91000727 Rev A

Configuring Your RealPort tty Devices

Solaris

Introduction

This guide will provide the information you need to test and use the serial ports created by the Digi RealPort device driver with PortServer and PortServer II network terminal servers.

Note: Except where noted, *PortServer* refers to both PortServer and PortServer II.

Important! Be sure to read the *Release Notes* that may be included with this software device driver.

Digi TTY Devices

This device driver supports four different devices on each asynchronous line. Two of these devices are tty devices, for use with terminals and modems, and two are transparent printer devices for printers connected to terminals. On line "**a001**," where "**a**" refers to PortServer **a**, and "**01**" refers to first line (port) on that concentrator, the four devices are named: **/dev/term/a001, dev/cua/a001, /dev/dpr/a001m** and **/dev/dpr/a001s**. These devices are described below.

Terminal/Modem Devices

/dev/term/a001 (also **/dev/dty/a001m**)

This is the "modem" tty device, used for terminals, modems, printers, laboratory equipment, etc. It is also sometimes referred to as a "dial-in" device.

This device is a traditional Unix port with modem control. It requires Carrier Detect to be high before it will operate. RTS/CTS handshaking is enabled by default.

When used with a modem, the port will wait for carrier before sending out the **login:** prompt, so the user is greeted properly upon making a connection.

When used with a terminal or other device, it is usually wise to wire the Digi DCD signal to the terminal's DTR (Data Terminal Ready) line. When the terminal is turned on, the system outputs a **login:** prompt. When the terminal is turned off, any associated jobs are killed, and the user is logged out.

Note that **/dev/term/a001** is a link to the actual tty device **/dev/dty/a001m**.

/dev/cua/a001 (also **/dev/dty/a001s**)

Standard device. This is the same as **/dev/term/a001** with the exceptions that the default handshake method is XON/XOFF, and that Data Carrier Detect need not be present to open the device.

Note that **/dev/cua/a001** is a link to the actual tty device **/dev/dty/a001s**.

An asynchronous line may be enabled as either a standard device or a modem device, but not both.

Transparent Print Devices

/dev/dpr/a001s
/dev/dpr/a001m

The "Transparent Print Devices" (DigiPRINT) for use with the auxiliary printer port of a terminal. Output directed to a **/dev/dpr** device goes out the auxiliary port of a terminal while the user continues to use the terminal normally.

Use **/dev/dpr/a001s** if your terminal device is **/dev/cua/a001** (standard device); use **/dev/dpr/a001m** if your terminal device is **/dev/term/a001** (modem device).

Transparent print devices allow you to use your terminal and a local printer connected to the terminal's auxiliary port at the same time. The system assumes data you send to the **/dev/dpr** device is destined for the printer. Before sending data to the printer, the system sends a special control sequence to the terminal to activate the printer port, sends the data, then turns the printer port back off again before sending more data for the terminal.

For correct operation, certain parameters must be provided to the *ditty* program. It is usually best to set these up in **/etc/rc2.d**, since they must be set each time the system is rebooted. See *Setting Terminal Options with ditty* and *DigiPRINT Transparent Print Option* in the *RealPort Unix Utilities Guide*.

Transparent print devices may not be enabled for login.

Testing the New Ports

Connect terminals to the ports (using a null modem cable, if necessary) and test the connections to each terminal by entering the following command for each port added:

```
date > /dev/cua/a001
```

(Assuming the terminal is connected to **a001**.)

Please note that in the above, the "date" command is used as a simple test, to provide text output that can be redirected; there is no other significance to "date" in this test.

Also note that the default settings for the driver are 9600 baud, 8 data bits, no parity and 1 stop bit.

- If the date appears on the terminal's screen, the device is properly connected.
- If the date *does not* appear on the terminal's screen, then that terminal is not receiving data; check the power, cables, connections, etc.
- If nonsense characters are printed on the terminal's screen, check the baud rates, data bits, stop bits, and parity setting on your terminal.

Once you can redirect output to your screen with the test above, perform the following steps to enable the ports for login.

Enabling the Ports for Terminals

Once you can redirect output to a terminal with the test above, perform the following steps to enable that port for login.

1. Log onto the console as super-user (root).
2. For versions of Solaris without Common Desktop support, start **Open Windows** (enter: **/usr/openwin/bin/openwin**).
3. From a Common Desktop or Open Windows Terminal window, run **/usr/bin/admintool**.
4. From the "**Browse**" menu, select "**Serial Ports**".
5. Select the port you wish to modify, then select "**Modify**" from the "**Edit**" menu (or simply double-click on the port).
6. Set the desired options for the device and click "**OK**". Repeat steps 5 and 6 for all ports you wish to enable at this time.

Using Digi Ports with Serial Printers

To set up a printer for use with the print spooler, see your System Administrator's Guide.

Many applications send printer data directly to the tty port without properly setting the port up first (opening the port, setting parity and framing, etc.). For such applications, it is necessary to open the port and hold it open so that any **stty** or **ditty** options remain in effect from one printing job to the next. Refer to the *RealPort Unix Utilities* manual for complete descriptions of all **ditty** parameters.

To prepare a port for connection to a printer, enter the following command:

```
sleep 999999 < /dev/term/a001 &
```

The command may be placed in **/etc/rc2.d/S99***filename* so that it is automatically executed whenever the system is booted (*filename* is a name of your choice, but must be preceded by **S99**).