

Release Notes 93000221U
for
PORTSERVER II Operating System
40001260T
Version 3.1.2
Software Manual P/N 92000246B
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Introduction

These release notes provide information on PortServer II OS version 3.1.2. They include information on the following:

Incompatibility between older versions of the PortServer II OS and this one, which can affect your configuration.

- A. Pre-3.0 Incompatibility Notice
- B. Pre-Rev K Model ROM Limitations
- C. Limitations for Systems with 2 Mb of Memory
- D. Upgrading flash ROM.
- E. Enhancements and added feature sets.
- F. Bug fixes in this release. These include both bugs reported in Problem Report numbers.

A. Pre-3.0 Incompatibility Notice

This version (3.1.2) 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 `epconf` command to save your configuration to a host and then restore it once the new version of the PortServer II OS has been installed.

B. 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, this is available from the Digi ftp site.

*NOTE: Versions above and including 3.1.0 will no longer be available in the smaller non-frame version.

C. Limitations for Systems with 2 Mb of Memory

Testing has determined that the PortServer II's previously 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. This includes users accessing the 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 its 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.

D. 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 II with the new operating system via TFTP, by using `set config boothost=hostip bootfile=filename tftpboot=yes`, and then rebooting your PortServer II. See command `set config` in 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 II 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 II 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`.

*NOTE – In some instances parameters from 3.0.13 may not translate properly into 3.1.2. In order to insure that the parameters are correct the user can save their parameters from 3.0.13 by doing a `cpconf` and reloading the parameters back into the PortServer II after 3.1.1 is loaded.

E. Enhancements

- PSII BIOS: release v1.0.7
 1. Upon detection of RTC memory checksum error, BIOS will save data at 0x700-0x7FF areas to the 0x500-0x5FF areas before re-initializing. (To see the dump, use the new OS command "`set config rtdump=bios`").
 2. Changes in the BIOS to improved memory test speed.
 3. Re-initialize defaults of BOOTP and TFTPBOOT to "No" (was previously defaulting to "Smart"). OS to look for re-initialized condition on boot. If found, copy boot config from flash to RTC.
 4. OS to have low priority checksum task to checksum the RTC RAM. If found to be bad, save a copy of RTC in flash, copy boot configuration from flash to RTC, and change Root' prompt to "Call Digi TS". (To see the ram dump, use the new OS command "`set config rtdump=ram`")
 5. Reboot the box when this failure is found, based on the probability of errant code.

Note: To reset the Root prompt use either one of the `rtdump` commands above.

- PSII OS Driver: release v3.1.2
 1. 4984: Console management using the "connect" command with an escape sequence. Define a menu system using "connect" instead of reverse telnet. Then to quit out of the "connect" session, use the "ConnectEsc" sequence:

"ConnectEsc" is defined under "set user". The default `ConnectEsc=off` means no ability for user to escape out of a "connect" session (just like in release v3.1.1). To set "ConnectEsc", use "`set user name=user connectesc=<escape char>`".

Note: the actual sequence to break a "connect" session is the ConnectEsc character plus <Carriage Return>.

2. 4880: Configurable TCP maximum retransmission timeout (rto_max). This feature is used to help recognize a TCP network drop (i.e. RealPort). The default "set config rto_max=240" translates to roughly 10 minutes before a TCP network drop is detected and resets.

Note: In order to recognize the TCP network drop, there must be some activity on the network. (I.e. Keep Alive packets, which are only supported on RealPort connections.)

3. 5160: Cosmetic changes to the Port Server II help menus. In order to reflect a consistent naming convention throughout the PortServer II help screens, the following changes were made to remove "range=range" in the help messages and replaced them with "range=index#":

```
Set auth ? range=(index#)-(index#)
Set host ? range=(index#)-(index#)
Set menu ? range=(index#)-(index#)
Set route ? range=(index#)-(index#)
Set device ? range=(index#)-(index#)
Set script ? range=(index#)-(index#)
Set filter ? range=(index#)-(index#)
Set service ? range=(index#)-(index#)
Set chat ? range=(index#)-(index#)
Set users ? Range=(index#)-(index#)
```

4. cpconf - Cosmetic changes for cpconf printout to include the OS Firmware version, ROM version, and amount of RAM

E. Bug Fixes

- PSII OS Driver: release v3.1.2
 1. 5150: Inaccessible ports with bin=on. If you reverse telnet via 20xx or altip with 'set port bin=on', the port will connect then immediately disconnect. Any connections to that port thereafter will result in the port being unavailable until reboot.
 2. 5076: Telnet progress indicators not present -- telnet, rlogin, raw connections broke in v3.1.1. Any telnet or rlogin connection request will result in a "connect to <server>" message when it is not even alive.
 3. 5085: Set conf submask. When the PSII is zeroed out with a 2 button clear, upon entering the ip and submask for a class B network, the submask defaults to 255.255.0.0 instead of the desired submask (i.e. 255.255.224.0). However when the user reboots, the desired submask is present.
 4. 5033: When telneting to Georgia Softworks NT telnet server, the connect locks. Telnet negotiates normally, but upon the login prompt, we are unable to send characters or have them echoed back.
 5. 4995: Cannot ping an altip remotely after pinging from the PortServer II. With 'set conf ip=1.1.1.1' and altip=1.1.1.2, the user is able to ping remotely but once a ping is issued from the PSII, he can no longer ping altip 1.1.1.2 remotely.
 6. 4849: Spelling error – fixed spelling errors in help menus.

7. tbreak - once a telnet connection is initiated, you have the ability to break the connection by hitting a designated keystroke sequence before the connection is established. This keystroke sequence is determined by the tbreak settings below:

- std - Only ^C will break a telnet connection
- any - Any keystroke will break a telnet connection
- none - No keystroke will break a telnet connection

8. cpconf – 1) does not show the “set config tbreak” value. 2) incorrect display of “set keys” settings when defined as non-control character. I.e. the command “set keys range=1 tesc=@” would be printed as “set keys range=1 tesc= @”(with a space between the “=” and the “@”).
9. "who" and "display ports" – fixed a range problem which was causing reboots on certain occasion (i.e. “who ra=1”). Note: In some instances of the “who” command with a PPP link, the results will be delayed.
10. Fix “set user” displaying junk when specifying the range of an undefined user.
11. Fix “set keys” so user will not be able to modify a pseudo-tty port. This fixes the problem where modifying the pseudo-tty port will change port 1’s settings.