IBM 8265

NWAYS Multiprotocol Switching Hub

This release note applies for both IISP and PNNI for ATM control point version 3.3.5

TABLE OF CONTENT

1 Fixes

All problems in the following list have been fixed in v3.3.5 operational code level.

- SAAL Problems when 8274 are connected to 8265 (with UNI links)

- 8265 reset with 8274 configured in PNNI : 8265 reset when 8274 ports are configured in PNNI (8265 and 8274 in the same cluster)

- 8265 rejected calls with 8271 model 712 when calls are crossing PNNI links

- DS3 daughter card Management problem : only one port seen by Network Management station

- PNNI link down in case multitple parallel links used between two 8265s

- ILMI does not answer anymore "NOSUCHNAME" to an SNMP GET ATM address table

- MIB error correction

2 New 8265 LES / BUS Function

The 8265 LES / BUS LAN Emulation services is ATM Forum compliant with LANE
Version 1.0.
It is supporting :

* two internal lecs
* one integrated LES which can support at most 128 clients
* two ELANs can be defined (1 TR & 1 Eth or 2 TR or 2 Eth)
* there is no integrated LECS

2 .1 CONFIGURING LAN EMULATION PARAMETERS

CARRY OUT THE PROCEDURES IN THIS CHAPTER ONLY IF YOU WANT TO USE 'LAN
EMULATION OVER ATM' FUNCTIONS ON THE 8265 A-CPSW.

2 .1 .1 PROCEDURE :

❶ If you want to implement LAN emulation, configure the LAN Emulation Server and
Broadcast Unknown Server (LES/BUS) parameters, as described in "SETTING UP
LAN EMULATION SERVERS" on point 2.1.3, using the command:

```
SET LAN_EMUL SERVER N START
```

❷ If you want to start a LAN Emulation Client, for example for TFTP functions,
configure the LEC parameters, as described in "SETTING UP A LAN EMULATION
CLIENT" on point 2.1.7, using the command:

```
SET DEVICE LAN_EMULATION CLIENT
```

❸ If you want an **external** LAN Emulation Configuration Server (LECS) support, configure the LECS ATM address or fixed PVC, depending on the configuration requirements of the LECS and external LECs (workstations, bridges, and so on).

To configure the LECS ATM address, as described in "SETTING THE LECS ATM ADDRESS" on point 2.1.8/2.1.9/2.1.11, use the commands:

```
SET LAN_EMUL CONFIGURATION SERVER

SET PVC
```

2 .1 .2 SETTING UP LAN EMULATION SERVERS

You can define either one or two separate LAN Emulation Servers (LESs).

When you start a LES, its associated BUS is automatically started.

The sections below describe how to:

☑ Start a LES
☑ Display the status and current parameters for both LESs
☑ Stop a LES.
☑ Display the LECs connected to the LES

2 .1 .3 STARTING A LES

● TOKEN RING - The following sample command includes parameters to start a
Token Ring LES :

```
8265>set lan_emul server 1 start tr 4 4544
  Enter Emulated ELAN name: LAN1tr
  Starting server.
8265>
```

● ETHERNET - The following sample command includes parameters to start an
Ethernet LES :

```
8265>set lan_emul server 1 start eth  124 1516
  Enter Emulated ELAN name: LAN1eth
  Starting server.
8265>
```

NOTE:

① The (optional) ELAN name is case-sensitive.

② Only the Maximum Frame Size and LAN Name parameters have default values. All
other parameters must be entered when starting a LES. Be carefull, for TR, default
frame size value is 1516, it can be modified manually to 4544 or others frame
format (9234 or 18190).
.

2 .1 .4 DISPLAY STATUS OF THE LES

Use the SHOW LAN_EMUL SERVERS command to display the current status and
parameters defined for both LESs:

```
8265> show lan emul servers
                    LAN Emulation Server 1

Status : Running.
LAN type : Ethernet.
Actual ELAN name : "LAN1eth".
Desired ELAN name : "LAN1eth".
Actual max frame size: 1516.
Desired max frame size: 1516.
ATM address : 39.99.99.99.99.99.99.0.99.99.01.50.50.50.50.50.50.50.02
LEC Id Range : 1 to 124
Current number of operational Clients : 3




                    LAN Emulation Server 2
Status : Not started.
LAN type : Token Ring.
Actual ELAN name : "LAN2tr".
Desired ELAN name : "LAN2tr".
Actual max frame size : 4544.
Desired max frame size: 4544.
ATM address : 39.99.99.99.99.99.99.0.99.99.01.50.50.50.50.50.50.50.03
LEC Id Range : 1 to 4
Current number of operational Clients : 0
8265>
```

2 .1 .5 STOPPING A LES

To stop the LES , you must issue the following command :

```
8265> set lan emul server 1 stop
```

Note :

Stopping a LES also stops its associated BUS.

Depending on the number of LECs that are connected to the LES, there may be a delay from the time the command is issued and the time the LES is completely stopped. For this reason, you should verify that the LES has stopped using the SHOW LAN EMUL SERVERS command before trying to start the LES again.

2 .1 .6 DISPLAYING THE LECs CONNECTED TO THE LES

By specifying the LES "id" in the SHOW LAN_EMUL SERVERS command, you can view all the LECs that are connected to that LES :

```
8265> show lan emul servers 1
LAN Emulation Server 1
Status : Running.
LAN type : Ethernet.
Actual ELAN name : "LAN1eth".
Desired ELAN name : "LAN1eth".
Actual max frame size: 1516.
Desired max frame size: 1516.
ATM address : 39.99.99.99.99.99.99.0.99.99.01.50.50.50.50.50.50.50.50.02
LEC Id range : 1 to 124.
Current number of operational Clients : 3
Local : 39.99.99.99.99.99.99.0.99.99.01.50
50.50.50.50.50.50.01 (port 0.0) OPERATIONAL Non Proxy
10.11.11.00.29.35.00 (port 1.1) OPERATIONAL Non Proxy
Remote : 39.99.99.99.99.99.99.0.99.99.01.51
51.44.32.51.44.32.00 (port 1.13) OPERATIONAL Proxy
8265>
```

2 .1 .7 SETTING UP A LAN EMULATION CLIENT

To configure the LEC, use the SET DEVICE LAN_EMULATION_CLIENT with the following parameters:

- ⇨ LAN type
- ⇨ IP address
- ⇨ Subnetwork Mask
- ⇨ LES ATM address, LECS ATM address or nothing
- ⇨ Individual MAC address

The A-CPSW follows the ATM Forum in order to find the LES ATM address, if no LES or LECS ATM address have been set, then the A-CPSW will search for the LECS ATM address , first using ILMI, then if it does not work the Well Known Address (WKA). In this case , you must not forget to define a WKA active in the Well Known Address table. If a LES ATM address has been defined then the LECS ATM address will never be used.

THE FOLLOWING CHOICES ARE OFFERED :

❶ LES ATM ADDRESS DEFINITION : if you want to define the LES ATM address for a LEC , you must issue the following command :

```
SET DEVICE LAN_EMULATION_CLIENT (TR/ETH) NO_LECS_WITH_LES les_atm_address
```

❷ LECS ATM ADDRESS DEFINITION : If you want to define the LECS ATM address for a LEC , you must issue the following command :

```
SET DEVICE LAN_EMULATION_CLIENT (TR/ETH) NO_LES_WITH_LECS lecs_atm_address
```

❸ NO SPECIFIC LES OR LECS DEFINITION :
The default value for the NO_LECS_WITH_LES or NO_LES_WITH_LECS keywords is
NONE. For example,

```
SET DEVICE LAN_EMULATION_CLIENT(TR/ETH)NO_LES_WITH_LECS
lecs_atm_address
```

```
SET DEVICE LAN_EMULATION_CLIENT (TR/ETH) NO_LES_WITH_LECS NONE
```

NOTE:

① In the case of an internal LES you should start the LES before you configure the LEC, in order to be able to get its ATM address (via SHOW LAN_EMUL SERVERS).

② The maximum frame size and emulated LAN name are provided by the associated LES.

③ The SET DEVICE LAN EMULATION_CLIENT command automatically starts the LEC.

④ No command to stop the LEC is available.

CHANGING THE MAC ADDRESS WILL FORCE THE A-CPSW TO RESET, AFTER CONFIRMATION.

2 .1 .8 SETTING THE LECs ATM ADDRESS

Some LAN Emulation Clients (LECs) determine the ATM address of their associated LES from the LAN Emulation Configuration Server (LECS). The A-CPSW supports these LECs with three separate methods for establishing a connection to the LECS:

⇨ ILMI MIB
⇨ LECS Well Known Address
⇨ Fixed PVC (0.17)

2 .1 .9 ILMI MIB

The LEC can get the unicast ATM address by doing a GETNEXT on the variable atmSrvcRegATMAddress in the ILMI MIB.

For LECs that use this method of addressing, you must define the LECS ATM address in each ATM switch that deals with these LECs. You define the LECS ATM address with the SET LAN EMUL CONFIGURATION SERVER command.

```
8265> set lan_emul configuration_server active wka
39.99.99.99.99.99.99.00.00.99.99.01.84.0C.11.80.95.4F.13.00
```

2 .1 .10 LECS WELL KNOWN ADDRESS

The LEC can directly call the LECS Well Known Address, which is

47.00.79.00.00.00.00.00.00.00.00.00.00.A0.3E.00.00.01.00

For LECs that use this method of addressing, you must define the LECS unicast address to be substituted for the Well Known Address in each ATM switch on the Call-Setup path, using the same SET LAN_EMUL CONFIGURATION command as for ILMI MIB method.

NOTE:

❶ You can define several ATM addresses for the LECS, but ONLY ONE can be enabled at a time (using the command SET LAN_EMUL CONFIGURATION_SERVER ACTIVE WKA).

❷ In order to use this method, the LECS must be able to accept calls to the WKA. If the LECS does not support calls to the WKA, you must use another addressing method.

2 .1 .11 FIXED PVC (0,17)

8265>set PVC 1.2 1 2.3 5 channel_point_to_point 0.17 0.33 best_effort

If the LEC requires a connection via fixed PVC, you must use the command SET PVC to define a PVC for virtual channel connection on the LEC side with vpi.vci equal to 0.17. When defining a PVC for virtual channel connection (VCC), the range of allowed VCI values includes the value 17.

Define a PVC on the LEC side with vpi.vci equal to 0.17 going to the LECS side, as shown here :

The A_CPSW internal LEC does not support the fixed PVC (0,17)

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2 .1 .12 CHECKING THE LECS CONFIGURATION

To display the Configuration of the LECS address, use the command :

8265> show lan_emul configuration_server

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3 Known Problems Currently being addressed

No problem at writing time

4 IMPORTANT INFORMATION

4 .1 Minimum Parts Needed for Operation

Mandatory :
- Hub chassis with ATM backplane   (PN 13J8690)
- Power Supplies (1 to 4) AC 415 W (PN 13J8706)
                              or DC 48 W   (PN 02L2438)
- Power Cord see country dependent list in Sales Manual
- One Controller Module (PN 13J8708)
- One Control PointSwitch Module (PN 13J8704)
- One PCMCIA card with IISP Code
                  or PNNI Code

Note : The PNNI code needs CPSW memory upgrade to 32MB, this is achieved by the addition of an extra 16MB SIMM card FC 6516, PN 13J8698.

Installation of the SIMM memory on CPSW module :
On the top right area of the CPSW module (after the PCMCIA card) there are two SIMM locations, one of them should already be installed (DRAM 1), the extra 16MB SIMM has to be inserted in the free connector (DRAM 2) with the same layout as the first one.
When mechanical installation is completed, all modules seated in place and powered up, issue the *"show device"* command to display the sensed memory size : it is displayed with the code type (IISP or PNNI) at the end of the text.

Recommended :
- One Code Download kit (PN   02L2437)

Note 1 : The Hub chassis includes: 3 fan units, 1 cable management tray, 14 blank single-slot filler plates, 4 blank power supply bay filler plates.

Note 2 : Accessories that come with the 8265 chassis :
          . One rubber feet kit, for use when mounting 8265 on a table
          . One DCE cable and interposer to connect a local console
           (RS-232 DTE/DCE cable, null modem interposer, gender changer interposer)
          . One rack mount kit
          . One Safety Handbook

8260 Features used in 8265 :

- The media modules must be at the appropriate FPGA level to be used in the 8265 (refer to the Warning Notice included with the PCMCIA card) .
- The 8260 Controller Module (PN 58G5800) must have a microcode level of **1.14** or higher to operate in the 8265.
- The Controller Module must be upgraded before being plugged in the 8265 (by using a 8260 Hub).

If you do not upgrade the Controller Module, the 8265 will not start.

4 .2 Caution

While the boot code is being updated from a "Release Vehicle" PCMCIA card, "*UPDB*" is displayed on the CPSW module LCD during the code download.
Make sure that you do not reset or power off the 8265 until the operation is completed and the machine resets itself, otherwise this will result in permanent non-recoverable damage to the CPSW boot memory and the machine will no longer be usable.

4 .3 PVC

The maximum number of supported PVC's is now 512, instead of 100 as stated in the User's Guide.

4 .4 VPC

The maximum number of supported VPC's is now 512, instead of 64 as stated in the User's Guide.

4 .5 8260 Modules

8260 supported modules can be used in the 8265 ATM Switch in slots number 1, 3, 5 or 7 only, and retain the same performance as when used in an 8260.

A decription of the supported modules and their prerequite levels for use in 8265 can be found in the Warning Notice included with the PCMCIA card.

4 .6 PNNI/IISP Ports on 8260 Modules

The number of ports that can be enabled on 8260 modules is restricted. The sum total bandwidth per module cannot exceed 212 Mbps. For example:

- On a 12-port 25 Mbps module, up to EIGHT ports can be enabled (200 Mbps bandwidth).
- On a 4-port 100 Mbps module, only TWO of the ports can be enabled (200 Mbps bandwidth).
- On a 2- or 3-port 155 Mbps module, only ONE port can be enabled (155 Mbps bandwidth).

5 MIB 2.3

If you manage your 8265 using network management software, update your MIB to level 2.3 by downloading the corresponding code from Internet web page:

http://www.networking.ibm.com/8265/8265fix.html

Following are the MIB Changes in V2.3 (compared to 8260 v2.1):

- New agent type and chassis type for 8265

- Support of the microcode upgrade for the controller module

- Support of the 4-port 155 Mbps modules

- Support of ILMI 4.0 features

- Enhancements in PNNI management : PNNI spanning trees

- Connection monitoring and statistics

- System monitoring

- Date format extensions to support year 2000.

- Support of 1-port 622 Mbps modules

- Port snooping

- Resource Allocation

- GSMP .

6 ILMI 4.0

Support of ATM Forum Specification ILMI 4.0, including the two major enhancements:

- *   Automatic configuration discovery

- *   Secure link procedures

7 UNI 4.0

In order to prevent interoperability problems with other ATM devices, the **default** signalling version is 3.1 and not 4.0.

If the user needs a signalling 4.0, it needs to be explicitly configured.

8 FPGA 1D13

A new level of FPGA code has been released to correct the following problems due to internal failure
of the module:

- **CPSW erratic Global Reset caused by:**

    - Double bus fault
    - Poll or wrap cell not received

- **CPSW frozen**

- **Following messages reported in the error log:**

    - VPC not found for ifindex
    - ILMI/NIX message has been received....

- **Erratic drop of PNNI links due to CPSW table pollution resulting from the internal failure.**

9 New functions

9 .1 Integrated Web Server

9 .1 .1 Features

- Password protection (system Administrator password).
- Graphical view of the IBM 8265 chassis, ATM modules, and ATM interfaces, with easy navigation.
- TELNET link to the Control Point.
- Direct navigation to Integrated Web Servers on attached devices.
- Basic Configuration Functions (isolate and connect modules, enable and disable ATM interfaces).
- Debugging (set up traces, display error log, display connection table).
- Basic SHOW functions.

9 .1 .2 Web Server Access

In order to access the Integrated Web Server, the Control Point must be configured as described in "TELNET Sessions Via a Remote Switch or Workstation", in Chapter 2 of the 8265 User's Guide.

9 .1 .3 Operational Environments

The Web Server is optimized for the following environments :
- 16 to 256 colors
- A Web browser that supports :
- Tables
- Timed page refresh
- Most of the latest-level Web browsers (HTML 3.0 and higher) support the above-listed features.

9 .1 .4 Configuring your Web Browser

In order to ensure that all necessary information is correctly displayed, perform the following steps before accessing the Web Server.
IMPORTANT : Set the Cache and Documentation Verification (if applicable) in your Web browser to the following values :
- Disk Cache : zero (0) kilobyte
- Memory Cache : zero (0) kilobyte

- Document Verification : Every time

The above listed values will ensure that all displays are current.
You can usually find the cache configuration panels for your Web browser in the Option
or Preferences pulldown menu. They may also be found under the subheading of
Network Preferences.

9 .1 .5 Using a Web Browser to Access the ATM Switch

Simply provide your Web browser with the TCPIP address of your Control Point.
Enter : http://*ip_address*
where *ip_address* is the IP address or the host name (where applicable) of the Control
Point.
Note : Default port 80 is used by the server.

You are prompted to enter a User Name and Password.
The User Name is always ADMIN.
The Password is the current Administrator password defined with the *"SET DEVICE
PASSWORD"* command

9 .2 Port Snooping

Port snooping allows you to re-copy traffic received on a given port *(source port)* to a probe
port *(target port)*.
A probe port is a port that has been configured to receive traffic from a source port.When a
port is configured for probing on an ATM module, **no other port** on this module can be used,
and all the ports **must be first disabled**. If the latter condition is not fullfilled an error
message will be issued : *"TARGET BLADE MISMATCH"*.

9 .3 VPI Offset

The VPI offset function is a way to use a VPI value greater than the maximumVPI value of
the normal range.
For example, in the VPI.VCI 6.8 configuration, the maximum VPI authorized value is 63, and
a VPI value of 64 would be rejected.
Using VPI offset we can use a VPI value of 64 by specifying a VPI offset equal to 64. With
this setting, the VPI can be in the range 64 to 127. The SVCs will always be allocated using
the smallest value of the VPI range, which is 64 in this example (VPI.VCI 64.32, 64.33 ...).
The sum of the maximum VPI value of the range and the VPI offset should not exceed 255.
For example, in the VPI.VCI 6.8 configuration, the VPI offset value should not be greater
than 192.
This function is only supported for VOID ports.

A VPC cannot be created with its VPI outside this range.

9 .4 Performance Monitoring for WAN Blades

The Performance Monitoring function monitors each WAN blade for defects and anomalies. These defects and anomalies are used in the generation of the performance monitoring parameters. The parameters being monitored can be displayed on the terminal dialog. Following are the hardware and software requirements to support this function:

1) Hardware requirements:
Minimum revision number (printed on the circuit board of the LIMO).

- For E1 I/O cards: rev 9004
- For T1 I/O cards: rev 9004
- For E3 I/O cards: rev 9007
- For DS3 I/O cards: rev 9007
- For OC3 I/O cards: rev 9003
- For STM1 I/O cards: rev 9003

2) Software Requirements:
Install, using the *'DOWNLOAD INBAND'* command, the following code in the LIMO card :

- For E1 I/O cards: v2.6 (e1_026.dwl)
- For T1 I/O cards: v2.6 (e1_026.dwl)
- For E3 I/O cards: v5.1 (e3_052.dwl)
- For DS3 I/O cards: v5.1 (t3_051.dwl)
- For OC3 I/O cards: v4.1 (o3_041.dwl)
- For STM1 I/O cards: v4.1 (s1_041.dwl)

These code updates can be obtained over the Internet as indicated in the chapter "Keeping your 8265 Up To Date" at the end of this document.

Caution : **A**ll *.dwl files are in ASCII format and should be downloaded in text mode (ascii).

10 NETWORK CONFIGURATION ADVICE

Setting reachable addresses with an IISP port:

- If you define an IISP port, check carefully that no VPI is defined in your reachable address.
- If you define a VOID or PUBLIC UNI port with a VPC LINK of type IISP, check carefully that the VPI of VPC link is defined in your reachable address.

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11 DOCUMENTATION UPDATE

11 .1 Viewing the 8265 documentation

The documents supplied on the 8265 Documentation CD are in Adobe Acrobat portable document format (PDF), and can be viewed using Adobe Acrobat Reader version 3.0 or higher. If you do not already have this program installed on your computer, you can install it from this CD. Versions for OS/2 and Microsoft Windows (16-bit and 32-bit) systems are provided.

8265 documentation is also available via the Internet at:
http://www.networking.ibm.com/did/8265bks.html

11 .2 Default passwords for CPSW module

The factory supplied passwords are:
- For Administrator mode, 8265
- For User mode, a null string.

11 .3 CPSW module Ethernet MAC address

A burned-in Ethernet MAC address is provided with each 8265 ATM backplane. This address should be noted, in case of backplane replacement. The address can be displayed using the SHOW INVENTORY VERBOSE command.

11 .4 SHOW MODULE x VERBOSE

If, after issuing the command "SHOW MODULE x VERBOSE", the module status is "hardware not okay" with "permanent failure", verify the 8265 power budget before exchanging the module (using the command "SHOW POWER BUDGET").
For example, if you plug a class 10 module in your 8265 and if you have a power budget deficit, then a module with a lower class setting (such as 1) may be shown as "hardware not okay" and "permanent failure".

11 .5 GSMP

THE GSMP (Generic Switch Management Protocol) code must only be used in conjunction with an MSS (module or standalone) software level that will be announced at a later date.

11 .6 Show PNNI Crankback

You can display whether or not the **crankback** function is enabled by entering the *"SHOW PNNI CRANKBACK"* command.

11 .7 622Mbps port configuration

Unlike what was written in the Media Module Référence Guide (page 31), stating that the 622 Mbps module can be configured only in "AUTO VOID / PUBLIC_UNI", this module can follow exactly the same schemes as the 155Mbps Modules, i.e. any of the following configuration:

  UNI / IISP / PNNI / AUTO / VOID / PUBLIC_UNI

11 .8 SET PVC <slot.port> <pvcid> ACTIVATE

This command allows to restart an already defined PVC.
As a side effect, the fact to restart the PVC will setup the retry sequence in case of failure (one retry every 15 seconds, for 5 minutes).
The syntax is :
*"SET PVC **<slot.port> <pvcid>** ACTIVATE"*

12 GENERAL INFORMATION

12 .1 Networking Rules

This section describes 8265 module performance and lists the rules to follow when building and validating your network.

12 .2 ATM Peer group intraconnection (PNNI)

An ATM Peer Group is a group of ATM hubs or switches interconnected by Private Network-to-Network Interfaces (PNNI). The PNNI protocol supports networking functions such as routing, node failure and recovery, backup and topology management.

 BANDWIDTH RECOMMENDATIONS: When you configure PNNI ports on 8260 modules (in slots 1, 3, 5, or 7) in the 8265:

The total sum of bandwidth of the ports cannot exceed 212 Mbps, for example :
- If you have a 2- or 3-port 155 Mbps module, you can only enable one of the ports (155 Mbps of bandwidth)
- If you have a 4-port 100 Mbps module, you can only enable two of the ports (200 Mbps of bandwidth)
- If you have a 12-port 25 Mbps module, you can only enable 8 of the ports (200 Mbps of bandwidth).

NUMBER OF SWITCHES IN THE SAME PEER GROUP:
Depending on the network topology and complexity, the peer-group can have up to 100 nodes (assuming there are up to 200 foreign addresses and 500 links in the peer group).

NETWORK RECOMMENDATION FOR A LAN-EMULATION SYSTEM:
- We strongly recommend limiting the number of nodes to 50.
- It is recommended to separate the 8265 Network Management functions (internal LECs) from user workstations.

MAX NUMBER OF PHYSICAL LINKS AND/OR PNNI VPCs PER 8265: 32

12 .3 ATM Peer Group Interconnection (IISP)

Interim Inter Switch Signalling (IISP) defines the interface between two 8265s
belonging to different ATM Peer Groups in the same subnetwork or in different subnetworks.

- IISP links are supported over both physical links and Virtual Path connections
  (VP tunneling).
- Parallel IISP links can be enabled between two clusters.
- The following limitations apply when configuring IISP ports:
  - ❖ PVCs cannot be defined **through** IISP links. It is necessary to define
    a PVC on each individual Peer Group involved in the connection.
  - ❖ The maximum number of reachable addresses that can be defined
    per 8265 is 64.

12 .4 IP over ATM (RFC 1577)

- The CPSW supports an IP client implementation to be managed over ATM
  (SNMP, Telnet, TFTP, Ping). The supported MTU size is 9188 bytes.
- The IP Over ATM client imbedded in the CPSW supports up to 64 concurrent IP
  Over ATM connections.

12 .5 ATM forum compliant LAN emulation client (LEC)

Each 8265 LEC supports up to 30 connections to other LECs.

13 KEEPING YOUR 8265 UP TO DATE

8265 code updates are available on the INTERNET.
We strongly recommend you to regularly go to the IBM 8265 upgrade web page:
http://www.networking.ibm.com/8265/8265fix.html

If you want to be notified automatically when microcode updates are available, we recommend
that you subscribe to our free update notification service on the 8265 registration web page:
http://www.networking.ibm.com/8265/8265reg.html

14 RELEASE HISTORY

14 .1 V3.3.1

- Max VCI does not reset to default value.
- Interoperability problem with adapters (MADGE, 8274, CISCO, ...) which doesn't respect the standards.
- 622 congestion : Modify Init sequence of PMC for 622.
- Status message reception with special cause.
- VP shaping accuracy improvement using 4 rings.

14 .2 V3.3.2

- Final fixes for remaining problems with Madge, 8274, Cisco... adapters
- MTU size : CPSW LAN Emulation MTU size negociation up to 64K frame size.
- Longest matching prefixes routing - Performance improvment in routing, search time significantly reduced.
- New command to restart a failing PVC (...ACTIVATE).
- In case the 827x VPD image is incorrect, the module no longer resets when it is plugged in the 8265.
- T1 links load balancing improvement in case of link redundancy.
- "20" code will be displayed in case of *"CLEAR ALL"* command.
- Web security enforcement.
- LECS ATM addresses no longer lost after CPSW reset.

14 .3 V3.3.3

- Minor changes to be year 2000 compatible while displaying date.
- After a 8260 reset, all LECS addresses are restored.
- In some configuration we could have a LEC turned down due to the fact that the LECS is not yet ready. Now if this still occurs we record a message, and we retry the LEC connection
- This code version allows the Boot downlaod toward new generation of AMD EEproms installed on new CPSW modules (Fru PN 25L4651 and 25L4652).

14 .4 V3.3.4

- **ILMI cold start**

When using a device connected to a 8265 with ILMI 4.0, the link went down due to a mishandling of the SysUpTime variable used by SNMP. This sends a trap that restart the connection.

- **Year 2000**

Minor changes to correctly display date for year 2000 and beyond.

- **LEC**

No LEC retry on cause 04 (duplicate MAC address problem). This could occur when we unplug and replug a connection before the MSS has cleared its own MAC table .

- **CRC errors**

We could have some CRC errors due to bad handling of management cells in CAD store memory.

- **622 blade**

622 Mbytes blade was resetting when under wrap test

- **Point to Multipoint**

Point to multipoint was blocked due to poor control block pointers handling.

- **Web page error**

When we were in single module page, clicking on the save button produced an error page, although the save was successful.

- **PNNI protocol**

When in use, the 10th RAIG was incorrectly handled.

- **Duplicate ATM address**

When we were in "duplicate ATM address allowed" mode the same address could be registered on the same port, leading to a table overflow (now the address is stored only if the address is on a different port)..

FOR   IISP   Only
- **Point to multipoint**

We modified point to multipoint path selection to use shortest path instead of widest path, whichever path algorithm is selected.

- **Admin weight**

Admin weight on vpc link agregate was advertised as 0 instead of real value.

APPENDIX - Warranty and Maintenance Service

To obtain warranty or maintenance service for this machine, contact your IBM
representative or call IBM:

In the U.S.A or Canada call: 1-800-IBM-SERV (426-7378)

For other countries: See the following lists

Country	Code	Telephone No (International)	Telephone No (Within country)
Europe Middle-East Africa area:			
Albania	355	42-32025	
Austria	43	-17060	1-1706-3630
Belgium	32	(0)2-225-25-25	
Bulgaria	359	2-9733171 or 2-9712550	
Croatia	3851	1-61245-00	
Czech republic	42	(0) 2-67106-390/155	
Denmark	45	45-96-50-50	80-31-10-10
Finland	358	9-4591	9800-4260
France	33	(0)2-38-55-77-77	0801-631-213
Germany	49	70-31-15-27-20	0180-5253553
Greece	30	(0)1-6881220	1-6801700
Hungary	36	1-185-0288 or 1-372-1131	
Ireland	353	(0)1-6603744	
Israel	972	3-697-8500	177-022-3888
Italy	39	39-600-7666	167-820-094
Macedonia	38	91-374441	
Netherland	31	(0)20-513-5151	
Norway	47	669-980-00	800-100-10
Poland	48	22-8786999	
Portugal	351	1-791-50-00	1-791-51-15
Romania	40	1-330 4555	
Russia	7	(0) 95-2586300 or (0)95-9402000	
Slovakia	421	7-7806274	
Slovenia	386	61-125-5205	
Spain	34	1-387-6611	901-100-000
South Africa	27	11-302-9700	0800-128-128
Sweden	46	8793-1000	020-31-10-10

Europe Middle-East Africa area continued :

Switzerland	41	1-643-66-33	0800-555-454
Turkey	90	(0) 212-2800900	
UK	44	(0) 1705-492949	0990-426-426
Ukraine	380	44-227 0225	
Yugoslavia (Serbia)		11-324 6221	

Asia-Pacific area:

Australia	61	2-9354-4000	1-32-426
Bangladesh	880	2-888868	
China (North)	86	10-6261-6677	
(East)	86	21-63858924	
(South)	86	20-87550203	
Hong Kong	852	2515-4333	
India			
- Bangalore	91	80-5267117	
- Mumbai(Bombay)	91	22-2180578	
- Calcutta	91	33-2426399	
- Delhi	91	11-3327496	
- Chennai(Madras)	91	44-8269280	
Indonesia	61	21-2512955	
Japan	81	(0) 120-03-5555	
Korea	82	822-784-0804/0805	
Malaysia	60	03-7177800	
New-Zealand	64	4-576-5999	0800-733222
Philippines	63	2-8192225	
Singapore	65	840-9911	
Sri Lanka	94	1-540830	
Taiwan	866	2725-9500	
Thailand	66	2-2734069	

For countries that are not in the preceding list, find your Country Contact at the following Web server:

http://www.ibm.com/Assist

Then select your country and click Go...

For information about other services IBM can offer you, connect to the following Web server: **http://www.as.ibm.com**

Important Note:

When calling for service of this machine, you will be required to provide the following informations:

Machine Type : **8265**
Model   : **17S**
Serial Number : **Located on the 8265 chassis label**.

IBM

IBM SmoothStart Services for 8265 ATM Switch

Highlights

Delivers a speedy and effective installation and configuration

Allows easy access to system experts

Provides basic skills instruction for your staff

Keeps your staff focused on business-critical activities

IBM SmoothStart Services

IBM SmoothStart Services are installation services designed to help accelerate the productive use of your IBM solution. Now, you don't have to worry about pulling your valuable in-house resources from their essential daily activities. An IBM services specialist gives you customized service and helps by instructing two of your staff on the basics of each task.

IBM SmoothStart Services for 8265 ATM Switch

With IBM SmoothStart Services for 8265 asynchronous transfer mode (ATM) switch, your services specialist installs and configures two IBM 8265 ATM switches. Our services specialist implements a solution that helps reduce excessive broadcast traffic on your LAN to help develop your network into a valuable corporate asset.

SmoothStart Services for 8265 ATM Switch

Component	IBM will...
Planning	Review and verify an installation plan with your representative

Installation and recommended configuration	Install and configure two IBM 8265 ATM Switches:
	• Configure ATM private network-to-network interface (PNNI), integrated information strategy plan (IISP), and user network interface (UNI) ports; ATM address; ATM network peer group ID; and one of the following ATM clients (if applicable):
	
	  - Classic Internet protocol
	
	  - Token-ring LAN emulation
	
	  - Ethernet LAN emulation
	
	Install one of the following ATM switches:
	• IBM 8260 multiprotocol switching hub
	
	• IBM 8285 workgroup switch
	
	Configure one of the following ATM switches:
	• IBM 8260 multiprotocol switching hub
	
	  - Upgrade 8260 microcode to the minimum level required for this service--version 3.0 or higher with corresponding field programmable gate array (FPGA)
	
	  - Configure ATM PNNI, IISP, and UNI ports; ATM address; ATM network peer group ID; and one of the following ATM clients (if applicable):
	
	    • Classic Internet protocol
	    • Token-ring LAN emulation
	    • Ethernet LAN emulation

Component	IBM will...

Installation and recommended configuration, continued	• IBM 8285 ATM workgroup switch
	
	  - Upgrade 8285 microcode to the minimum level required for this service--version 3.0 or higher with corresponding FPGA
	
	  - Configure ATM PNNI, IISP, and UNI ports; ATM address; ATM network peer group ID; and one of the following ATM clients (if applicable):
	
	    • Classic Internet protocol
	    • Token-ring LAN emulation
	    • Ethernet LAN emulation

Operational verification	Verify an installation plan with your representative
SmoothStart installation record	Give you a SmoothStart installation record that documents the software configuration information
Basic skills instruction	Provide up to two people on your staff with basic skills instruction

Large graphic and video applications create demand for new networking solutions

The Internet, intranets, video, distance learning, and large graphic files are creating the need for large amounts of bandwidth. Network managers must control many different protocols, generating excessive broadcasts.

To answer that need, use our 8265 ATM Switch service to route data packets across different protocols in switched networks.

By controlling data traffic, this service:

• Delivers large amounts of bandwidth on demand

• Allocates computer resources for time-critical application requirements

• Balances data traffic on the network

• Selects the best route between two networks

• Supports data send/receive acknowledgments

This service can offer a significant reduction in both time and costs to promote a competitive advantage for your company.

How it works

Our services specialist installs and configures your new ATM technology. The services specialist:

• Determines and prioritizes networking components and procedures

• Tailors the needed products and software components to your needs

When the service is complete, you receive an installation record that summarizes the accomplishments and recommendations of our services specialist.

Prerequisites

To perform this service, you must have:

• Two IBM 8265 switches

• An 8260 hub or an 8285 switch

For more information...

In the United States contact us at : 1-800-IBM-4YOU (426-4968).

Outside the United States visit our Web site at: http://www.as.ibm.com

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