

Release Notes 93000221Y  
for  
PORTSERVER II Operating System  
40001260X  
Version 3.1.5  
Software Manual P/N 92000246C  
Software Manual P/N 92000271B  
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## I. Introduction

These release notes provide information on PortServer II OS version 3.1.5.

## II. Summary

- A. Pre-3.0 Incompatibility Notice
- B. Pre-Rev K Model ROM Limitations
- C. Limitations for Systems with 2 Mbytes of Memory
- D. Upgrading flash ROM.
- E. Enhancements and added feature sets.
- F. Bug fixes in this release.

## III. Details

### A. Pre-3.0 Incompatibility Notice

This version (v3.1.5) of the PortServer II OS is incompatible with versions older than v3.0. 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 reload 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 v3.0 and later have caused 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 v3.0 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 v3.1.0 will no longer be available in the smaller non-frame version.

### C. Limitations for Systems with 2 Mbytes of Memory

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

- Full 64 port configurations in which more than 50 asynchronous and/or TCP users are simultaneously using the PortServer II. This includes users accessing the PortServer II via the Ethernet connection or any type of connection using the serial ports.
- Sites with heavy traffic on serial ports. The problem is simply throughput – degradation of performance may indicate that additional memory is called for.

### D. Upgrading Flash ROM

In some instances parameters from previous releases (e.g. v3.1.4) may not translate properly into v3.1.5. In order to insure that the parameters are correct the user can save their parameters from the previous

releases by doing a “cpconf tohost” and reload the parameters back into the PortServer II after 3.1.5 is loaded.

- The recommended procedure for upgrading Flash ROM 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 is recommended to maintain a backup of your current configuration when re-writing a sizable portion of flash.
  3. Boot with the new OS (v.3.1.5) via TFTP by using “set config boothost=<hostip> bootfile=<filename> tftpboot=yes”, and then reboot 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 OS, 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 OS onto 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. Reset the PortServer II to factory default by using either the two-button reset or “boot action=eewrite”.  
Note: “boot action=eewrite” will leave some IP configurations intact to insure the PSII can be reach and boot from the network.
  6. Configure the IP configuration settings; as a minimum, define IP Address and Submask.
  7. Load the cpconf files from your TFTP server. Note: this may still generate warnings.

#### E. Enhancements

1. 1066, 5320: It was identified that the PortServer required the ability to recognize a network drop. In addition, a requirement for configurable base TCP socket number was needed. These capabilities are accomplished through the set tcp command.

#### Command Syntax

|                      |   |
|----------------------|---|
| Configuration Syntax | set tcp [realport=tcpport#] [rto_max=1-240] [sockets=1000-9000] [keepalive_idle=hour.minute.second] [probe_count=5-30] [probe_interval=10-75] |
| Display Syntax       | set tcp   |

#### Field Descriptions

**realport** - the TCP port number used for RealPort connections; formerly in set configuration (tcpport# eg. 771).

**rto\_max** - the TCP maximum retransmission timeout; formerly in set configuration (1-240).

**sockets** - the configurable base TCP socket number (1000-9000).

**keepalive\_idle** - the keepalive idle timer (hour.minute.second).

**probe\_count** - the number of TCP keepalive probes to send (5-30).

**probe\_interval** - the time between TCP keepalive probes (10-75).

#### Command Examples

|                           |                      |
|---------------------------|----------------------|
| Display TCP Settings      | set tcp              |
| Configure RealPort Number | set tcp realport=771 |

2. 2326: The ability for a user to set the SNMP community string. (The applicable SNMP messages are “set\_request” and “get\_request”)
3. 5419: The maximum number of simultaneous Realport connections to a PortServer II has been increased from 16 to 20.

- 5488: It was recommended that the default connect escape character for the 'root' user should be changed to ^[. This change has been made.
- 6000: The 'connect' command has been revised. The connect command is used to establish a connect session to a serial port.

**Command Syntax**

Syntax connect (serial# | hunt-group#)

**Field Descriptions**

**serial#** - A particular PortServer Serial Port (values are 1 to 64).

**group#** - The hunt-group number assigned to a group of serial ports.

**Command Examples**

Connect to serial port 4 connect 4

- 6000: The 'reconnect' command has been added. The reconnect command is used to re-establish a connect session to a serial port.

**Command Syntax**

Syntax reconnect (serial# | hunt-group#)

**Field Descriptions**

**serial#** - A particular PortServer Serial Port (values are 1 to 64).

**group#** - The hunt-group number assigned to a group of serial ports.

**Command Examples**

Reconnect to serial port 4 reconnect 4

Reconnect to last port used reconnect

- 6003: The 'kill' command has been revised. The kill command is used to clear or reset a session.

**Command Syntax**

Syntax kill (tty#)[- (tty#)]

**Field Descriptions**

**tty#** - The number of the port on which to clear a session.

**Command Examples**

Kill tty port 4 kill 4

Kill tty ports 33-35 kill 33-35

Kill tty ports 33-37 and 2 kill 33-37 2

- 6001: The 'help' command has been added. The help command is used to provide helpful information to the user. The command is issued by typing 'help' at the command interface.
- 5986: The 'set altip' command has been revised. The 'set altip' command is used to: configure a serial port or group of serial ports with an IP address; display current entries in the altip table; or remove an entry from the altip table. The PortServer II uses alternate IP addresses to route outbound calls to the correct serial port or group of ports. By associating ports with IP addresses, telnet users on the LAN can use IP addresses, rather than port numbers, to specify a port or range of ports in their telnet calls. Up to 64 alternate IP address entries are permitted.

Normal users can use the set altip command to view altip table entries. Root privileges are required to configure and remove altip table entries.

#### Command Syntax

Add Entry without Rebooting set altip group={ group#} base={base#} ip={ip-addr}  
Display Entry Syntax set altip [range=range]  
Remove Entry Syntax\* set altip rm {[range=range] | ip=ip-addr}

#### Field Descriptions

**group** - is a port or group of ports.

**base** - is the base socket value for the port.

**ip** - assigns an IP address to the ports or group of ports (hunt group) specified on the group field.

**range** - specifies a range of index entries in the altip table

**rm** - switches to remove mode.

#### Command Examples

Display altip table set altip  
Display altip entries 1 to 7 set altip range=1-7  
Add altip entry immediately set altip ip=198.150.150.10 group=65 base=2000  
Remove an altip entry\* set altip rm ip=198.150.150.10  
Remove altip entries\* set altip rm range=7-14

\*Note – Altip entries are only removed after PortServer reboot.

10. 6002: The set port command has been revised. The set port command is used to: configure the operating parameters of a port; or display the port's operating parameters. Normal users can use the set ports command to display operating parameters for the port they are using. Administrator (root) privileges are required to use it to display parameters on other ports and to configure ports.

#### Command Syntax

Configuration Syntax set port [auto={on|off}] [bin= {on|off}] [dest= ip-adr] [dev= device] [dport= tcp-port] [edelay= milliseconds] [group= group] [id= id-name] [range= range] [save={on|off}] [screen= screen#] [sess= sessions] [termtype= type] [uid= id]  
Display Syntax set port [range= range] [screen= screen#]

#### Field Descriptions

**auto** – ‘on’ means that all users of the port will bypass PortServer II’s login and password sequence and be automatically connected to the destination defined on the dest field. ‘off’ means that port users will not be automatically connected to a destination. The default is off.

**bin** - ‘on’ means that telnet users are provided with telnet binary connections. ‘off’ means that telnet users are provided with normal (ASCII) connections. The default is off.

**dest** - is the IP address of the destination system to which port users will be routed if auto=on

**dev** - is the device type, which defines the device connected to the port. The default is term.

**dport** - is the TCP port for users of autoconnect ports. The default is 0.

**group** - assigns a group number to this port, which means that this port is part of a hunt group. Outgoing calls specifying this hunt group can then use any available port in the group. Use numbers 65 to 100 to avoid conflicts with regular port numbers.

**id** - creates or changes the id for a port or ports specified.

**range** - is the port or range of ports to which this command applies.

**save** – ‘on’ set ports changes are saved when the PortServer III is rebooted. ‘off’ set ports changes are not saved when the PortServer III is rebooted. Any set ports options set when save=off will be lost when the PortServer III is rebooted. The default is on.

**screen** - displays different assortments of values.

**sess** - is the maximum number of sessions any user can run through this port. The range is 1-9, and the default is 4.

**termtype** - is the type of terminal assigned to the port. This information is used during multiscreen and multisession operations and is passed to the host during telnet negotiations. Use a terminal type that is valid with the host operating system.

**uid** - is an index number in the user table that identifies a particular user for this port. If you use this field, calls from others attempting to use this port will be rejected.

#### Command Examples

|  |  |
|--|--|
| Display Attributes                                   | set port   |
| Display Attributes                                   | set port range=7-8   |
| Display id Attribute                                 | set port range=7-8 screen=2                                      |
| Display all Attributes<br>(This includes full names) | set port range=7-8 screen=0                                      |
| Configure Autoconnect Port                           | set port range=5 auto=on dest=199.125.123.10 dev=mio<br>dport=23 |

#### F. Bug Fixes

1. 3462: An automatic connection (set port auto=on) can be interrupted if Enter is pressed during initialization of the session. This problem has been fixed.
2. 5011: Following an abnormal telnet session termination, the PortServer Port 'locks up' and requires a kill tty command before it resumes normal operation. This problem has been fixed.
3. 5292: When a 'kill tty' command is used for a PPP dialout session through a Modem 8 EM Port (or PORTS/16EM Port) the PortServer does not operate correctly until the PortServer is rebooted. This problem has been fixed.
4. 5379: The 'set configuration' command's 'myname' field truncates strings to 32 characters and does not inform the user of this truncation. This has been corrected.
5. 5408: Set trace field 'ether' is documented incorrectly as 'ethernet' in the command line help display. This issue has been corrected.
6. 5503: The PortServer Telnet implementation was not correctly interpreting termination strings such as \r, \n, \r\n and \n\n. This issue has been corrected.
7. 5530: The PortServer 'set user' command displays unknown data in the 'Login Script' Field. This problem has been fixed.
8. 5550: A SNMP 'Get Request' message always returns 'NoSuchObject'. This problem has been fixed.
9. 5552: The SNMP Object Identifiers 'rs232AsyncPortBits' and 'charPortLowerIfIndex' were found to be read only. These Object Identifiers are now changeable.
10. 5637, 5718: The 'set arp' command doesn't accurately update the 'tim2liv' for a given entry, the PortServer assumes that 'tim2liv' should be 1200. This problem has been fixed.
11. 5641: The set line command does not set values correctly in the error error field. This has been fixed.

12. 5724: Using the 'set auth' and 'connect' commands with the same port can cause the password to be echoed. This 'set auth' and 'connect' combination can also cause the 'connect escape' character to function incorrectly. In addition, using 'set auth' and 'rlogin' can cause the login not to be echoed. These problems have been corrected.
13. 5730: An unsuccessful 'connect' session leaves a session that cannot be terminated using kill. This problem has been fixed.
14. 5745: When 'who' displays that a connection is 'logging in' the connection cannot be killed. This has been corrected.
15. 5763: When using altip over a serial connection an ethernet telnet escape break sequence is sent rather than the correct serial break sequence. This issue has been solved by specifying a base socket number when making an altip entry.
16. 5767: A 'boot action=eewrite' was removing the PortServer's IP Address, Gateway and Submask information. This problem has been fixed.
17. 5816: When a 'connect' session is disconnected and a reverse telnet is attempted to the same port in a quick and repetitive manner the PortServer can reboot. This problem has been corrected.
18. 5821: There has been inconsistent operation of telnet and rlogin from a PortServer through an ethernet connection. This problem has been corrected.
19. 5878: The 'kill' command was sending inconsistent messages upon successful completion. Now 'kill' does not print out anything if it is successful.
20. 5983: Reverse Telnet out of an PortServer EM Port did not operate correctly. This problem has been corrected.
21. 6041: The 'set menu' command was incompatible with previous versions of the PSII OS. The 'set menu' command was corrected and is currently backwards compatible with previous PSII OS versions.
22. 6258: PortServer EM Ports did not correctly configure to a specified baud rate (This was applicable to SNMP and RealPort connections). This problem has been fixed.