IBM

8271 Nways Ethernet LAN Switch ATM OC-3c Module Release Notes

Please use the following notes in conjunction with the "IBM 8271 Nways Ethernet LAN Switch ATM OC-3c Module User's Guide", part number 02L1332.

These Release Notes apply to version 1.05 of the ATM Module agent software and version 3.1 of the Switch agent software.

If you have problems with your ATM network you should also read the Release Notes that accompany your ATM Switch.

In these release notes, the term *Switch* refers only to the switches listed in the "Device and Agent Support" section.

Device and Agent Support

The ATM Module has been verified and approved for use in the following Switch products:

- IBM 8271 Nways Ethernet LAN Switch Model 524
- IBM 8271 Nways Ethernet LAN Switch Model 612
- IBM 8271 Nways Ethernet LAN Switch Model 624
- IBM 8271 Nways Ethernet LAN Switch Model 712

Important Installation Information

This section contains important information relating to installing the ATM Module. Read the whole of this section before installing the ATM Module.

Installing the ATM Module

When installing the ATM Module it is important that it is pushed firmly into place and the thumb screws fully tightened to ensure a good connection between the ATM Module and the Switch.

The ATM Module and Backbone port

If you install the ATM Module into a Switch that does not already have a backbone port, the ATM Module automatically becomes the backbone port when the Switch is powered-up or initialized.

If you install the ATM Module into a Switch that already has a backbone port, the backbone port remains unchanged.

Unsupported Features

The ATM Module **does not support**:

- The *Spanning Tree Protocol (STP)*.

- *Permanent Virtual Circuit (PVC)* and *OAM* functionality.

Redundant Power System (RPS)

If a Redundant Power System (RPS) is required, you must use the Advanced RPS with 100 Watt Modules.

The ATM Module and Resilient Links

A link is considered to have failed if:

- The fiber cable is broken or removed.

- The physical layer of the ATM Module or adjacent device fails.

Known Issues

This section describes the known issues and limitations of the ATM Module software. This section also provides tips and hints to help you integrate the ATM Module within specific network configurations that are not mentioned in the User's Guide.

Management and Ethernet Frame Types

IBM 8271 Nways Ethernet LAN Switch Models 524, 612, 624, and 712 switch all Ethernet frame types. However, it can only be managed by ETHERNET II frame types. This includes SNMP and TCP/IP traffic addressed to the switch.

ATM Module Software

1 If you connect a faulty cable to the ATM Module or power-off the adjacent ATM Switch, reconnecting the cable or powering-up the ATM Switch may cause:

- The Switch to reset, adding 40 seconds to the time taken to re-establish connections.

- The ATM Physical Layer Statistics screen to show excessive Coding Violations for the ATM port. The ATM Module will still bring up the LECs, despite these Coding Violations.

If you have a problem establishing a connection over ATM, check for Coding Violations and faulty cabling.

2 Static entries in the ARP Table occupy space in the *Persistent Data Store (PDS)*. To clear the PDS of all static entries, you must initialize the Switch. This clears **all** user configuration data (except the IP address) and returns the Switch to factory default settings.

3 Some statistics values may be incorrect under certain circumstances:

- Store and Forward frames are counted as cut-through.

- The local screens may sometimes display incorrect (very large) values, for example, a port counter with a value of 4294967294 instead of zero.

4 SNMP MIB objects (counters IsMonWg and IsMon-Port) give incorrect values for packets of less than 64 bytes (plus CRC).

5 If a user is in the ARP Table local screen and the inactivity timer expires, the user is returned to the ARP Table for VLAN 1, regardless of which VLAN the user was viewing before the time-out.

6 The local screens appear to allow more than one LEC to join an ELAN. In fact, only one LEC is successful in joining the ELAN; any other LECs assigned to the ELAN will fail to join and will retry continually.

7 The following MIB objects are not read by the ATM Module:

atmInterfaceMyNeighborIfName.125
atmInterfaceMyNeighborIpAddress.125

8 The ATM Port Statistics screen displays percentage values greater than 100% when the optical line is attenuated more than the specified limit.

Network Configuration Issues

1 Many VLANs connected to a single central ATM Switch
If a large number of VLANs are connected to a single central ATM Switch, the time taken to set up connections can be reduced if the *Well known address* of the LECS is used instead of the one obtained automatically by ILMI. To make the ATM Module use the *Well known address:*

a Select the required VLAN using the ATM LEC Setup screen (described on page 8-4 of the ATM Module User's Guide).

b The ATM LEC Setup screen allows you to select whether the ATM address of the LES is to be entered manually or obtained automatically from the LECS. Ensure that the field is set to *manual.*

c The LES Address field is then displayed and you must change only the first two characters of the address to 02 (zero two).

d Select APPLY and wait for the confirmation message.

e Set the LECS/Manual field to *LECS* and select APPLY.

f Repeat this procedure for each of the VLANs.

2 Optimizing the connection time-out
If a large number of connections are retained for longer than necessary, the ATM Module may appear to run out of connections. Use a MIB Browser to reduce the time-out period (the default is 1200 seconds) to more accurately reflect connection times (for example, 300 seconds). Find the lecConfigTable and change the lecVccTimeoutPeriod.

3 LAN Emulation ARP support
The ATM Module does not support manual creation of permanent LAN Emulation ARP Table entries. If you wish to set up a connection through a proxy LEC, to a device that does not advertise its presence on the network (for example, it does not produce "hello" packets), make sure its MAC address is entered as a permanent address in its local Switch database. Refer to the User's Guide that accompanies your Switch for details of how to make addresses permanent.

4 ATM Switch does not support N-ARP

If an ATM Switch does not support N-ARP (negative or reverse ARP) and an end-station is moved, it may take approximately 5 minutes for the new position of the end-station to be learned. Note that the time-out of the Switch database also has an impact on the length of time taken to learn the new position of an end-station.

In this release the ATM Module does not generate N-ARP messages.

5 Moving end-stations while they are still active

If an end-station is moved to another Switch while it is still communicating using Ping, NFS or a similar protocol, the ATM Module through which it is communicating may not register the move.

You should disconnect the end-station (or discontinue communication) for at least 5 minutes to allow the ATM Module's LE_ARP table to age-out the original end-station entry.

Note that the time-out of the Switch database also has an impact on the length of time taken to learn the new position of an end-station.

6 Using a Telco ATM Switch (multiplexer de-multiplexer)

If you are communicating via a Telco ATM Switch (multiplexer/de-multiplexer), you will probably need to change the VPI value for the ILMI VCC. For example, if two ATM devices use a Telco ATM Switch to communicate over a WAN and the WAN service provider assigns a VPI of 1 to the connection, the ILMI VCC at both ends of the connection must be set to 1:16. See Figure 1.
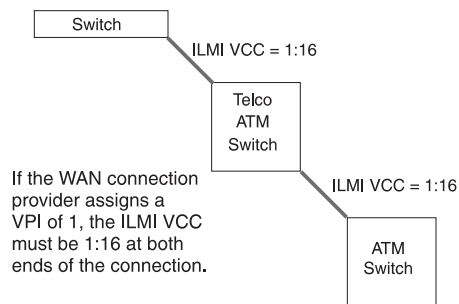

Figure 1   Using a Telco ATM Switch

Changing the ILMI VCC on the ATM Module is described on page 8-2 of the ATM Module User's Guide. To change the ILMI VCC on the ATM Switch refer to the User's Guide that accompanies the ATM Switch. The VCI value should not be changed and must be 16.

7 Adjacent ATM Switch is from Bay Networks
If the adjacent ATM Switch is from Bay Networks, you may need to manually configure LES addresses, as described on page 8-4 of the ATM Module User's Guide.

8 Adjacent ATM Switch is from Fore
Before connecting an IBM 8271 Nways Ethernet LAN Switch (when fitted an ATM Module) to a Fore ATM Switch, you may need to:

■ Manually configure ELAN names on the ATM Module to match ELAN names used by the Fore ATM Switch.

■ Ensure that unused VLANs are not connected to an ELAN.

See page 8-4 of the ATM Module User's Guide for details.

If you require technical support, please refer to Appendix E of the ATM Module User's Guide.