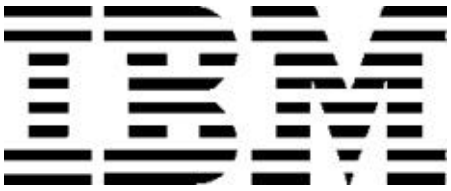
IBM Corporation
IBM 8276-300 Series Users Release Notes
Version 1.0.6
Revision F

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8276-300 Series Users Release Notes Version 1.0.6

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REVISION HISTORY

Release	Revision	Date	Description of Changes
1.0	-	11/1/96	Beta Release
1.0.1	A	11/18/96	Official Controlled Release
1.0.2	B	11/22/96	Production Release
1.0.3	C	1/6/97	Maintenance Release
1.0.4	D	4/22/97	Maintenance Release
1.0.5			Not Released
1.0.6	F	1/6/98	Maintenance Release

1. Introduction

This release note describes the basic feature set supported, known limitations, bugs and known work-around fixes for 8276-300 Series Version 1.0.6 software. Please read this document in its entirety as it contains important operational aspects that may impact your network.

2. Feature Set Supported

Hardware and software features supported with the release 1.0.6 are the following:

Hardware:

- 2 Meg Flash memory
- 1 Meg RAM
- LANCE Ethernet controller
- 36 UTP Ethernet ports
- 2 Fiber optic Ethernet plugin modules
- 4 Ethernet LAN segments
- 1 Serial console port

Software Major Features:

- Support for SNMP MIB II RFC 1213.
- Support for SNMP Repeater MIB RFC 1516.
- Support for IBM private MIB for configuring segments and ports, 8276.MIB.
- Support for IBM private chassis MIB, IBM-CHASSIS.MIB.
- User interface to display and clear port counters, configure segments and ports.
- User interface to display protocol statistics.
- Support in bootrom for FTP and ZMODEM.
- Runtime boot file support for FTP, Telnet and ZMODEM.
- Capability to create and delete static routes.

3. Technical Support Contacts

This section provides contacts for help if you have questions about the IBM RouteSwitch products or if a RouteSwitch product is not working correctly. It also explains how to access the IBM electronic sites to obtain the latest version of microcode and release notes.

1. **Electronic Support**
   This section explains how to access the IBM electronic site to obtain the latest version of microcode, drivers, and software by using the Internet World Wide Web, FTP or the IBM BBS.
   a. **WWW: http://www.networking.ibm.com/**
      This is the IBM Networking home page. From here, you can access product announcements, publications, and other information regarding hardware and software updates, and a technical support information database. The direct path to the support area is:
      http://networking.ibm.com/nes/neshome.html/
   b. **FTP: lansupport.raleigh.ibm.com**
   c. **IBM Bulletin Board System:**
      Using a modem you can access the IBM BBS to obtain the latest versions of software. Set your modem and communications software to 8 data bits, no parity, and 1 stop bit. Dial one of the following numbers:

Unites States:	(919) 517-0001
Toronto:	(905) 316-4255
Toronto:	(416) 956-7877
Vancouver:	(604) 664-6464
Montreal:	(514) 938-3022

2. Voice Support

IBM Network Hardware support: **1-800-772-2227**. Follow the menu prompts for Network Hardware.

4. Upgrade procedure

* Anti Static Warning *

Before handling any components, eliminate any static electricity by wearing a ground strap, or by grounding yourself properly. Static discharge can damage the memory modules and components in your 8276-300 Series.

The following procedure will require reconfiguration of any port segment assignments previously assigned.

Upgrading to version 1.0.6 from versions 1.0.1 or 1.02 requires changing the bootrom flash devices. The following defines the procedure to change the bootrom:

Equipment required:
Small Phillips head screwdriver
Medium flat head screwdriver
Chip extractor
Static discharge protective wrist strap

1. Disconnect power connector form 8276-300 Series.
2. Remove cover:

   a. Remove 2 Phillips head screws from back plate.
   b. Using a flathead screwdriver, gradually pry the cover from the back panel at the grooves in the back of the 8276-300 Series.
   c. Remove the cover by pulling toward the front and lifting up.

3. Swap out flash chips U30 and U31:

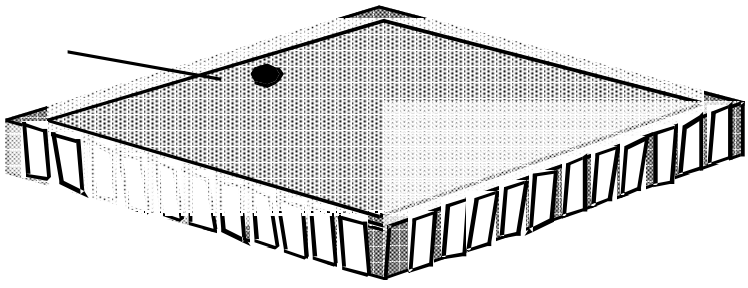
   a. Place wrist strap on and make sure strap is properly grounded.
   b. Locate U30 and U31 and, using extraction tool, remove these chips.
   c. Insert new U30 (P/N 9100) and U31 (P/N 9101) chips in sockets:
   d. Locate the small circular impression, or dot, along one edge of the chip. You must line this dot up with another dot located on the board.

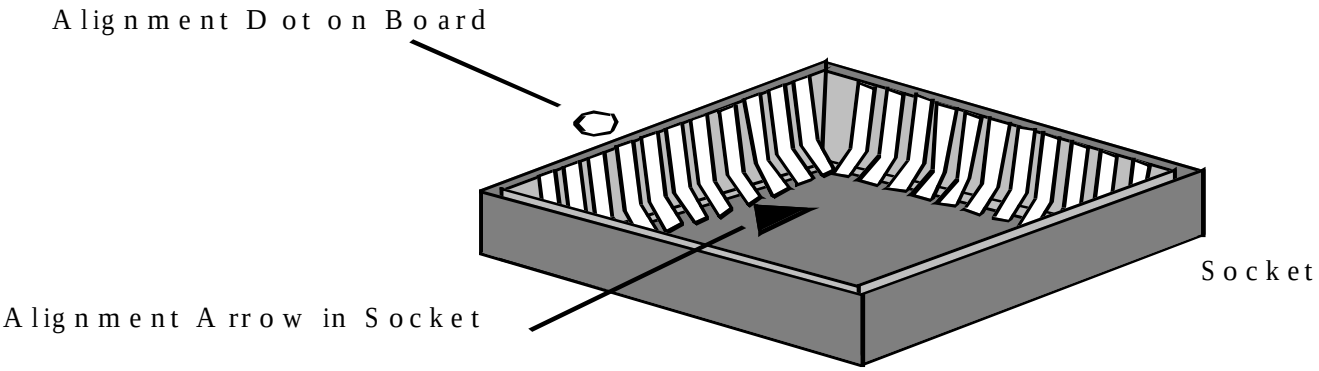
◆ Warning ◆

If you do not follow the instructions for inserting a chip exactly, then you will cause damage to your switching module. If a chip does not face in the correct direction, the board will overheat.

   e. Align the chip by matching the dot on the chip with the dot on the board. You may also note that the memory socket contains a small arrow by which you can also align the chip.

Alignment Dot on Chip





Aligning the Chip in the Socket

f. After the chip is correctly aligned in the socket, gently place both thumbs on opposite sides of the chip and apply even pressure downward until the chip clicks into place. Do not force the chip into the socket or you will damage its connector pins.
g. Ensure chips are properly seated.

4. Replace chassis cover:

   a. Use the tab located in the middle and bottom of the chassis face to guide assembly. Move the chassis cover back slightly to enable sliding it into the back end of the frame.

5. Upgrade boot file image mpm.img using ZMODEM:

   a. Connect the serial port using 9600, N81N.
   b. Reconnect the power connector. Prepare to stop the autoboot and go to the BOOT prompt.
   c. Hit any key to stop the boot process. Disregard the error messages for problems with "config_init()" and "config_rewind()
   d. At the boot prompt type in "R mpm.cfg" This will remove **all files** from flash memory.
   e. The 8276-300 Series will erase the file system and reboot. Prepare to stop the autoboot procedure.
   f. Stop the autoboot procedure.
   g. Enter "c" to change boot parameters.
   h. Type in "zm" after "ffs" to allow ZMODEM operation.
   i. Hit enter to move down to modem parameters and enter "19200, n81c" to change modem speed to 19200.
   j. Hit enter until boot prompt appears.
   k. Enter "S" to save boot parameters. It is important to do this to ensure new boot images are saved to flash
   l. Enter "l" (lower case L) to start download.
   m. Enter "d" to download from disk.
   n. Go to terminal and start downloading mpm.img to 8276-300 Series,
   o. Download the file named oem.res.
   p. When download is complete hit enter to return to boot prompt.
   q. Enter "@" to reload.
   r. Upgrade is complete

6. Upgrade boot file image mpm.img using FTP:

    a. Reconnect the power connector. Prepare to stop the autoboot and go to the BOOT prompt.
    b. Hit any key to stop the boot process. Disregard the error messages for problems with "config_init() and "config_rewind().
    c. At the boot prompt type in "R mpm.cfg" This will remove **all files** from flash memory.
    d. The 8276-300 Series will erase the file system and reboot. Prepare to stop the autoboot procedure.
    e. Stop the autoboot procedure.
    f. Type "c" to change the IP parameters.
    g. Change the IP parameters to the appropriate values for your network.
    h. Enter "S" to save boot parameters. It is important to do this to ensure new boot images are saved to flash
    i. Use the "ftp" command to access the FTP server containing the mpm.img boot file.
    j. Login to the FTP server and set the transfer mode to binary with the "bin" command.
    k. Get the boot file upgrade mpm.img.
    l. Get the file oem.res.
    m. Close the FTP session using the "bye" command.
    n. Load the boot file using the "@" command.
    o. upgrade is complete.

    Note: If you have any problems with these instructions please contact IBM Technical Support.

5. General Instructions and Notes

1. Upgrading the runtime boot file mpm.img from the executing boot file image requires FTP or ZMODEM loading the compressed file mpm.gz. The naming convention was changed in release 1.0.4. The default root name used in the boot file bootline parameter was changed from 'pzport.img' to 'mpm.img' in release 1.0.4. If the bootrom is release 1.0.3, the boot file name must remain pzport.img and the upgrade compressed file must be named pzport.gz.

2. Upgrading the runtime boot file mpm.img from the bootrom, (the "[Boot]" prompt), requires FTP or ZMODEM loading the uncompressed file mpm.img. If the bootrom is version 1.0.3, the name of the boot file must remain pzport.img

3. The bootrom recognizes the commands *L* and *ls* as being the same file-listing directive.

4. The bootrom recognizes the commands *R* and *rm* as being the same file removal directive.

5. The 8276-300 Series does not have a battery backed real-time clock, so the date and time are not saved over a reboot.

6. The SNMP Agent host name is synonymous with the SNMP System Name. Therefore changing either effects the other.

7. Speeds on the console/modem ports greater than 19,200 are not supported.

8. The MIB II traps link down and link up are not supported in this release.

9. After removing or deleting the mpm.cfg configuration file, the 8276-300 Series must be rebooted.

10. If a newer boot file upgrade is required, the file mpm.gz is required if ftp loading from the boot file user interface. After loading this file the user must immediately reboot.

11. Do not load extraneous files on the 8276-300 Series. The available flash file space is reserved for making upgrades. If some information must be kept on the 8276-300 Series, ensure that at least 128K is reserved at all times. In order to upgrade the 8276-300 Series the flash file system must be clear of all extraneous files.

12. If the 8276-300 Series segments are configured from the IBM Nways RouteSwitch SNMP Manager, setting the segment names also saves the segment information. Saving the segment information is also available from the 'seg' command in the user interface. Segment information is also saved before a system or hub reset. The hub reset is performed through setting the 'rptrReset' MIB-II variable identified in the supported repeater MIB RFC-1516.

13. The following are the part numbers for the "new" U30 and U31 flash chips:
    U30 = Part number 9100
    U31 = Part number 9101.

14. When changing the IP configuration using "ipcfg" user is prompted to save and reboot the switch. User must save and reboot the switch when prompted for the new configuration to become effective. Recycling the power instead of warm rebooting the 8276-300 Series prevents the new IP configuration from being saved.

15. When upgrading from version 1.0.3, the compressed boot file mpm.gz must be renamed to pzport.gz before FTP downloading to the 8276-300 Series. The 1.0.3 bootrom will only recognize the compressed file pzport.gz.

6. 8276-300 Series Version 1.0.1 - 1.0.4 Problem Resolution

The 8276-300 Series Version 1.0.1 and 1.0.2 Known Problems that have been fixed in this release:

These changes require changing all four EPROM's:

- Problem powering up a hot 8276-300 Series. (PR 4643)
- Flash compaction causes 8276-300 Series to hang. This problem may occur if several files are downloaded to 8276-300 Series and then removed. It may also occur if the segment information is changed several times for each port. The problem occurs when automatic compaction of the mpm.cfg file takes place. (PR 4418)
- Memory exception error during aggressive SNMP/telnet/ftp/ping processing. (PR 4493)
- 8276-300 Series crashes running ping from a telnet session originating at a remote host. (PR 4641)
- Ping times out during simultaneous ftp download to 8276-300 Series. (PR 4494)
- Unable to SNMP configure uplink ports. Work around was to use user interface for setup. (PR 4636)
- Continuous message "bad input segment" displayed during SNMP queries. (PR 4624)
- Multiple entries of the same segment returned when multiple requests are simultaneously made from IBM Nways RouteSwitch Network Manager. (PR 4790)
- LED status updates not available. (PR 4413)
- Command 'systat' now shows less than 100% CPU utilization.

The 8276-300 Series Version 1.0.3 Known Problems that have been fixed in this release:

- Trap control does not set correct values. (PR 4317)
- Broadcast trap control does not follow newer IBM Nways RouteSwitch convention. (PR 6317)
- Unable to customize software to OEM configuration. (PR 6317)
- Unable to configure custom IP subnet mask. (PR 5612)
- SNMP agent host name limited to 12 characters, not 15 as specified.

The 8276-300 Series Version 1.0.4 Known Problems that have been fixed in this release:

- Year 2000 leap year calculated incorrect. (PR 4317)
- Telnet port should be freed before going down on reboot. (PR 6970, 9097)
- Command 'dt' accepts bad values for date and time. (PR 9171)
- The subnet and broadcast masks used by IP can be incorrectly modified. (PR 9403)
- Unable to communicate with 8276-300 Series when NMS is configured in same subnet as 8276-300 Series. (PR 7953)
- IBM proprietary polling structure not included in 8276-300 Series SNMP agent. (PR 8654)
- Some 8276-300 Series's exhibit a problem losing the UI shell prompts options. (PR 7469)
- 8276-300 Series may hang during continuous two-way ping with large packets. (PR 8910)
- SNMP Chassis MIB lists part numbers as zeros. (PR 9037)
- Setting date/time throws off 'System Uptime' under 'systat' display. (PR 9518)

7. Known Problems

The problems listed here include problems known at the time of the product's release. Any problems not discussed in this section should be brought to the attention of the IBM Technical Support organization as soon as possible. See section 3 for technical support contacts.

Problem Report 1607

fsck in bootstrap always runs at 9600 baud. Running at a baud rate other than 9600, removing a file, and power cycling during the compaction will cause permanent failure.

Work-around: NONE

Problem Report 5306

There is no real time clock on 8276-300 Series, the parameters need to be updated upon every reboot.

Work-around: Update the parameters after every reboot.