Linux Device Driver for Digi DataFire RAS PTE

Before You Begin

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- Driver Configuration

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DataFire RAS PTE Configuration Information

DataFire RAS PT1, PT2

- Channelized T1, Long Haul (External T1)
- Channelized T1, Short Haul (PBX or Other Internal Network)
- ISDN T1 (PRI), Long Haul (External T1)
- ISDN T1 (PRI), Short Haul (PBX or Other Internal Network)

DataFire RAS PE1, PE2

- ISDN E1 (Euro ISDN)

DataFire RAS PTE Linux Setup Overview

Here are the major steps required to set up the DataFire RAS PTE adapter in a Linux system.

Overview of Setup Steps

1. Prepare for configuration by gathering configuration information. See Information to Gather
2. Install the adapter. See the appropriate hardware installation card for more information.

   Install the Linux device driver package. See Installing a Downloaded Device Driver. This procedure also loads the driver and builds the RAS capable devices.
3. Configure the driver. See Driver Configuration.

Installing a Downloaded Device Driver

This topic describes how to install a device driver that has been downloaded from the Digi ftp site.

Procedure

1. Log in as super user (root).
2. Install and make the driver package by entering **rpm -ihv dgdm*.rpm** (there are no spaces in "**dgdm*.rpm**"). The driver will be installed in **/usr/src/dg/dgdm/drv/linux**.
3. Enter one of the following commands to load the driver and build the devices:

   RedHat: **/etc/rc.d/init.d/dgdm start**

   Debian: **/etc/init.d/dgdm start**

   The devices will be created in **/dev/dg/dgdm**, linked to **/dev**, and will have the following format:
   Dial-in devices: **ttyG***a_xx*, where *a* is the adapter number and *xx* is the device number.
   Dial-out devices: **cug***a_xx*, where *a* is the adapter number and *xx* is the device number.
4. Add the new services to the **/etc/rc.d** hierarchy by entering the following command:

   chkconfig --add dgdm

Uninstalling the Device Driver

1. Log in as super user (root).
2. Kill all processes that use the dgdm device.
3. Remove the device driver module by entering one of the following commands:

   RedHat: /etc/rc.d/init.d/dgdm stop

   Debian: /etc/init.d/dgdm stop

4. Enter rpm -e dgdm.

Driver Configuration

Once the device driver has been successfully installed, it must be configured with information about the connection. See Information to Gather for printable provisioning forms.

The forms will help you gather all the necessary information to configure the driver.

Configuration via the Dense Modem Control Panel

1. Log in as Super User (root).
2. Enter **dm_gui**. The Dense Modem Control Panel appears.
3. Click the adapter icon (picture of a circuit board). The Dense Modem Configuration utility appears.

The configuration utility shows tabs for each installed adapter, beneath which are tabs for various status, provisioning and configuration forms. Fill out the forms according to the information gathered from your telephone company. Help is provided for each form.

Manual Configuration

If you are unable or do not wish to use the graphical configuration utility, the driver may be configured manually with the **dm_admin** command. The man pages for **dm_admin** provide complete descriptions of all of the command line options.

More Information

For more comprehensive information about the device driver and associated utilities, see the man pages for:

- **dm_driver**
- **dm_gui**
- **dm_admin**

DataFire RAS PTE Configuration Information

Channelized T1, Long Haul

The following information may be required to complete the configuration of your DataFire RAS PTE adapter within your operating system environment. Note that not all operating systems support all parameters.

The parameters on this page are for channelized T1 connected directly to an external T1 telephone line (Long Haul). If your adapter is connected to a PBX or similar in-house network, use the Short Haul configuration page.

Parameter	**Value**
Coding	[ ] B8ZS [ ] AMI
Framing	[ ] ESF [ ] D4
Long Haul Line Build Out (Level)	[ ] 0dB [ ] 7.5 dB [ ] 15 dB [ ] 22.5 dB
Signaling	[ ] Ground Start [ ] Loop Start [ ] Immediate Start [ ] Wink Start -- Wink Digits (1-20): _____
Leased Time Slots (Channels)	
Modem Nationality	

DataFire RAS PTE Configuration Information

Channelized T1, Short Haul

The following information may be required to complete the configuration of your DataFire RAS PTE adapter within your operating system environment. Note that not all operating systems support all parameters.

The parameters on this page are for channelized T1 connected to a PBX or similar in-house network (Short Haul). If your adapter is connected directly to an external T1 telephone line, use the Long Haul configuration page.

Parameter	**Value**
Coding	[ ] B8ZS [ ] AMI
Framing	[ ] ESF [ ] D4
Short Haul Length (in feet)	[ ] 0-133 [ ] 133-266 [ ] 266-399 [ ] 399-533 [ ] 533-655
Signaling	[ ] Ground Start [ ] Loop Start [ ] Immediate Start [ ] Wink Start -- Wink Digits (1-20): _____
Leased Time Slots (Channels)	
Modem Nationality	

DataFire RAS PTE Configuration Information

ISDN T1 (PRI), Long Haul

The following information may be required to complete the configuration of your DataFire RAS PTE adapter within your operating system environment. Note that not all operating systems support all parameters.

The parameters on this page are for ISDN T1 (PRI) connected directly to an external T1 telephone line (Long Haul). If your adapter is connected to a PBX or similar in-house network, use the Short Haul configuration page.

Parameter	**Value**		
Coding	[ ] B8ZS		
Framing	[ ] ESF		
Long Haul Line Build Out (Level)	[ ] 0dB [ ] 7.5 dB [ ] 15 dB [ ] 22.5 dB		
Signaling	[ ] AT&T 5ESS [ ] Nortel DMS 100/250 [ ] ETSI [ ] INS-1500 (Japan) [ ] National ISDN2 [ ] None		
NFAS Master Port (RAS 48 PT2 Only)	[ ] None [ ] 1 [ ] 2	Interface ID for Port 1 (0-127): _____	Interface ID for Port 2 (0-127): _____
Leased Time Slots (Channels)			
Modem Nationality			

DataFire RAS PTE Configuration Information

ISDN T1 (PRI), Short Haul

The following information may be required to complete the configuration of your DataFire RAS PTE adapter within your operating system environment. Note that not all operating systems support all parameters.

The parameters on this page are for ISDN T1 (PRI) connected to a PBX or similar in-house network (Short Haul). If your adapter is connected directly to an external T1 telephone line, use the Long Haul configuration page.

Parameter	**Value**		
Coding	[ ] B8ZS		
Framing	[ ] ESF		
Short Haul Length (in feet)	[ ] 0-133 [ ] 133-266 [ ] 399-533 [ ] 533-655		
Signaling	[ ] AT&T 5ESS [ ] Nortel DMS 100/250 [ ] ETSI [ ] INS-1500 (Japan) [ ] National ISDN2 [ ] None		
NFAS Master Port (RAS 48 PT2 Only)	[ ] None [ ] 1 [ ] 2	Interface ID for Port 1 (0-127): _____	Interface ID for Port 2 (0-127): _____
Leased Time Slots (Channels)			
Modem Nationality			

DataFire RAS PTE Configuration Information

ISDN E1 (Euro ISDN)

The following information may be required to complete the configuration of your DataFire RAS PTE adapter within your operating system environment. Note that not all operating systems support all parameters.

The parameters on this page are for ISDN E1 (Euro ISDN).

Parameter	**Value**
Framing	[ ] CEPT with CRC4 [ ] CEPT without CRC4
Coding	[ ] HDB3
Signaling	[ ] ETSI [ ] None
Leased Time Slots (Channels)	
Modem Nationality	
