itself with a fatal error. An example of this would be if you removed 50-pin cables from the front of five Ethernet 50-Pin modules at the same time. This would cause 12 port down traps for each module, thereby causing a total of 60 traps to be sent to the EMM.

If you removed the cables from the modules one at a time (in sequence), the EMM would process the traps with no errors.

5. You may notice the following display errors when the EMM shows counter information about IBM 8250 modules:

- All counter statistics for port 12 on the Ethernet 50-Pin Module are displayed as port 14. Consequently, when you request counter statistics for port 12 via the SHOW COUNTER PORT command, you must instead request port 14.
- No counter statistics will be displayed if you request statistics for port 12. Note that this problem does not affect any other port command.
- When two EMMs are on the same network, entering the SHOW COUNTER command from either EMM reports counter information from the other EMM as occurring on port 16.
- IBM 8250 Bridge and Router modules always show network statistics as originating on port 1.

6. Version 3.2 Advanced EMM Software Bugs

1. Do not establish cross-module redundancy for ports on the IBM 8250 Ethernet Repeater Module (FC 3804) unless the microcontroller version is 004 or higher. The version can be displayed by entering the SHOW MODULE command for the Repeater Module.
2. You can only establish cross-module redundancy for ports on the IBM 8250 Ethernet Port-Switching Fiber Module (FC 3808, FC 3809, FC 3810, FC 3811, FC 3812 and FC 3813) if the port numbers are the same for each module. For example, slot 2, port 2 must be made redundant with slot x, port 2. The message: Redundancy must be specified on corresponding ports: Command aborted. displays if you do not use the same ports. With microcontroller version 002 or higher, there is no restriction. The version can be displayed by entering the SHOW MODULE command for the Fiber Module.
3. On a slave EMM using EMM advanced software, security may be set for any port in the concentrator, even if the specified port is on a module that does not exist in the concentrator.
4. You must disable security on a port prior to removing the module from the concentrator if you do not plan on returning the module to the same slot. If you remove the module first, the security setting in the concentrator will remain set for any new module that is installed in that slot.

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