Release Notes 93000221E
for
PORTSERVER II Operating System
40001260D
Version 3.0.1
Product Manual P/N 90030500B
Command Reference Guide 92000246A
June 20, 1997

Introduction

These release notes provide information on PortServer II OS version 3.0.1. They include information on the following:

- Incompatibility between older versions of the PortServer II OS and this one, which can affect your configuration
- ROM limitations for those with Pre-Rev K Model PortServer IIs
- Limitation for systems with fewer than 2 Mb of Memory
- Manual errata
- Upgrading flash ROM
- Changes to the OS since it went through beta testing
- Bug fixes in this release. These include both bugs reported in Problem Report Numbers as well as some that were not reported.

Pre-3.0 Incompatibility Notice

This version (3.0.1) of the PortServer II OS is incompatible with versions older than 3.0. Certain parts of the non-volatile storage formats used to store configuration information have been changed. Consequently, if you want to use this version of the OS and preserve your current configuration, you must use the `cpconf` command to save your configuration to a host and then restore it once the new version of the PortServer II OS has been installed.

Pre-Rev K Model ROM Limitations

The addition of frame relay to 3.0 and later versions of the OS causes the size of the boot image to exceed the space available in the PortServer II flash ROM for units built prior to the Rev K models. Consequently, if you want to use a 3.0 or later OS with these older units, you must do one of the following:

- Boot PortServer II via TFTP over the ethernet port.
- Acquire a smaller version of the OS, which does not have frame relay, from the Digi ftp site.

Limitations for Systems with 2 Mb of Memory

Testing has determined that the PortServer II's standard 2 Mb of installed memory is inadequate in the following instances and is likely to require an expansion to at least 4 Mb:

- Full 64 port configurations in which more than 50 asynchronous and/or TCP users are simultaneously using PortServer II. These include users accessing PortServer II via the ethernet connection or any type of connection using the serial ports.

  Note: Exceeding this number of users is unlikely in RealPort environments because each RealPort connection is seen as a single user. This means that while that user may control more than one port, if there is only one host connected to the PortServer II using RealPort, it will use only a little more memory than someone making a telnet connection.

If more than one host is using PortServer II as a RealPort server, each host will have it's own TCP connection, and therefore each is considered a user. It is unlikely that a site will have enough RealPort connections to cause problems.

- Sites with heavy traffic on serial ports. Here the problem is simply throughput. Degradation of performance may indicate that additional memory is called for.

Manual Errata

Page 47 of the PortServer II User's Guide (90030500) incorrectly states that a V.24 cable is supplied with the PortServer II. This cable is not included.

Sync parameters are automatically set when FrameRelay. To ensure proper operation of the Synchronous Port the port must be set to "dev=term" OR "dev=prn".

Upgrading Flash ROM

Should it be necessary to update the PortServer II OS contained in Flash ROM on your PortServer II, the recommended procedure is:

1. Obtain the new version of the software from Digi and place it on your TFTP server.
2. Save your current configuration using `cpconf`. This should not be necessary, but it is advisable to maintain a backup of your current configuration when re-writing a sizable portion of flash.
3. Boot your portserver with the new operating system via TFTP, by using `set config bootfile=`*filename* `tftpboot=yes`, and then rebooting your portserver. See page 45 of the *User's Guide and Reference Manual* for more details. This step ensures that you have a good copy of the new version of the software, and also that you can still boot your PortServer II in the unlikely event that your flash image gets corrupted in the process of writing it.
4. After booting your PortServer via TFTP, load the new version of the software into the flash ROM by using the command `boot load=`*host*`:`*filename*. If all goes well, the PortServer will reply "`The image now in flash memory appears valid.`"
5. Now you can return your PortServer II to booting from its flash ROM image by entering the command `set config tftpboot=no`.

Change from Beta

Miscellaneous routing fixes have been made.

The TFTP timeout algorithm was improved.

The RealPort daemon will survive ICMP messages in a more reliable manner.

In the cases where PPP is started before the identity of the remote is known, the async map starts out a 0x00000000, not 0xFFFFFFFF. The result is we don't have to go through LCP negotiations twice if the user's desired async map is 0x00000000 (most often the case). Also, the software flow control flags on the port are checked, and if set, the flow control characters are used to determine the async map.

PPP changes, mostly to work through problems connecting with Microsoft Windows NT.

Bug Fixes

The bug fixes addressed by this release include, but are by no means limited to:

1. PR #4760 - inability to telnet to the PortServer's own "altip" address. In other words, from the PortServer command line, one could not telnet to an IP address that was one of that PortServers own "altip" addresses.
2. PR #4842 - the PortServer sent garbage values to the radius server, the values sent were to have been an integer value, instead the integer appeared to be the address of that value.
3. PR #4881 - connections from the PortServer to a foreign host were not succeeding because a previous error condition had not cleared that stream. The symptom was a hang while attempting to establish the connection.
4. PR #4909 - telnet from the PortServer to a host which negotiates the TERM_TYPE variable did not consistently reflect the termtype set in "set ports"
5. PR #4926 - this is the same problem described in PR #4909.
6. PR #5051 - the "who" command will now show the host.domain name in the connected from field, if the name is available, if not the IP address will be displayed, as it always has been shown.
7. PR #5095 - the number of incoming TCP connections has been raised from 32 to 65. This will allow a TCP connection to each of the possible 64 serial ports plus one TCP connection to the PortServer command line.
8. PR #5098 - this is the same problem described in PR #4909.
9. PR #5122 - Breaks were not sent out serial ports, neither using the telnet command 'send break" nor pressing the break key. This was a problem exhibited on the expansion modules, port numbers 17 - 64.

Problems found which did not have assigned Problem Report Numbers.

1. Numerous changes affecting the RealPort features in the PortServer. These changes make the notification of status changes more reliable. Mode changes, such as baud rate and flow control, can be made more reliably.
2. Certain variables keeping RealPort sequence numbers were short rather than unsigned short, sequence numbers are full 16 bit values.
3. Error counters were added to the expansion modules.
4. A number of errors were found in TCP and IP code, which under certain combinations of load and activity, would result in the use of a NULL pointer, or the attempt to use previously freed memory.
5. The check for a null return from the "new" operation were being optimized out. The code is now compiled with a switch to disable this "feature".

The problem report number (PR #) is included to enable Digi Tech Support to reference a complete description of the problem, if necessary.