

## Chapter 9: Configuring the System

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### What is NetPower Configurator?

NetPower Configurator is a tool for configuring, either on-line or off-line, any number of NetPower DeviceServers that make up a PowerNet Software network. NetPower Configurator allows you to:

- ◆ Specify the IMPACC devices that are connected to and whose data is polled by the NetPower DeviceServer.
- ◆ Specify how IMPACC devices are physically connected to the device network.
- ◆ Specify what data the NetPower DeviceServer will log (for trend logging) and the frequency of the logging.
- ◆ Optionally, specify the scan rates for device status scans and device data scans.

NetPower Configurator maintains the configuration information pertaining to the items in a database, so that the interaction between these items is automatic.

### Running NetPower Configurator

Before you configure the NetPower DeviceServer, you must start and log on to NetPower Configurator.

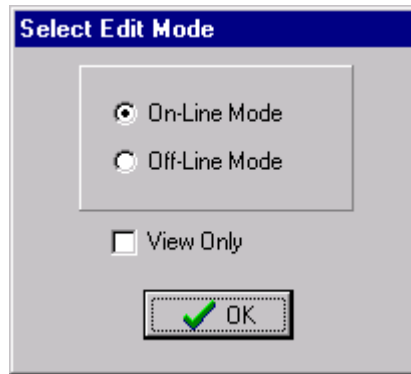
For detailed information about starting, logging on, checking out a license, logging off, and exiting NetPower Configurator, see *Chapter 6: Logging On and Off*.

#### Starting NetPower Configurator

To start NetPower Configurator, do the following:

1. Choose NetPower Configurator from the PowerNet Suite program group in the Start menu.
2. If you have not previously checked out a license, check out a license for NetPower Configurator.

The Select Edit Mode dialog box displays.



3. Select a configuration mode, either On-Line or Off-Line.
4. If you want to run in View Only mode, select the View Only checkbox.

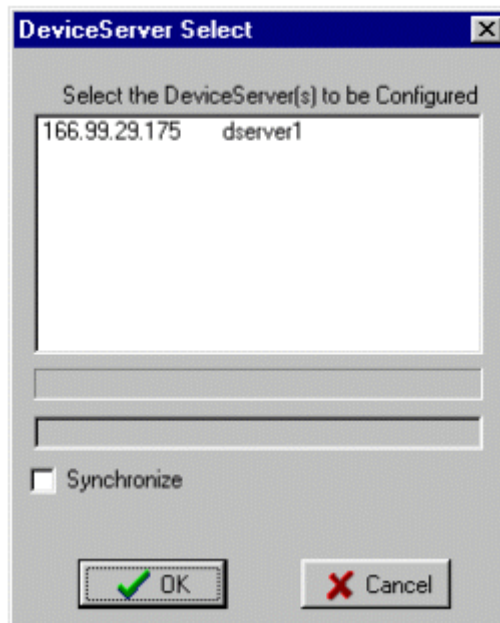
**Note**

For more information on configuration modes, see the section *Configuration Modes*.

5. If you have previously configured a NetPower DeviceServer, the DeviceServer Select dialog box displays.

**Note**

If you are starting NetPower Configurator for the first time, the DeviceServer Select dialog box does not display.



6. To configure a previously configured NetPower DeviceServer, select a NetPower DeviceServer from the list and click OK.

**Note**

To configure a new NetPower DeviceServer, click Cancel.

The NetPower DeviceServer main window displays and NetPower Configurator runs in either On-Line or Off-Line mode.

If you are not currently logged on to a PowerNet Software application, you have view-only security privileges in NetPower Configurator.

If you are currently logged on to an application, you are logged on to NetPower Configurator with the last user ID and password you used.

## Logging On to NetPower Configurator

**Important**

You must log on to NetPower Configurator and have either System Administrator or System Configuration security privileges to be able to configure devices.

To log on to NetPower Configurator, do the following:

1. If you have not previously logged on to an application, select Log On “NetPower Configurator” from the File menu.
2. Enter your user ID and password into the Log On dialog box.
3. Click OK.

NetPower Configurator logs you on.

## Logging Off

### Note

If NetPower Configurator does not detect any keyboard input or mouse movement, you are logged off automatically after a set time interval. For more information about automatic log off, see *Chapter 6: Logging On and Off*.

To log off NetPower Configurator, choose Log Off “NetPower Configurator” from the File menu.

NetPower Configurator logs you off. You now have view-only security privileges.

## Exiting NetPower Configurator

To exit NetPower Configurator, do the following:

1. From the File menu, choose Exit.

A confirm dialog box displays, verifying the request to exit.

2. Click OK.

NetPower Configurator exits, and returns the license to the NetPower License Manager.

### Note

You can also use the Exit and Keep License command, which does not return the license to the NetPower License Manager. For more information, see *Chapter 6: Logging On and Off*.

## Configuration Modes

NetPower Configurator has four modes in which you can work:

- ◆ On-Line
- ◆ On-Line View Only
- ◆ Off-Line
- ◆ Off-Line View Only

### On-Line Mode

When in the On-Line Mode, you can:

- ◆ Create a new NetPower DeviceServer configuration.
- ◆ Make changes to one or more NetPower DeviceServer configurations. As you enter the changes, the information is immediately sent to the NetPower DeviceServer and stored in the Master configuration database. In addition, a change broadcast message is sent to the PowerNet Software applications that are connected to the network.

## Off-Line Mode

When in the Off-Line Mode, you can:

- ◆ Create a new NetPower DeviceServer configuration.
- ◆ Edit a saved NetPower DeviceServer configuration.

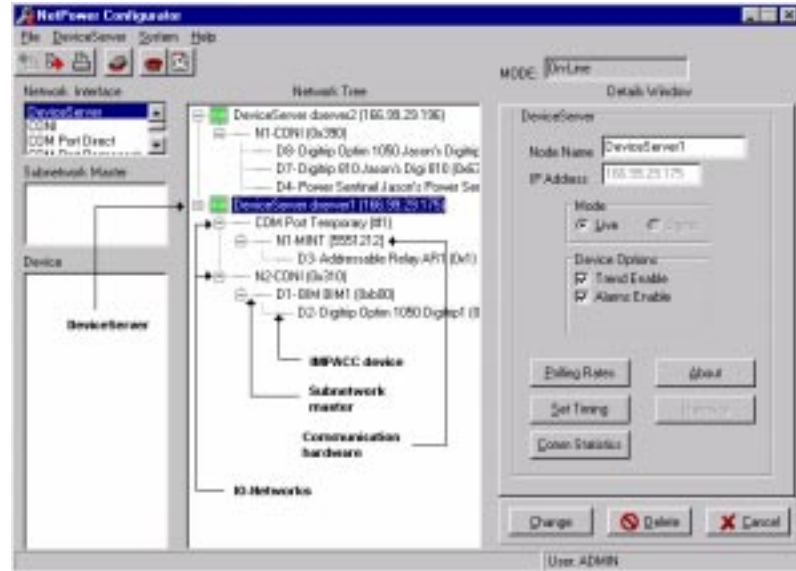
Whenever you make a change to the configuration, it is saved only to the Configuration Database. Next time you run NetPower Configurator in On-Line mode, you will be prompted to synchronize between the Configuration database and the NetPower DeviceServer.

## On-Line View Only and Off-Line View Only Modes

When in On-Line View Only Mode or Off-Line View Only Mode, you can view information as if you were in On-Line or Off-Line Mode, but you cannot make any changes to the configuration.

## NetPower Configurator Main Window

The NetPower Configurator main window lists the available NetPower DeviceServers and configuration information about each NetPower DeviceServer.









- ◆ The Mode text box displays the configuration mode that you selected at log on (i.e., On-Line, Off-Line, On-Line—View only, Off-Line—View Only).
- ◆ The Network, Subnetwork Master, and Device list boxes display available items from which you select to configure a NetPower DeviceServer.

- ◆ The Network Tree list box displays the hierarchy of items as you configure your NetPower DeviceServer(s).
- ◆ The Network Tree list box displays a green icon to the left of each NetPower DeviceServer, indicating that you have communications with the NetPower DeviceServers in On-Line mode. If you are in the Off-Line mode, no icon displays.
- ◆ The Details Window on the right-hand side of the NetPower Configurator main window displays the details pertaining to an item.
- ◆ If you select a device while in On-Line mode, the Details Window displays the Status and Reason for the item. If you are in the Off-Line configuration mode, the Status and Reason fields do not display.

## Menu Options and Toolbar Icons

The following table describes the menu options and their corresponding icons:

| Menu Options                    | Description   | Icon  |
|---------------------------------|---|---|
| <b>File</b>                     |   |   |
| Import                          | Imports a previously exported configuration database, or an IMPACC Series III database configuration.   |  |
| Export                          | Makes a duplicate copy of the Master Configuration database.  |  |
| Print                           | Prints any combination of NetPower DeviceServer items (NetPower DeviceServer, CONI network, Serial network, IMPACC device) saved in the Configuration Database. |  |
| Log On "NetPower Configurator"  | Logs you on to NetPower Configurator.   | N/A   |
| Log Off "NetPower Configurator" | Logs you off NetPower Configurator.   | N/A   |
| Setup Database Synchronization  | Sets up the database synchronization.   | N/A   |

| Menu Options                  | Description  | Icon  |
|-------------------------------|--|---|
| Setup Auto Logoff             | Sets up the automatic logoff interval.                     | N/A   |
| Exit & Keep License           | Exits NetPower Configurator without returning the license. | N/A   |
| Exit                          | Exits NetPower Configurator and returns the license.       | N/A   |
| <b>System</b>                 |  |   |
| Phone Directory               | Allows you to add or edit the list of phone numbers.       |    |
| Change TCP/IP Network Timeout | Changes the timeout period for a NetPower DeviceServer.    |    |
| <b>DeviceServer</b>           |  |   |
| DeviceServer List             | Displays the list of configured NetPower DeviceServers.    |  |
| <b>Help</b>                   |  |   |
| About                         | Displays the About NetPower Configurator dialog box.       | N/A   |
| Contents                      | Displays the table of contents for on-line help.           | N/A   |
| Keyword Search                | Performs a keyword search.                                 | N/A   |

## Overview of the NetPower DeviceServer Configuration Process

### Note

Before you use NetPower Configurator, be sure database synchronization has been set up correctly. The Master and Local Configuration databases should be set for the same database. See *Chapter 5: Database Synchronization*.

Configuring a single NetPower DeviceServer consists of several tasks. The order of these tasks must be:

1. Add a NetPower DeviceServer.
2. Add a device communications network to the NetPower DeviceServer.
  - ◆ If you are adding a CONI Network, the CONI card must be configured before its associated items are configured.
  - ◆ If you are adding a Serial Network, the communication hardware (MINT, RS232 PONI, or Modem PONI) must be configured before the associated items are configured.
3. Add devices to the NetPower DeviceServer's communication network.

If you have subnetworks, subnetwork masters must be added before the associated devices.

### Note

You must be logged on and have System Administrator or Configuration security privileges to add, modify, or delete any device with the NetPower Configurator.

The following table lists the configuration steps and which sections to reference for more information:

| For Information on...  | See...   |
|--|--|
| Adding a NetPower DeviceServer.  | <i>Adding a NetPower DeviceServer to the System</i>    |
| Adding a device communication network interface to your NetPower DeviceServer. | <i>Adding a Device Communication Network Interface</i> |
| Adding devices to the NetPower DeviceServer's communication network.           | <i>Adding a Device</i>                                 |



**Note**

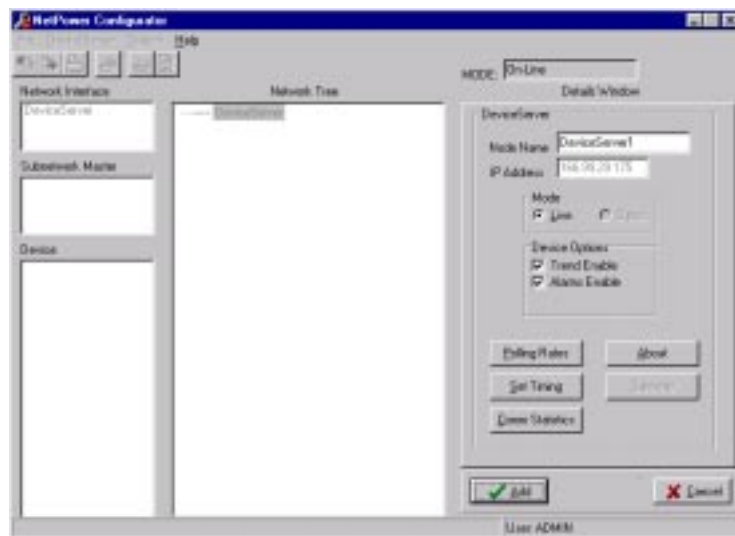
The sections listed previously assume that you are working in the On-Line mode. For information about working in the Off-Line mode, see the section *Working in Off-Line Mode*.

## Adding a NetPower DeviceServer to the System

To add a NetPower DeviceServer, do the following:

1. Click on the NetPower DeviceServer in the Network list box, then drag-and-drop it into the Network Tree list box.

The NetPower Configurator main window updates the Network Tree list box, and displays the default input settings for the NetPower DeviceServer in the Details Window.



2. In the Node Name field, type the name of the NetPower DeviceServer.
3. In the IP Address field, type the IP address of the NetPower DeviceServer.

**Note**

Each NetPower DeviceServer must have a unique and static IP address and Node Names. Two NetPower DeviceServers cannot have the same IP address.

3. To disable Device Trending, clear the Trend Enable check box.
4. To disable Alarms, clear the Alarms Enable check box.

**Note**

For more information on Device Trending, see the section *Setting Device Trending*.

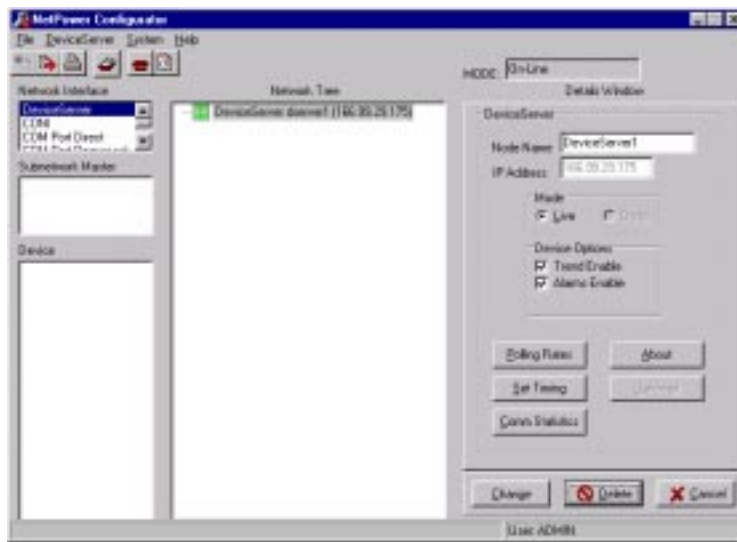
5. Click Add.

The NetPower Configurator main window updates the Network Tree list box to list the configured NetPower DeviceServer, and displays the current input settings in the Details Window.

**Note**

If you are in the On-Line configuration mode, a green icon displays to the left of the NetPower DeviceServer. If you are in Off-Line mode, no icon displays.

In addition, the Network list box lists the available network types.



The NetPower DeviceServer is added to the configuration, and NetPower Configurator stores the NetPower DeviceServer input settings in the Configuration Database.

**Note**

This procedure configures the NetPower DeviceServer using the default polling and timing settings. It is recommended that you use the default settings unless your system has a required update time for device data. To change the default polling settings, see the section *Setting Polling Rates*. To change the default timing, see the section *NetPower DeviceServer Timing*.

6. To add additional NetPower DeviceServers, repeat steps 1 through 5.

If you exit and restart NetPower Configurator, the added NetPower DeviceServer displays in the DeviceServer Select dialog box.

The next step in configuring a NetPower DeviceServer is to add a device communication network to a NetPower DeviceServer. For information, see the section *Adding a Device Communication Network Interface*.

## Modifying a NetPower DeviceServer in the Network Tree

### Note

If you want to modify a NetPower DeviceServer not listed in the Network Tree list box, you must first add the NetPower DeviceServer to the Network Tree list. See the section *Adding a NetPower DeviceServer to the Network Tree*.

To modify a NetPower DeviceServer in your Network Tree list, do the following:

1. If it is not already selected, select the NetPower DeviceServer you want to edit from the Network Tree list box.  
The NetPower Configurator main window updates to display the input settings for the NetPower DeviceServer in the Details Window.
2. To change the NetPower DeviceServer description, type a new description in Node Name field.
3. To disable Device Trending, clear the Trend Enable check box.

### OR

To enable Device Trending, select the Trend Enable check box.

4. To disable Alarms, clear the Alarms Enable check box.

### OR

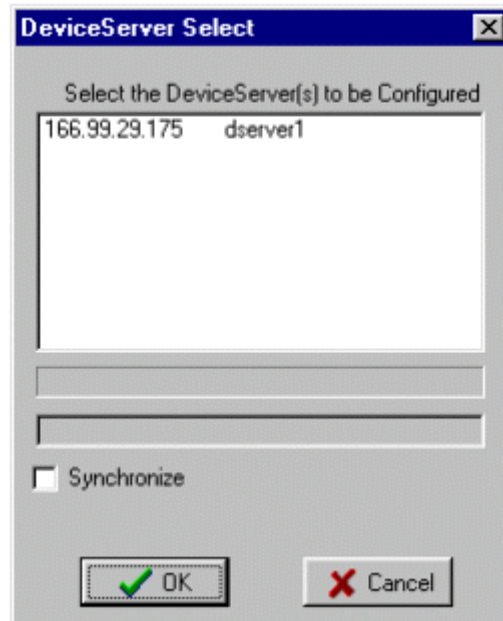
To enable Alarms, select the Alarms Enable check box.

5. When you have entered all the changes you want to make, click Change.  
The NetPower Configurator main window updates to display the changes.
6. To edit additional NetPower DeviceServer configurations, select a different NetPower DeviceServer from the Network Tree list box and repeat steps 2-5.

## Adding a NetPower DeviceServer to the Network Tree

If you want to edit a NetPower DeviceServer you have previously added to the Configuration database, but it is not currently listed in the Network Tree list box, do the following

1. Click the NetPower DeviceServer List icon.  
The DeviceServer Select dialog box displays.



2. Select the NetPower DeviceServer you want to add to the Network Tree list box.
3. Click OK.

The NetPower Configurator main window updates to display the NetPower DeviceServer and its associated devices.

**Note**

If the time stamp on the NetPower DeviceServer and the time stamp on the Configuration database differ, you are prompted to synchronize. For more information, see the section *Synchronization*.

## Deleting a NetPower DeviceServer from the Network Tree

**Important**

Deleting a NetPower DeviceServer removes the NetPower DeviceServer and all devices connect to that NetPower DeviceServer from the Configuration database.

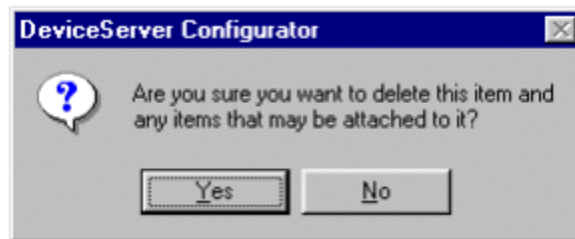
To delete a NetPower DeviceServer, do the following:

1. In the Network Tree list box, click on the NetPower DeviceServer you want to delete.

The Details Window updates to display the input settings for that NetPower DeviceServer.

2. Click Delete.

A confirmation dialog box displays, confirming the request to delete the item.



3. Click Yes.

NetPower Configurator deletes all of the associated items, beginning with the lowest branch in the network tree, and working its way up to the NetPower DeviceServer.

## Loss of Communication with a NetPower DeviceServer

When you are in the On-Line mode, a green icon displays to the left of each NetPower DeviceServer in the Network Tree list box. If communication between the NetPower Configurator and a NetPower DeviceServer is lost, an error message displays informing you that the NetPower DeviceServer has disconnected.



◆ Click OK.

The icons to the left of all the NetPower DeviceServers temporarily turn red, and the NetPower DeviceServer that lost communication is removed from the Network Tree list box.

Once the disconnected NetPower DeviceServer is removed, the remaining icons turn green.

## Adding a Device Communication Network Interface

There are four ways the device communication network can interface with a NetPower DeviceServer:

- ◆ Through a CONI card.
- ◆ Through a COM port direct, to a MINT or RS232 PONI

- ◆ Through a COM port permanent, to a dedicated telephone line
- ◆ Through a COM port temporary, to a non-dedicated telephone line

A remote network requires communication hardware, which includes a modem for the NetPower DeviceServer and either a MINT and a modem, an RS232 PONI and a modem, or a Modem PONI for the IMPACC network to interface with a telephone network.

The following table describes the network types and corresponding communications hardware that are used for each network.

The NetPower DeviceServer Hardware column designates the communications hardware that directly connects to the NetPower DeviceServer.

The Network Hardware column designates the communications hardware that is used to connect the IMPACC network to a telephone network.

| <b>Device Network Type</b>  | <b>NetPower DeviceServer Hardware</b> | <b>Network Hardware</b>                              | <b>Description</b>  |
|-----------------------------|---------------------------------------|--|---|
| CONI                        | CONI III or CONI IA                   | N/A  | The device network wire terminates at the RJ-11 port of the CONI card.                              |
| COM Port Direct (Serial)    | COM port                              | MINT or RS232 PONI                                   | The device network hardware attaches to the COM port of a NetPower DeviceServer.                    |
| COM Port Permanent (Serial) | Modem and COM port                    | Modem and MINT or modem and RS232 PONI or Modem PONI | The NetPower DeviceServer modem dials the remote network through a MINT, RS232 PONI, or Modem PONI. |
| COM Port Temporary (Serial) | Modem and COM port                    | Modem and MINT or modem and RS232 PONI or Modem PONI | The NetPower DeviceServer modem dials the remote network through a MINT, RS232 PONI, or Modem PONI  |

**Note**

The number of allowable serial networks for a NetPower DeviceServer depends on the number of available COM ports. If you want to add more COM ports to your NetPower DeviceServer by adding a Digiboard, see *Chapter 2: Installation*.

NetPower DeviceServers support up to 32 COM ports. When you configure a NetPower DeviceServer, be sure you set the correct COM port for a particular device network interface.

For each type of network interface, there are limits to the number and type of devices that you may configure. NetPower Configurator automatically determines these limitations as you configure.

## Adding a CONI Card

A CONI card is a PC card that is installed internally in a DeviceServer. It allows the NetPower DeviceServer to communicate directly with a device network.

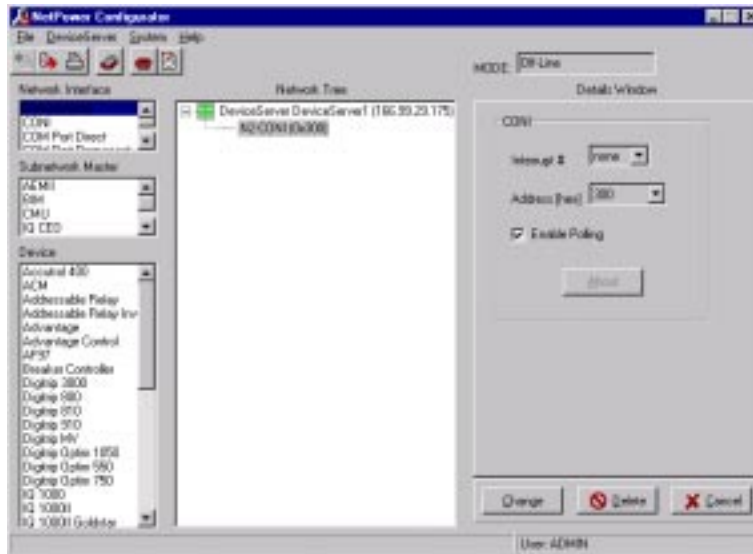
**Note**

A CONI III has two modes of operation. Mode 1 must be used for CONI III, Revision 3 and earlier. Mode 2 must be used for CONI III, Revision 4 and later. Click on the About box in the Details area to see if your CONI III is set correctly.

To add a CONI card, do the following:

1. Drag-and-drop CONI from the Network list box to the Network Tree list box, highlighting the NetPower DeviceServer.

The NetPower Configurator main window updates the Network Tree list box to display the CONI card, and the Details Window displays the input settings to be entered for the CONI card.



2. If you are using interrupts, select the correct interrupt (IRQ) number in the Interrupt # field.

Each IRQ number must be unique and must match the jumper settings on the card. The available settings are 3, 4, 5, and 7. Be sure that the interrupt does not conflict with any of your computer's hardware.

3. Select the correct address in the Address (hex) field.

The CONI address corresponds to the dip switch settings on the CONI card and must be unique. Once you select a particular address, that number is no longer available to configure subsequent CONI cards.

**Note**

If you do not want to poll the device network at this time, clear the Enable Polling check box.

4. Click Add.

The Network Tree list box updates to display the configured device network, designated by the prefix Nx, where N represents the network designation, and x represents the particular network number.

The Details Window displays the CONI card input settings.

You are now able to add devices to the NetPower DeviceServer. To add devices, see the section *Adding a Device*.

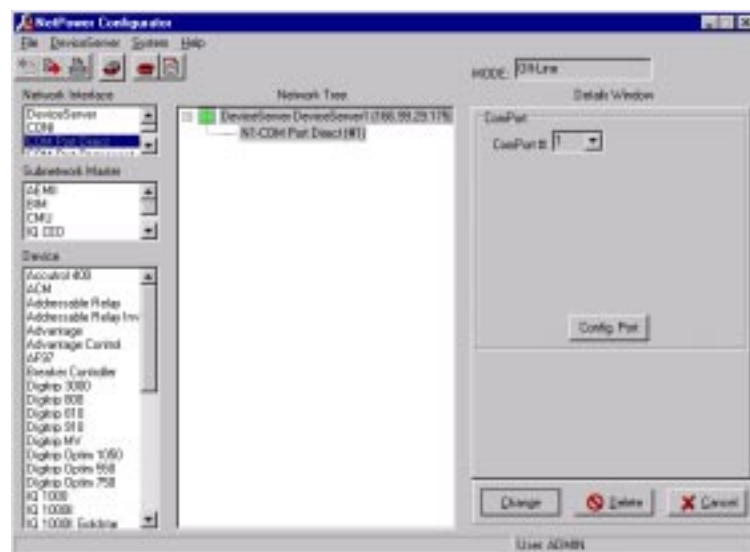


## Adding a COM Port Direct

The COM Port Direct configuration allows you to communicate with a device network through a NetPower DeviceServer's serial port. You communicate with the network through either the MINT or RS232 PONI. The MINT and the RS232 PONI are the communication hardware through which information is routed from the network to the NetPower DeviceServer. You must be sure to configure the COM port to the same settings as the communication hardware.

To configure COM Port Direct, do the following:

1. Drag-and-drop the COM Port Direct from the Network list box to the Network Tree list box, highlighting the NetPower DeviceServer.  
The Network Tree list box updates to display the COM Port Direct, and the Details Window displays the input settings for the COM Port Direct.



2. Select a unique COM port number (1 to 32) in the ComPort # field.
3. Click Config. Port.

The RS232 Information dialog box displays.

4. In the RS232 Type field, select either MINT or RS232 PONI.  
These devices are described in the following table:

| Device     | Description  |
|------------|--|
| MINT       | Permits multiple IMPACC devices.<br>Communicates using the RS232 to INCOM protocol.<br>There are no device restrictions. |
| RS232 PONI | Permits a single IMPACC device.<br>Communicates using the RS232 to INCOM protocol.<br>Supports only one device.          |

5. In the Baud Rate field, select the baud rate for the particular communication hardware that you have chosen. The available baud rates for each are described in the following table.

| Device     | Baud Rate                     |
|------------|-------------------------------|
| MINT       | 1200, 2400, 9600, 19.2 k baud |
| RS232 PONI | 1200 baud only                |

6. Because you are configuring the COM port, you must match the communications protocol for the hardware you are using. Make the proper selections for:

- ◆ Time Extended field
- ◆ Handshake field
- ◆ Stop Bits radio buttons
- ◆ Use Ack/Nack check box
- ◆ Enable Initially check box

**Note**

Default values display for the Data Bits and Parity output fields. Be sure that your communication hardware is physically configured to these settings.

7. Click OK.

The NetPower Configurator main window displays with list boxes inactive (grayed out).

8. Click Add.

The Network Tree list box updates to display the device communications network interface, designated by the prefix Nx, where N represents the network designation, and x represents the particular network number.

The Details Window displays the COM Port Direct settings.

You are now able to add devices to the NetPower DeviceServer. To add devices, see the section *Adding a Device*.

**Note**

If you want to check or edit the settings of a COM Port Direct configuration at a later time, click on the COM Port Direct in the Network Tree list box and click Config. Port. The RS232 Information dialog box displays, showing the corresponding settings.

## Configuring a COM Port Permanent

The COM Port Permanent configuration allows you to communicate with a device network through the NetPower DeviceServer serial port and an attached modem. You communicate with the network through a modem and a MINT or RS232 PONI, or through Modem PONI. Once you add the COM Port Permanent, the phone number is automatically dialed. If the line disconnects, the number is re-dialed.

**Note**

Before you configure the COM Port Permanent, make sure the modem and phone line are installed correctly at both the local site and the remote site.

The MINT, the RS232 PONI, and the Modem PONI are the communication hardware through which information is routed from the

network to the NetPower DeviceServer. You must be sure to configure the COM port to the same settings as the communication hardware.

If you are configuring the COM Port Permanent for the first time, you must first define a telephone number in the Phone Directory.

To add telephone numbers in the Phone Directory, see the section *Using the Phone Directory*.

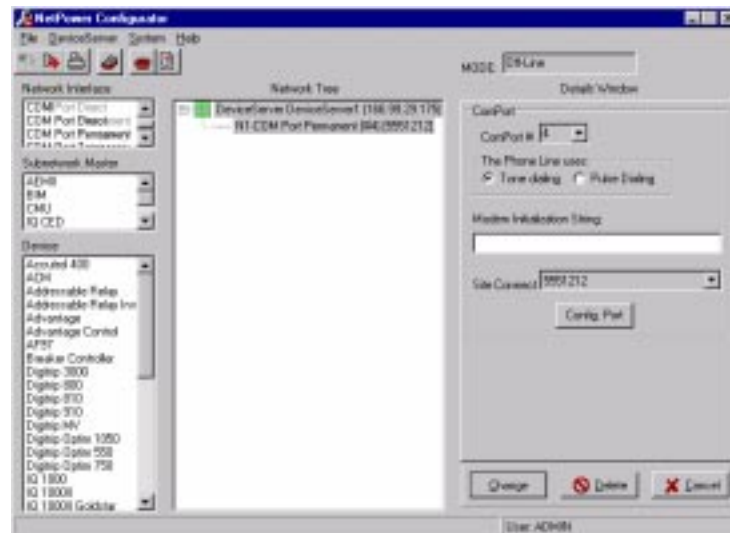
**Important**

Before you configure a COM Port Permanent, increase the Timeout limit to 60 seconds. To change the Timeout Limit, see the section *Setting the TCP/IP Timeout Limit*.

To configure COM Port Permanent, do the following:

1. Drag-and-drop the COM Port Permanent from the Network list box to the Network Tree list box, highlighting the NetPower DeviceServer.

The Network Tree list box updates to display the COM Port Permanent, and the Details Window displays the input settings for the COM Port Permanent.



2. Select a unique COM port device number (1 to 32) in the ComPort # field.
3. Select either the tone dialing or pulse dialing radio button.
4. If necessary (in accordance with the manufacturer's specifications), type the required string in the Modem Initialization String field.
5. Select the desired telephone number in the Site Connect field.
6. Click Config. Port.

The RS232 Information dialog box displays.

7. In the RS232 Type field, select MINT, RS232 PONI, or Modem PONI.

These devices are described in the following table:

| Device     | Description  |
|------------|--|
| MINT       | Permits multiple IMPACC devices.<br>Communicates using the RS232 to INCOM protocol.<br>There are no device restrictions. |
| RS232 PONI | Permits a single IMPACC device.<br>Communicates using the RS232 to INCOM protocol.<br>Supports only one device.          |
| MODEM PONI | Permits a single IMPACC device.<br>Communicates using the RS232 to INCOM protocol.<br>Supports only one device.          |

8. In the Baud Rate field, select the baud rate for the particular communication hardware that you have chosen.

The available baud rates for each are described in the following table.

| Device     | Baud Rate             |
|------------|-----------------------|
| MINT       | 1200, 2400, 9600 baud |
| RS232 PONI | 1200 baud only        |
| MODEM PONI | 1200, 2400, 9600 baud |

9. Because you are configuring the COM port for a modem, you must match the communications protocol for the modem to which you are dialing and connecting. Make the proper selections for:
  - ◆ Time Extended field
  - ◆ Handshake field
  - ◆ Stop Bits radio buttons
  - ◆ Use Ack/Nack check box
  - ◆ Enable Initially check box

**Note**  
Default values display for the Data Bits and Parity output fields. Be sure that your communication hardware is physically configured to these settings.

10. Click OK.

The NetPower Configurator main window displays with the list boxes inactive (grayed out).

11. Click Add.

The Network Tree list box updates to display the configured device network, designated by the prefix Nx, where N represents the network designation, and x represents the particular network number.

The Details Window displays the COM Port Permanent input settings.

You are now able to add devices to the NetPower DeviceServer. To add devices, see the section *Adding a Device*.

**Note**  
If you want to check or edit the settings of the COM Port Permanent configuration at a later time, click on the COM Port Permanent in the Network Tree list box and click Config. Port. The RS232 Information dialog box displays, showing the corresponding settings.

## Configuring a COM Port Temporary

The COM Port Temporary configuration allows you to communicate with a device network through the NetPower DeviceServer serial port and a modem. This configuration allows you to temporarily communicate with the network through a modem and a MINT or RS232 PONI. Each time you want to communicate with the network, you use the modem to connect to the remote site. When you are finished, the connection must be terminated manually.

### Note

You do not need to have defined telephone numbers to configure the COM Port Temporary, but you do need at least one defined telephone number to configure the associated communications hardware (MINT, etc.). To define telephone numbers, see the section *Using the Phone Directory*.

You must be sure to configure the COM port to the same settings as the communication hardware.

### Important

Before you configure a COM Port Temporary, increase the Timeout limit to 60 seconds. To change the Timeout Limit, see the section *Setting the TCP/IP Timeout Limit*.

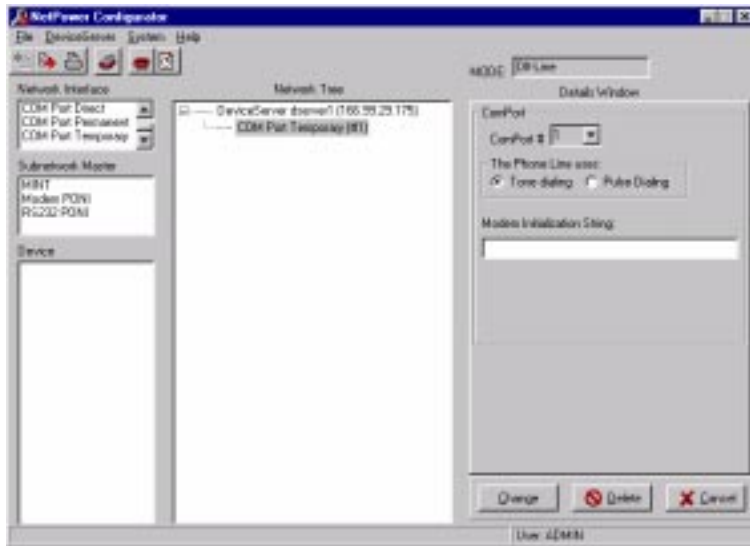
To configure COM Port Temporary, do the following:

1. Drag-and-drop the COM Port Temporary from the Network list box to the Network Tree list box, highlighting the NetPower DeviceServer.

The Network Tree list box updates to display the COM Port Temporary, and the Details Window displays the input settings for the COM Port Temporary.





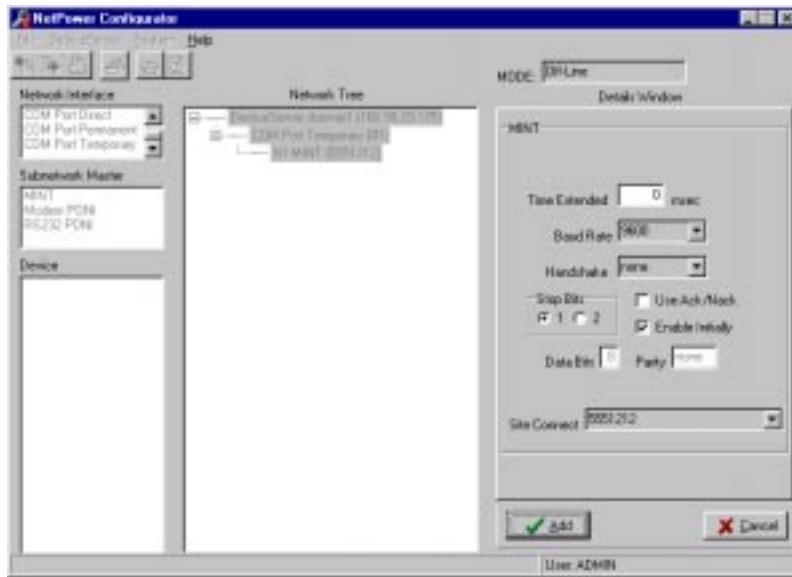


6. Drag-and-drop a MINT, an RS232 PONI, or a Modem PONI from the Subnetwork Master list box to the Network Tree list box, highlighting the COM Port Temporary.

These devices are described in the following table:

| Device     | Description  |
|------------|--|
| MINT       | Permits multiple IMPACC devices.<br>Communicates using the RS232 to INCOM protocol.<br>There are no device restrictions. |
| RS232 PONI | Permits a single IMPACC device.<br>Communicates using the RS232 to INCOM protocol.<br>Supports only one device.          |
| MODEM PONI | Permits a single IMPACC device.<br>Communicates using the RS232 to INCOM protocol.<br>Supports only one device.          |

The Details Window updates to display the input settings for the selected hardware.



7. In the Baud Rate field, select the baud rate for the particular interface that you have chosen. The available options are described in the following table.

| Device     | Baud Rate             |
|------------|-----------------------|
| MINT       | 1200, 2400, 9600 baud |
| RS232 PONI | 1200 baud only        |
| MODEM PONI | 1200, 2400, 9600 baud |

8. In the Site Connect field, select the desired telephone number.
9. Because you are configuring the NetPower DeviceServer COM port for a modem, you must match the communications protocol for the modem to which you are dialing and connecting. Make the proper selections for:
  - ◆ Time Extended field
  - ◆ Handshake field
  - ◆ Stop Bits radio buttons
  - ◆ Use Ack/Nack check box
  - ◆ Enable Initially check box

**Note**

Default values display for the Data Bits and Parity output fields. Be sure that your communication hardware is physically configured to these settings.

10. Click Add in the NetPower Configurator main window.

The Network Tree list box updates to display the configured device network, designated by the prefix Nx, where N represents the network designation, and x represents the particular network number.

The Details Window displays the input settings for the communication hardware.

You are now able to add devices to the NetPower DeviceServer. To add devices, see the section *Adding a Device*.

**Note**

If you want to check or edit the settings of the COM Port Temporary configuration at a later time, click on the desired communication hardware in the Network Tree list box and click Config. Port. The RS232 Information dialog box displays, showing the corresponding settings.

## Using the Phone Directory

In order to configure the COM Port Permanent and the COM Port Temporary networks, you must have a telephone number of a remote device network for the NetPower DeviceServer to dial. As you add Telephone numbers to the Phone Directory, they are stored in the Configuration Database. These numbers are automatically accessed when you configure either the COM Port Permanent or COM Port Temporary networks.

An error message displays if you do not have a telephone number in the database, and you attempt to configure either the COM Port Permanent or COM Port Temporary networks.

### ***Adding a Phone Number***

To add a phone number to the Phone Directory, do the following:

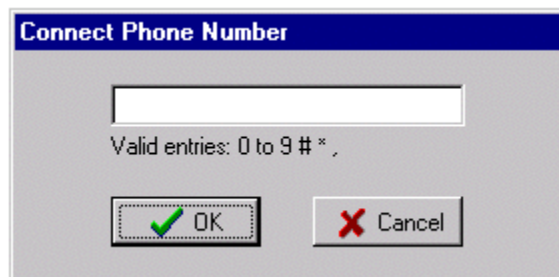
1. Click the Phone Directory icon.

The Phone Directory dialog box displays.



2. Click New.

The Connect Phone Number dialog box displays.



3. Type a telephone number in the field.
4. Click OK.

The Connect Phone Number dialog box closes, and the telephone number displays in the Phone Directory dialog box.

5. Repeat steps 1 through 4 to add subsequent telephone numbers.
6. Click OK in the Phone Directory dialog box to finish adding telephone numbers.

The phone numbers are stored in the Configuration Database. NetPower Configurator supplies these phone numbers for selection when you configure certain types of device networks.

### ***Changing a Phone Number***

To change a phone number, do the following:

1. Click the Phone Directory icon.

The Phone Directory dialog box displays.

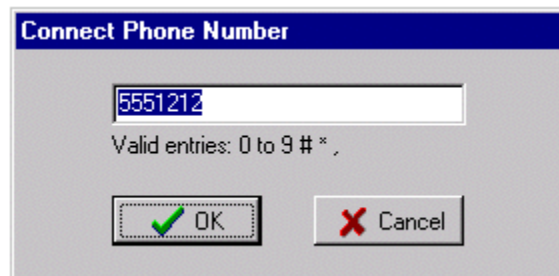


2. Click on the phone number you want to edit.

The Edit and Delete buttons become active.

3. Click Edit.

The Connect Phone Number dialog box displays.



4. Edit the selected phone number.

5. Click OK.

The Connect Phone Number dialog box closes, and the edited telephone number displays in the Phone Directory dialog box.

6. Click OK in the Phone Directory dialog box to finish editing phone numbers.

### ***Deleting a Phone Number***

To delete a phone number, do the following:

1. Click the Phone Directory icon.  
The Phone Directory dialog box displays.
2. Click on the desired phone number to delete.  
The Edit and Delete buttons become active.
3. Click Delete.  
The phone number is deleted.
4. Click OK in the Phone Directory dialog box to finish deleting phone numbers.

## **Modifying a Device Communication Network Interface**

To modify a device communication network interface, do the following:

1. In the Network Tree list box, click on the network interface (either CONI, COM port direct, COM port permanent, or COM port temporary) you want to modify.  
The Details Window updates to display the input settings for that network interface.
2. Make the desired changes to the input settings.
3. Click Change.  
NetPower Configurator updates the input settings, and displays the changes in the Network Tree list box.

## **Deleting a Device Communication Network Interface**

### **Important**

Deleting a device communication network interface deletes all the devices that connect to that network interface from the Configuration database.

To delete a device communication network interface, do the following:

1. In the Network Tree list box, click on the network interface (either CONI, COM port direct, COM port permanent, or COM port temporary) you want to delete.  
The Details Window updates to display the input settings for the selected device network.
2. Click Delete.

A confirmation dialog box displays, confirming the request to delete the item.

3. Click Yes.

NetPower Configurator deletes all of the associated items, beginning with the lowest branch in the network tree, and working up to the device network.

## Adding a Device

After you have added the NetPower DeviceServer and a device communications network interface, you are able to add devices (including subnetwork masters) to these networks.

Certain IMPACC devices cannot communicate with certain networks or subnetwork masters. NetPower Configurator is automated such that once you added a NetPower DeviceServer and the proper communication interface, only the IMPACC devices that display in the Device list box are ones that can communicate with the set of selected items.

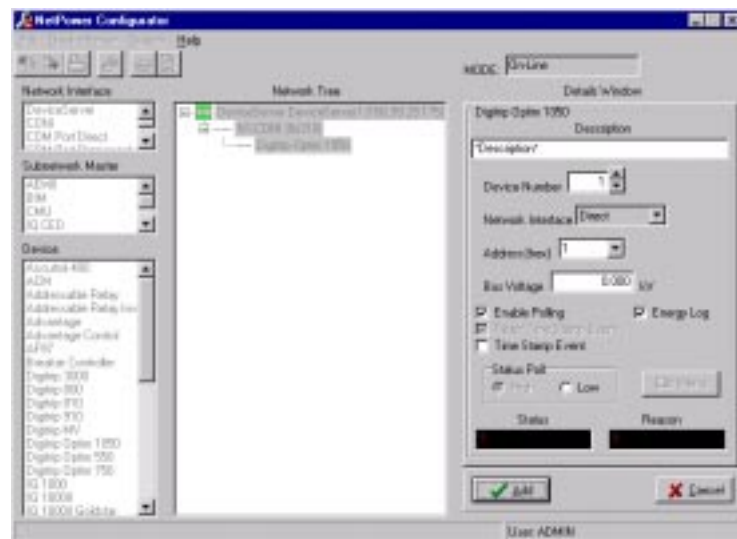
To add a device, do the following:

### Note

Before you attach (configure) a device to a specific item, click on that item to list the devices that are configurable to that item.

1. Drag-and-drop a device from the Device list box to the Network Tree list box, highlighting a particular item in a device network.

The Network Tree list box updates to display the device, and the Details Window displays the input settings to be entered for the device.



**Note**

If you attempt to attach a device to an item that cannot be configured with that device, an error message displays.

You can only attach a single item to an RS232 PONI and a Modem PONI.

2. In the Description field, type a description for the device.
3. In the Device Number field, either select a device number, or allow NetPower Configurator to set the device number by default.

**Note**

Once you use a device number in a NetPower DeviceServer configuration, that number is removed from the Device number field for the particular NetPower DeviceServer configuration. The device number becomes available if you delete a device, or if you select another NetPower DeviceServer.

4. In the Network Interface field, select the correct interface.  
The device may be wired to the device network, either directly or through a PONI.
5. Select the correct address for the device in the Address (hex) field. If you are configuring the device in a subnetwork, the Address field automatically displays the allowable number of device addresses for the corresponding subnetwork master.  
The address corresponds to the dip switch settings on the subnetwork master or at its interface (PONI or Direct), and must not be used by any other device.
6. In the Details Window, make the appropriate settings for the device you are configuring. The selections vary. Use the following table to make your selections.

| Setting                | Description  |
|------------------------|--|
| Bus Voltage            | Type the line voltage to which the IMPACC device is attached. This value is also used to correctly display trip curves in NetPower Setpoints and Tripcurve.                      |
| Enable polling         | Clear this check box if you wish to service (and not poll) this device. When you clear this check box for a particular subnetwork master, the Reason output field displays DABL. |
| Reset Time Stamp Event | Select this check box to enable the device to reset its Time Stamp Event buffer, should that device generate an event.   |



| Setting           | Description   |
|-------------------|---|
| Time Stamp Events | Select this check box to enable the device to save information to its Time Stamp Event buffer, should that device generate an event.                                    |
| Energy Log        | Select this check box to enable the device to perform energy logging.   |
| Status Polling    | Select the High radio button for high priority polling for the status of the device. Select the Low radio button for low priority polling for the status of the device. |

- Click Add in the NetPower Configurator main window.

The Network Tree list box updates to display the configured device, designated by the prefix Dx, where D represents the device designation, and x represents the particular device number.

The Details Window updates the input settings for the device, and displays the Status and Reason fields, which display the real-time status and status reason of the device when in On-Line mode.

- Repeat steps 1 through 7 to configure additional devices.

After you add the device, you may want to assign scan rates or set device trending.

## Assigning Polling Rates to a Device

You assign data priority levels, because specific data may change more often than other data.

There are two polling rates that you assign to a device:

- ◆ Status Scan
- ◆ Data Scan

### Note

You may optimize data throughput of a device network by modifying default data and status scan rates across devices. This procedure, performed at the NetPower DeviceServer, involves setting scan rates to specific pre-defined priority levels. For more information, see the section *Setting Polling Rates*.

## Assigning Device Status Scan Rates

To assign device status scan rates, do the following:

- In the Network Tree list box, click on the device to which you want to assign device status scan rates.

The Details Window updates to display the input settings for the particular device.

2. Select the High Rate radio button to poll at the High rate, or select the Low Rate radio button to poll at the Low rate.

**Note**

You set the actual polling rates to the High Rate and Low Rate at a NetPower DeviceServer. If you set the High Rate to zero, the High rate radio button will be grayed out (inactive).

3. Click Change.

NetPower Configurator sends the updated polling rates to the NetPower DeviceServer.

**Assigning Device Data Scan Rates**

To assign device data scan rates, do the following:

1. In the Network Tree list box, click on the device you want to edit.

The Details Window updates to display the input settings for the particular device.

2. Click Edit Menu.

A pop-up menu displays.

3. Select the Data Rates menu option.

The Edit Polling Rates dialog box displays.

| User Defined Poll Attribute          | Rate |
|--------------------------------------|------|
| Flags                                | none |
| IA,IB,IC,IX                          | none |
| VAB,VBC,VCA                          | none |
| Watts,Pk Demand Watts                | none |
| Power Factor                         | none |
| Total Energy, Rev Energy, Fwd Energy | none |
| Raw Buffer                           | none |
| System Demand                        | none |
| Frame and Plug                       | none |

Rate 1: 15 seconds  
Rate 2: 20 seconds  
Rate 3: 0 seconds  
none

The window on the left-hand side of the dialog box lists all the device data attributes and corresponding default polling rates.

The section on the right-hand side of the dialog box displays the polling rates for three pre-defined priority levels (Rate 1, Rate 2, and Rate 3).

**Note**  
You set the polling rates for Rate 1, Rate 2, and Rate 3 at the NetPower DeviceServer. For more information, see the section *Setting Polling Rates*.

4. For the listed device data attributes, do one of the following:
- ◆ Assign a high priority polling rate for a particular device data attribute by first selecting it, then clicking Rate 1.
  - ◆ Assign a medium priority polling rate for a particular device data attribute by first selecting it, then clicking Rate 2.
  - ◆ Assign a low priority polling rate for a particular device data attribute by first selecting it, then clicking Rate 3.

The priority level for the selected device data attribute updates to the rate you selected.

| User Defined Poll Attribute          | Rate |
|--------------------------------------|------|
| Flags                                | none |
| IA,IB,IC,IX                          | 1    |
| VAB,VBC,VCA                          | 1    |
| Watts,Pk Demand Watts                | 1    |
| Power Factor                         | 2    |
| Total Energy, Rev Energy, Fwd Energy | 1    |
| Raw Buffer                           | 2    |
| System Demand                        | 2    |
| Frame and Plug                       | 2    |

Rate 1: 15 seconds  
Rate 2: 20 seconds  
Rate 3: 0 seconds  
none

**Note**  
If you click None for the desired polling rate, the device is not polled periodically. The device data will still be polled on a as-needed basis, in the background.

5. Click OK.

NetPower Configurator sends the updated polling rates to the NetPower DeviceServer and to the Configurator Database.

## Setting Device Trending

Device Trending allows you to track and record device-specific data at regular time intervals. The purpose of accumulating this data is to identify and analyze trends in device data. While a NetPower DeviceServer polls devices on a continuous basis, Device Trending may be defined for specific time intervals over which you want to collect data (current, voltage, etc.) for a particular device or subnetwork master. Once you configure these time intervals for device attributes, you can use the NetPower Monitor application to examine these trends.

You may use Device Trending to define multiple device attributes over different time intervals and/or define multiple time intervals for the same device attribute. For example, you may want to define the following:

- ◆ Phase A Current: Frequency: Daily, Every 4 hours; Start Time: Midnight
- ◆ Peak Demand of Phase A Current: Frequency: Daily, Every 2 hours; Start Time: Midnight
- ◆ Peak Demand of Phase A Current: Frequency: Weekly; Start Time: Midnight

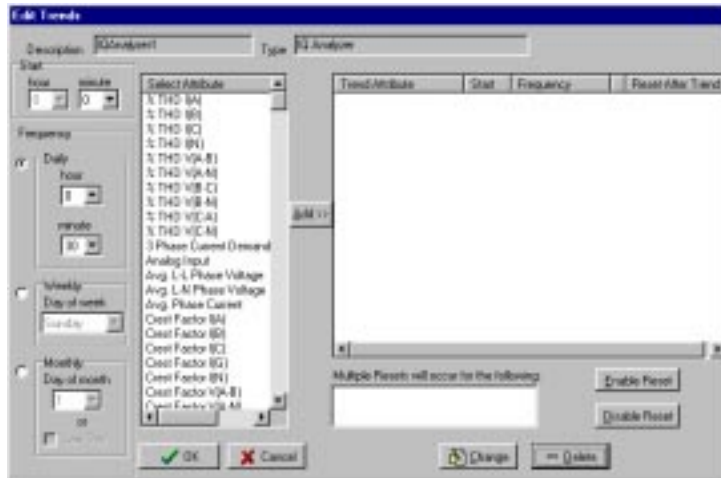
You add the particular device attribute (Phase A Current, Peak Demand of Phase A Current) to a custom list, and for each attribute, define the beginning time and frequency for which you wish to trend. To configure attributes for Device Trending, see the section *Configuring a Device Attribute for Trending*.

### **Edit Trends Main Window**

To access the Edit Trends main window, do the following:

1. Select a device
2. On the Details Window, click Edit Menu.  
A pop-up menu displays.
3. Select Trend.

The Edit Trends main window displays.



The following table describes the elements for the Edit Trends main window.

| Element          | Function  |
|------------------|---|
| Description      | This field displays the name of the selected device attribute.  |
| Type             | This field displays the selected device type.   |
| Select Attribute | This list box displays available device attributes from which you select (to add to the Trend Attribute list box).  |
| Trend Attribute  | This list box displays the selected device attributes for Device Trending.  |
| Start            | These fields are used to set the Trending Start Time.   |
| Daily            | This radio button represents one of three available Trending Frequency options. The associated fields are used to set the time interval during which you wish to trend over a 24-hour period.   |
| Weekly           | This radio button represents one of three available Trending Frequency options. The associated field is used to define the day of the week in which you wish to trend.  |
| Monthly          | This radio button represents one of three available Trending Frequency options. The associated field is used to define the day of the month in which you wish to trend. (You may define either a specific day of the month or the last day of the month.) |

| Element         | Function  |
|-----------------|---|
| Multiple Resets | This field lists the associated buffers, if you wish to enable multiple Trending Resets using varying Trending settings. For more information, see the section <i>Multiple Resets</i> . |

### Configuring a Device Attribute for Trending

To configure an attribute for Device Trending, do the following:

1. In the Network Tree list box of the NetPower Configurator main window, click on the device you want to edit.

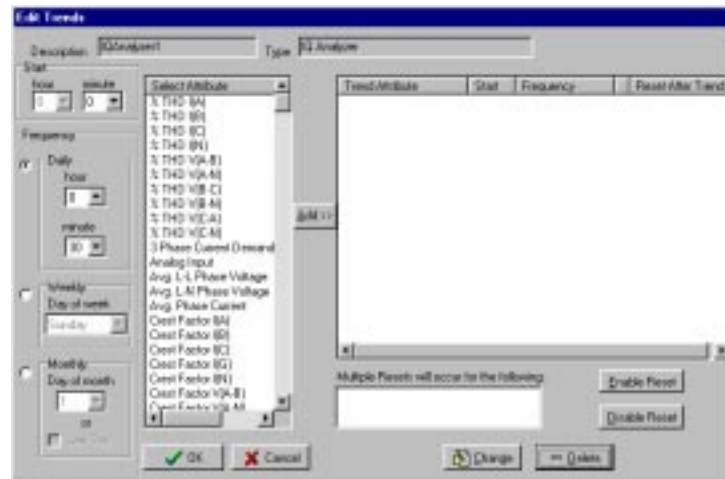
The Details Window updates to display the input settings for the particular device.

2. Click Edit Menu.

A pop-up menu displays.

3. Select Trend.

The Edit Trends main window displays.



4. In the Frequency section, select the time interval at which you want to perform Device Trending.

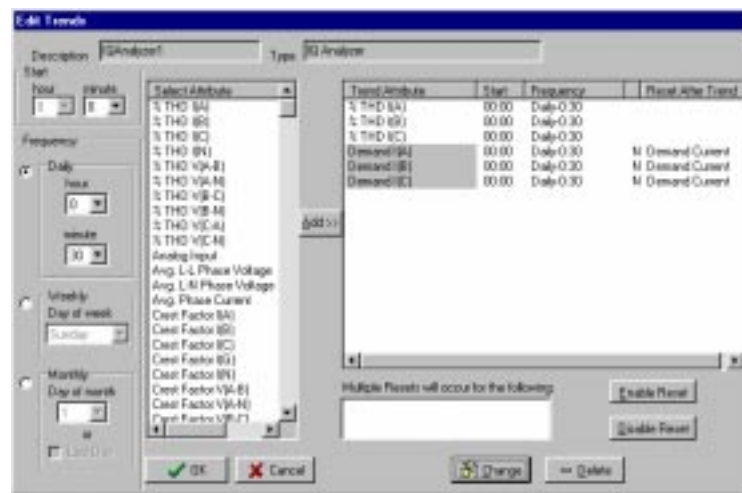
You may select either the Daily, Weekly, or Monthly radio button.

Because a relationship exists between Trending Frequency and Start Time, if you select Daily at a specific Trending interval, the available Trending Start Times may change.

If you select Monthly, you may define when to perform Device Trending as either a specific day, or the last day of the month.

5. In the Start section, select the hour and minute at which you want to start Device Trending.
6. In the Select Attribute list box, select the device attribute or attributes you want to configure.
7. Click Add.

The selected attribute or attributes are configured to the most current settings, and display in the Trend Attribute list box.



**Note**

If the configured device attributes have the capability to be reset after trending, the Reset After Trend column displays. For more information on resetting attributes, see the section *Resetting for Device Trending*.

8. To configure additional device attributes, repeat steps 4 through 7.  
As you configure additional device attributes, the Trend Attribute list box reorders the attributes alphabetically.
9. Click OK.

The Edit Trends window closes.

### ***Editing Device Trending Settings***

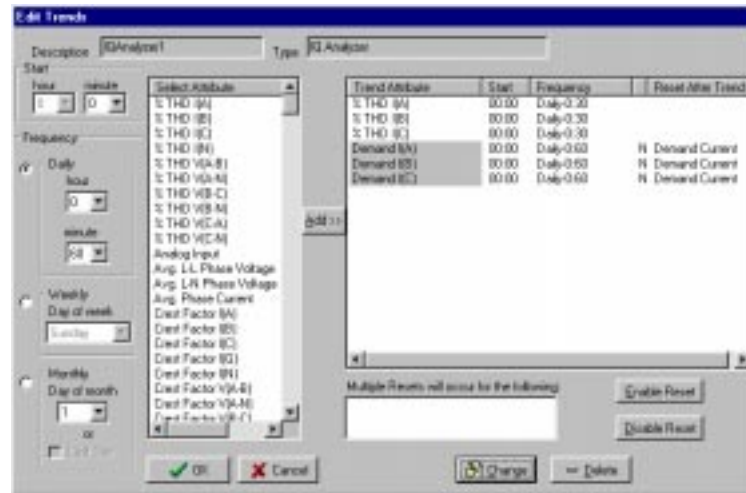
To edit trending settings for a device attribute, do the following:

1. In the Network Tree list box of the NetPower Configurator main window, click on the device you wish to edit.  
The Details Window updates to display the input settings for the particular device.
2. Click Edit Menu.  
A pop-up menu displays.
3. Select the Edit Trend menu option.

The Edit Trends window displays.

4. Edit the settings you want to edit.
5. Click Change.

The selected attributes update to the most current settings, and display in the Trend Attribute list box.



6. Click OK.

The Edit Trends window closes.

### ***Deleting a Device Attribute***

To delete a device attribute from Device Trending, do the following:

1. In the Network Tree list box of the NetPower Configurator main window, click on the device you want to edit.

The Details Window updates to display the input settings for the particular device.

2. Click Edit Menu.

A pop-up menu displays.

3. Select the Edit Trend menu option.

The Edit Trends window displays.

4. In the Trend Attribute list box, select the device attribute or attributes you want to delete.

5. Click Delete.

The selected device attributes are deleted from Device Trending.

6. Click OK.

The Edit Trends window closes.



## Resetting for Device Trending

Device attributes may have the capability to reset after device trending is performed. If a device attribute has this capability, when you add the device attribute to the Trend Attribute list box, the Reset After Trend column displays. The Reset After Trend column lists the name of the buffer to which the attribute belongs, and whether the attribute is enabled to reset after trending. If Device Trending is enabled, a (Y) displays. If Device Trending is disabled, an (N) displays.

If you enable a device attribute to reset, the value for that attribute is reset after device trending is performed. For example, if the Trending frequency for Demand Phase (A) Current is defined as Daily-0:30, then after every 30-minute interval, the value for that attribute is reset.

Multiple attributes may belong to the same buffer. If attributes belong to the same buffer, then trending is performed at all defined Trending settings for all associated device attributes. For more information, see the section *Multiple Resets*.

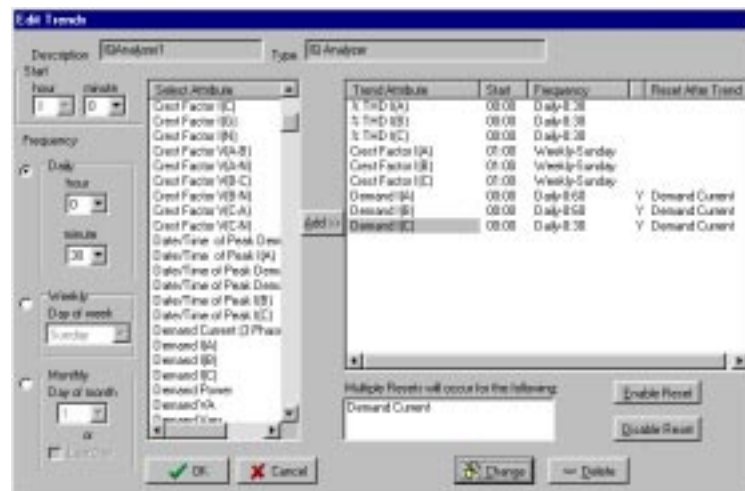
## Enabling and Disabling the Device Trending Reset

To enable or disable the Device Trending Reset, do the following:

1. In the Trend Attribute list box, select the configured device attribute or attributes you want to edit.
2. To enable the Device Trending Reset, click Enable Reset.

The Reset After Trend column in the Trend Attribute list box displays (Y).

If the device attribute belongs to a buffer that holds another attribute defined at different Trending settings, then the name of the buffer displays in the Multiple Resets list box.



**Note**

For more information about multiple resets, see the section *Multiple Resets*.

3. To disable the Device Trending Reset, click Disable Reset.  
The Reset After Trend column in the Trend Attribute list box displays (N).
4. Click OK.

The Device Trending Reset settings are saved.

**Multiple Resets**

When you enable the Device Trending Reset for a configured device attribute, the value for that attribute resets after Trending occurs. However, if the device attribute belongs to a buffer that holds another configured device attribute, which is defined at different Trending settings, then both device attributes are reset to both defined settings.

For example, if the Trending settings for Peak Demand Phase (A) Current are defined as Daily-0:30, and the Trending settings for Demand Phase (A) Current are defined as Daily-0:10, then both attributes reset at 10-minute and 30-minute intervals.

When you define the Trending settings for a particular device, be sure to check that the device attributes are reset at the desired intervals.

## Modifying Device Settings

To modify a device, do the following:

1. In the Network Tree list box, click on the device you want to modify.  
The Details Window updates to display the input settings for that device.
2. Make the desired changes to the input settings.
3. Click Change.

NetPower Configurator updates the input settings, and the changes are displayed in the Network Tree list box.

## Copying Device Settings

To copy the settings of one device to another device, do the following:

**Important**

You can only copy the settings of one device type to a device of the same type. For example, you may copy the polling rates of a Digitrip 910 only to another Digitrip 910.

1. In the Network Tree list box, click on the device from which you want to copy settings.

The Details Window updates to display the input settings for that device.

2. Right-click on the selected device.

A pop-up menu displays.

3. Select the desired option to copy from that device, according to the following table.

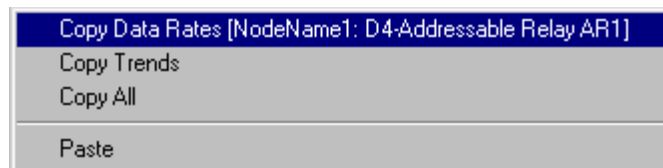
| Option          | Description   |
|-----------------|---|
| Copy Data Rates | Copy the polling rates for the associated device attributes. For more information, see the section <i>Assigning Polling Rates to a Device</i> . |
| Copy Trends     | Copy the configured device attributes and associated Trending settings. For more information, see the section <i>Copying Device Settings</i> .  |
| Copy All        | Copy both Data Rates and Trends.  |

4. Click on the device to which you want to copy the settings.

The Details Window updates to display the input settings for that device.

5. Right-click on the selected device.

A menu displays. Information for the device that you are copying from displays in the menu.



6. From the menu, select Paste.

The settings from the first selected device are copied to the second selected device.

## Deleting a Device

### Important

Deleting a device removes all devices connect to that device from the Configuration database.

To delete a device, do the following:

1. In the Network Tree list box, click on the device you want to delete.

The Details Window updates to display the input settings for the selected device.

2. Click Delete.

A confirmation dialog box displays, confirming the request to delete the item.

3. Click Yes.

NetPower Configurator deletes the item, and the Details Window no longer displays.

## Working in Off-Line Mode

To configure your system Off-Line, you follow the same steps to add NetPower DeviceServers, device communication network interfaces, and devices as if you are in On-Line mode. However, the additions you make are saved only to the Configuration database, and not to the NetPower DeviceServer.

If you run NetPower Configurator in Off-Line mode, and make any additions or changes to the system, when you next run NetPower Configurator in On-Line mode, you are prompted to synchronize.

While in Off-Line mode, you can:

- ◆ Export a database
- ◆ Import a database
- ◆ Import Series III configuration databases

### Note

You can also export a database in On-Line mode.

## Synchronization

Whenever you save a configuration, the date and time (the time stamp) are also saved. If you are in On-Line mode, the time stamps between the Configuration database and the NetPower DeviceServer are always the same. When you are in Off-Line mode and make additions or changes to the system, the time stamps between the Configuration Database and the NetPower DeviceServer differ, as Off-Line mode does not save to the NetPower DeviceServer.

When you configure your system off-line, and then run NetPower Configurator in the On-Line mode, the NetPower DeviceServer/Database Synchronize dialog box displays, prompting you to synchronize.

**DeviceServer / Database Synchronize**

IP Address: 166.99.29.175      Description: dserver1

|         | DeviceServer          | Database              |
|---------|-----------------------|-----------------------|
| Created | 06/02/1998 06:12:24pm | 06/05/1998 04:52:16pm |

Upload from DeviceServer      Download to DeviceServer

Select      Select

Cancel

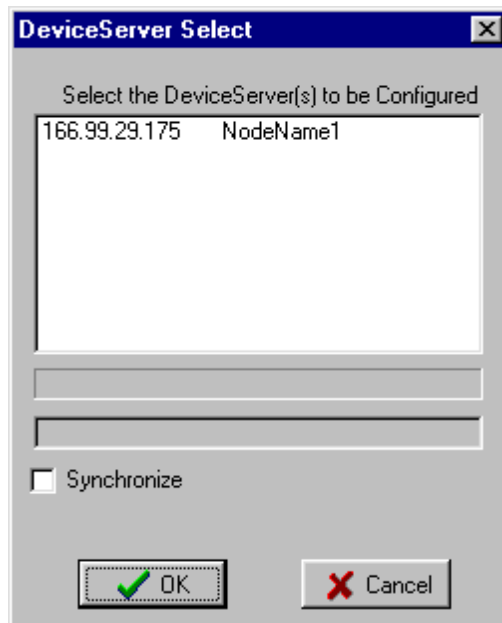
**Note**

The dialog box displays whenever you run NetPower Configurator and there is a discrepancy between the time stamps on the NetPower DeviceServer and the Configuration Database.

You must either upload the configuration from the NetPower DeviceServer and overwrite the Configuration database, or download the configuration from the Configuration database to the NetPower DeviceServer.

- ◆ To use the NetPower DeviceServer configuration and overwrite the Configuration Database, click Upload from NetPower DeviceServer.
- ◆ To use the configuration in the Configuration database and overwrite the NetPower DeviceServer configuration, click Download to NetPower DeviceServer.

If you must synchronize the NetPower DeviceServer and the Configuration database, but the Synchronize dialog box does not display, select the Synchronize check box in the DeviceServer Select dialog box.



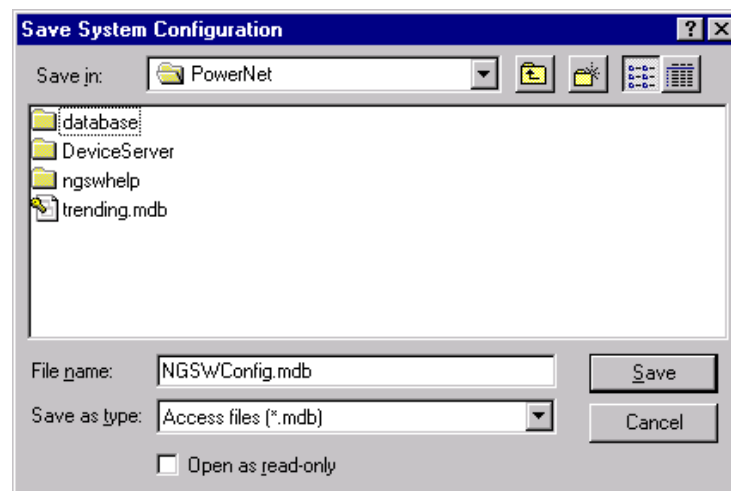
The NetPower DeviceServer/Database Synchronize dialog box displays.

## Exporting a Database

To export a Configuration Database, do the following:

1. Click the Export Database icon.

The Save System Configuration dialog box displays.



2. Browse to the location where you want to save the Configuration Database.
3. If you want the database to be read-only, select the Open as Read Only check box.
4. Click Save.

The Configuration Database is saved to the location you specified.

## Importing a Database

You can import two types of databases:

- ◆ Configuration Database. This is a Configuration Database that was saved by NetPower Configurator.
- ◆ IMPACC Series III data file. This is a database saved in IMPACC Series III.

### Note

To import, you must be logged on to NetPower Configurator in Off-Line mode.

## Importing a Configuration Database

To import a Configuration Database file, do the following:

1. Drag-and-drop the NetPower DeviceServer from the Network list box to the Network Tree list box.

The Network Tree list box updates to display the NetPower DeviceServer, and the Details Window updates to display the input settings for the NetPower DeviceServer.

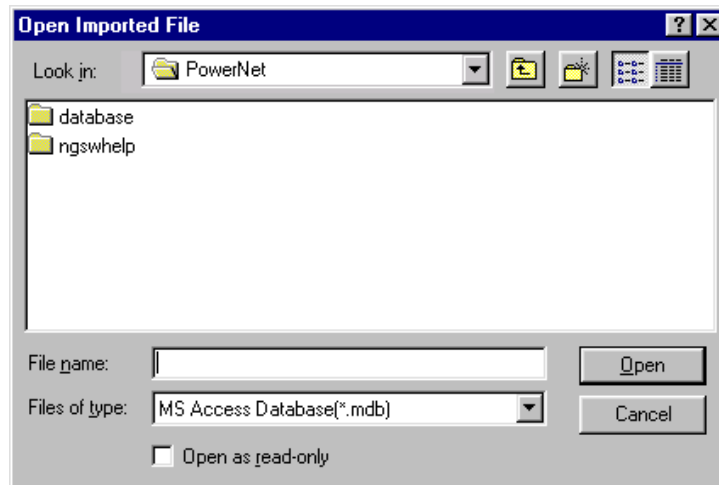
2. In the Node Name field, type a description of the NetPower DeviceServer you are adding.
3. In the IP Address field, type the address of the NetPower DeviceServer you are adding.
4. Click Add.

The Network Tree list box updates to display the NetPower DeviceServer.

### Note

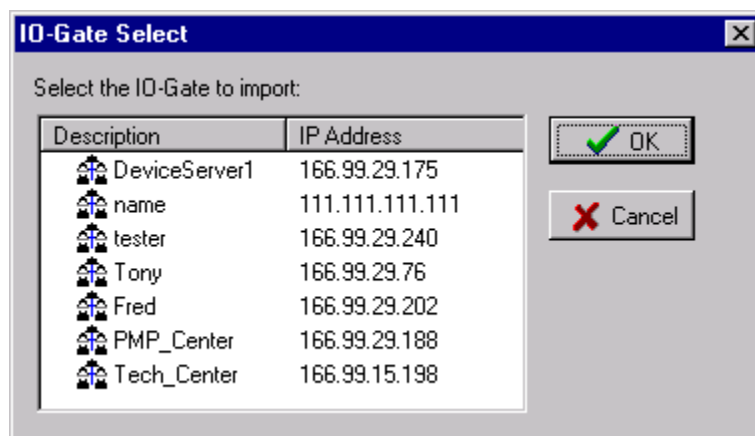
To import a database into a NetPower DeviceServer, that NetPower DeviceServer must have no associated items.

5. Click the Import Database icon.  
The Open Imported File dialog box displays.



6. In the Files of Type field, change the file type to MS Access Database (\*.mdb).
7. Browse for the desired Configurator .MDB file to import, then click Open.

The DeviceServer Select dialog box displays.



8. Select the DeviceServer to import and click OK.  
The Network Tree list box updates to display the imported configuration.
9. Exit NetPower Configurator.
10. Start and log on to NetPower Configurator in On-Line mode.
11. Make any necessary changes to the devices.



### ***Importing a Series III Configuration File***

To import a 16-bit IMPACC file, do the following:

1. Drag-and-drop the NetPower DeviceServer from the Network list box to the Network Tree list box.

The Network Tree list box updates to display the NetPower DeviceServer, and the Details Window displays the input settings for the NetPower DeviceServer.

2. In the Node Name field, type a description of the NetPower DeviceServer you are adding.
3. In the IP Address field, type the address of the NetPower DeviceServer you are adding.
4. Click Add.

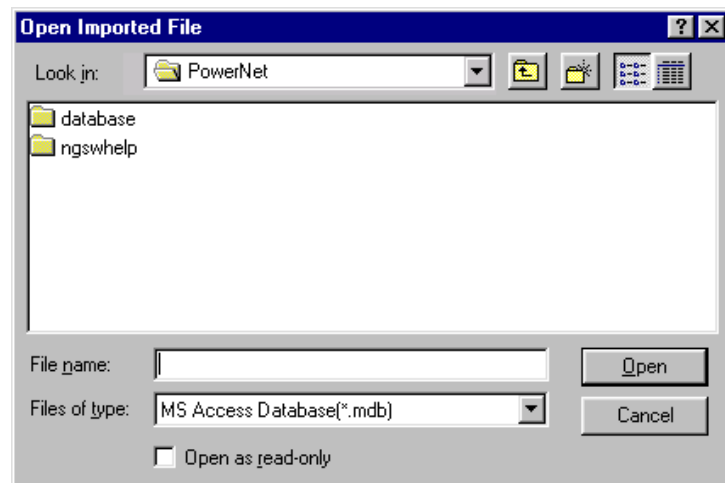
The Network Tree list box updates to display the NetPower DeviceServer.

#### **Note**

To import a database into a NetPower DeviceServer, that NetPower DeviceServer must have no associated items.

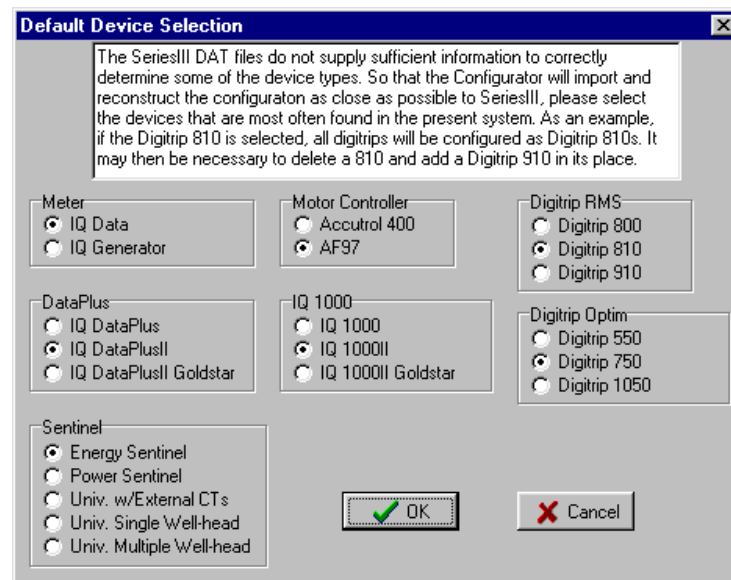
5. Click the Import Database icon.

The Open Imported File dialog box displays.



6. In the Files of Type field, change the file type to IMPACC Configuration File (\*.dat).
7. Browse for the CONFIGV3.DAT file, then click Open.

The NetPower Configurator main window updates to display imported devices. (This window is grayed out while the Default Device Selection dialog box displays.)



The Default Device Selection dialog box lists devices that cannot be defined in NetPower Configurator from the Series III files.

8. Select radio buttons in each section of the Default Device Selection dialog box.

For example, if your configuration has 50 Digitrip 800s and 20 Digitrip 810s, you would select the Digitrip 800 radio button. After NetPower Configurator imports 70 Digitrip 800s, you would record the addresses of the devices, then delete 20 Digitrips, and subsequently reconfigure these 20 devices as Digitrip 810s using the recorded addresses.

9. Click OK.

The Network Tree list box updates to display all of the imported devices.

10. Record the addresses for selected devices to be deleted and reconfigured.
11. Delete the selected devices.
12. Add the new devices using the recorded designations and addresses. For information on adding devices, see the section *Adding a Device*.
13. Exit NetPower Configurator.
14. Start and log into NetPower Configurator in On-Line mode.

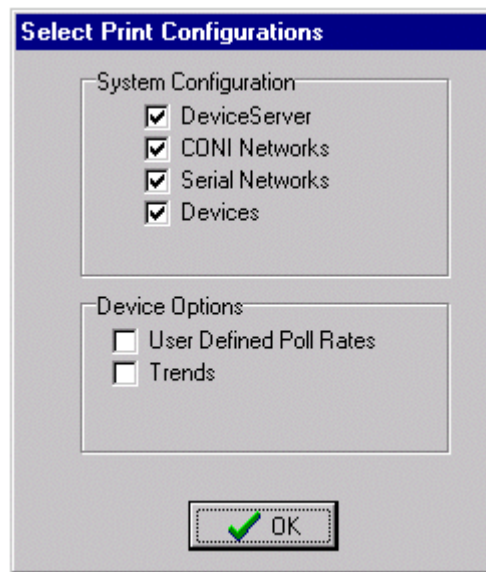
## Printing Network and Device Configurations

The Print feature allows you to print any level of a single NetPower DeviceServer configuration. The default setting enables printing for all levels of the configuration.

To print a NetPower DeviceServer configuration, do the following:

1. Click the Print icon.

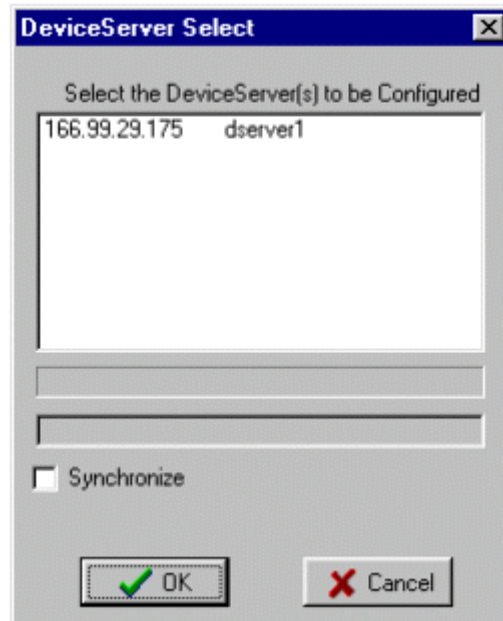
The Select Print Configuration dialog box displays.



Check boxes display with default settings, enabling printing a NetPower DeviceServer configuration for the following configuration levels:

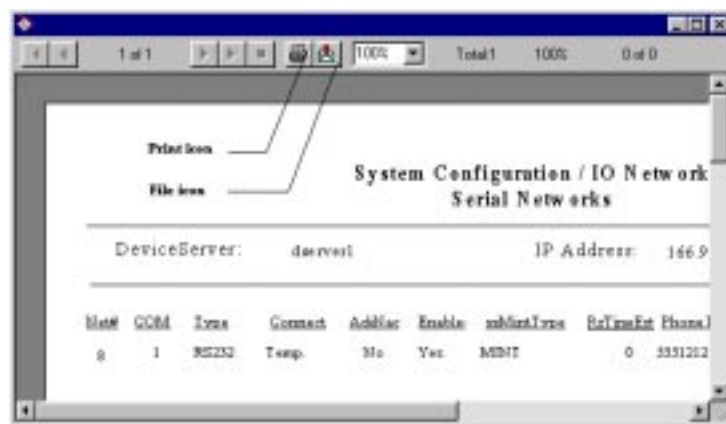
- ◆ NetPower DeviceServers
  - ◆ CONI networks
  - ◆ Serial Networks
  - ◆ Devices
2. If applicable, clear the desired check boxes to disable printing certain configuration levels.
  3. If desired, select User Defined Poll Rates and Trends to print the configurations for these device options.
  4. Click OK.

The DeviceServer Select dialog box displays.



5. Select a NetPower DeviceServer.
6. Click Print.

For all of the selected configuration levels that you selected to print, a window displays.

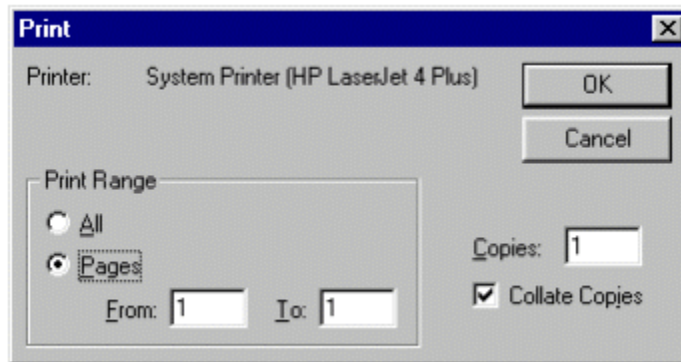


6. In each window, click the print icon to print the file.

**OR**

Click the file icon to save and print the file at a later date.

Each time you click the print icon, the Print dialog box displays, allowing you to select print options.



7. Select your Print options.
  8. Click OK.
  9. Click the exit icon to exit each Print window that displays.
- The system removes each Print Window.

## Advanced Features

Advanced features include:

- ◆ Setting the TCP/IP timeout
- ◆ Setting polling rates
- ◆ Setting NetPower DeviceServer timing
- ◆ Viewing the Polling Communication Statistics.

To set the NetPower DeviceServer timing, you should be familiar with the CONI card and how data transfers across the CONI card.

### Setting the TCP/IP Timeout Limit

Setting the TCP/IP Timeout Limit defines the time window for specific instructions (such as adding or editing a device) to transfer between the NetPower DeviceServer and NetPower Configurator. If the instruction is not completed within this time window, then a message displays, indicating that the particular action was not completed due to a timeout.

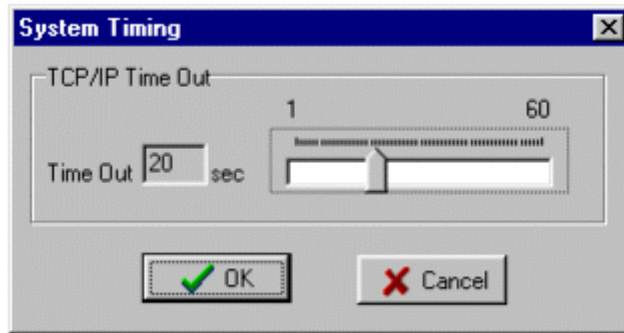
#### Note

NetPower DeviceServer may still have successfully executed the instruction, even if a timeout occurs. To avoid timeouts from occurring, increase the TCP/IP Timeout Limit.

To set the TCP/IP Timeout Limit, do the following:

1. Click the Change Timeout Icon.

The System Timing dialog box displays.



2. Move the slider to the right to increase the timeout or move the slider to the left to decrease the timeout.  
The Time Out text box displays the updated timeout value.
3. Click OK to finish setting the timeout limit.

## Setting Polling Rates

Polling is the process of communicating with a device to determine its status or collect data. To optimize data throughput, you can set polling rates of individual items, minimizing NetPower DeviceServer wait states and timeouts.

A Polling Rate is a user-defined value set to a predefined priority level (i.e., high, low, etc.), and represents the frequency of the polling (i.e., how often the item is polled).

You set the Polling Rates (500 sec, 1000 sec, etc.) on a NetPower DeviceServer, then assign these rates to particular device attributes associated with devices.

There are two types of Polling Rates you can set:

- ◆ **Data Scan.** You set the polling rate for three pre-defined priority levels at which the NetPower DeviceServer polls for device data (current, voltage, etc.). These polling rates are then assigned to polling scans at particular subnetwork masters and/or devices.
- ◆ **Status Scan.** You set this polling rate for two pre-defined priority levels at which the NetPower DeviceServer polls for device status (Run, Closed, etc.). These polling rates are then assigned to subnetwork masters and/or devices

## Setting Data Polling and Status Polling Rates

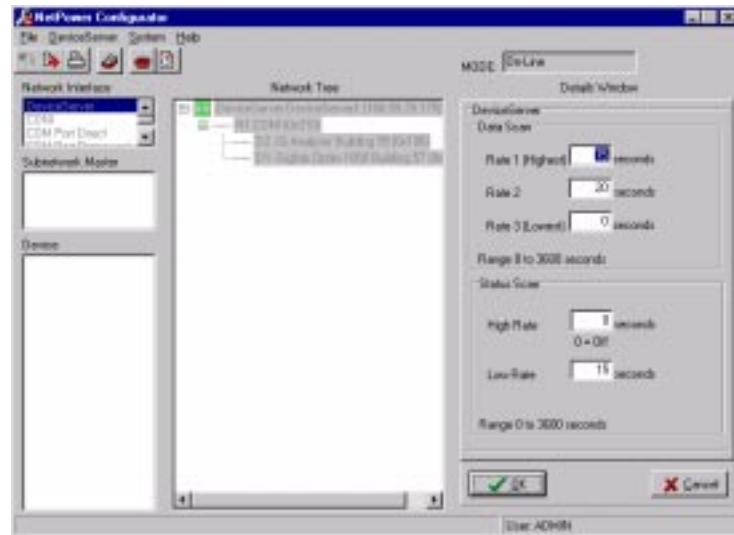
To set the data polling and status polling rates for the NetPower DeviceServer, do the following:

1. In the Network Tree list box, click on the NetPower DeviceServer you wish to edit.

The Details Window updates to display the input settings for the NetPower DeviceServer.

2. Click Polling Rates.

The Details Window updates to display the Data Scan section and the Status Scan section.



3. In the Data Scan section, type the desired polling rates (in seconds) in the Rate 1, Rate 2, and Rate 3 fields.

When you input the time values for the individual polling rates, Rate 1 must be less than Rate 2, and Rate 2 must be less than Rate 3.

**Note**  
The time value refers to the time interval between polls; thus, a lower time value means a faster polling rate.

The following table describes the polling rates:

| Option | Description   |
|--------|---|
| Rate 1 | Highest priority level to poll data values.<br>If data throughput defined at this priority level reaches the time limit, then only data within that time limit is polled. Data values defined at lower priority levels are not polled.                    |
| Rate 2 | Medium priority level to poll data values.<br>If data throughput defined at the Medium and High priority levels reaches the time limit, then only data within that time limit is polled. Data values defined at the lowest priority level are not polled. |

| Option | Description                             |
|--------|---|
| Rate 3 | Low priority level to poll data values. |

The input value must be from 0 to 36,000 seconds.

4. In the Status Scan section, type the desired polling rates (in seconds) in the Low Rate and/or High Rate fields.
  - ◆ High Rate is the rate used for a High priority level for Status Scanning. This rate value must be less than the Low Rate value.
  - ◆ Low Rate is the rate used for a Low priority level for Status Scanning. This rate value must be greater than the High Rate Value. You must set a Low Rate (greater than zero), but not necessarily a High Rate.

**Note**

The time value refers to the time interval between scans; thus, the lower time value means a faster polling rate.

The input value must be from 0 to 36,000 seconds.

5. Click OK.

NetPower Configurator saves the updated status scan rates to the NetPower DeviceServer and Configuration Database.

To assign Data Scan Rates to devices, or to , see the *Assigning Device Status Scan Rates*. To assign the status priority levels to devices, see the section *Assigning Device Status Scan Rates*.

## NetPower DeviceServer Timing

Within the PowerNet Software system, there are three types of communication that involve the NetPower DeviceServer:

- ◆ Communication between PowerNet Software applications and a NetPower DeviceServer via TCP/IP
- ◆ Communication between IMPACC devices and a NetPower DeviceServer via INCOM
- ◆ Communication between Modbus masters and a NetPower DeviceServer via RS-232.

When you configure the NetPower DeviceServer, NetPower DeviceServer timing settings, which control the transfer of data (communication), are set to a default value. To optimize data throughput, you can edit these default settings. These settings are:

- ◆ Subscribe Push Rate.
- ◆ Scan Time Budget.



### ***Setting the Subscribe Push Rate***

The Subscribe Push Rate setting allows you to adjust the rate at which changing device data values (current, voltage, etc.) are sent from the NetPower DeviceServer to an application. The Subscribe Push Rate is designated as such, because the data values are sent or “pushed” from a NetPower DeviceServer to an application, instead of being constantly requested, or “pulled” from the NetPower DeviceServer by the application. An application subscribes for data, to be sent at a defined time interval (much like a magazine subscription), however, a NetPower DeviceServer only sends data to the application if the data has changed since the last time it was sent.

#### **Note**

A NetPower DeviceServer sends the data to the application once every 10 minutes if the data has not changed within the 10-minute period.

Because the time value refers to the interval between polls, increasing the time value for the push rate decreases the rate at which the NetPower DeviceServer sends the data values.

For example, an application subscribes to the NetPower DeviceServer for the Phase A Current (IA) and the Ground Current (IG) at a push rate of 5 seconds. IA changes every second, while IG remains at zero. Initially, the application receives both values after 5 seconds. After that, the application receives the IA value every 5 seconds and the IG value every 10 minutes.

There are several reasons to change the Subscribe Push Rate:

- ◆ To meet a specification for a data update rate.
- ◆ To monitor device data at a very high rate.
- ◆ To reduce TCP/IP network usage by NetPower DeviceServers.

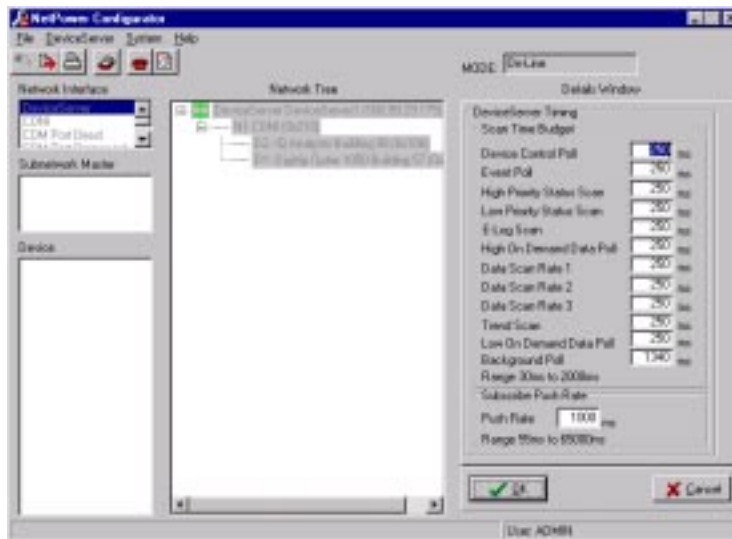
To edit the Subscribe Push rate, do the following:

1. In the Network Tree list box, click on the NetPower DeviceServer you want to edit.

The Details Window updates to display the input settings for the selected NetPower DeviceServer.

2. Click Set Timing.

The Details Window updates to display the NetPower DeviceServer Timing settings. The Scan Time Budget section displays at the top of the window, and the Subscribe Push Rate section displays at the bottom of the window.



3. Type a new value in the Push Rate field.
4. Click OK.

The updated Subscribe Push Rate value is sent to the NetPower DeviceServer, and the NetPower DeviceServer initially returns the data values. Subsequent subscription of data values does not occur until another application subscribes for data.

### ***Setting the Scan Time Budget***

NetPower DeviceServer runs several scan loops (e.g., Device Control scan, High Priority scan, etc.). These scan loops run concurrently, and often require the use of the same network interface (CONI, MINT). When a scan loop uses a network interface, it has exclusive access to that interface. Scan loops cannot use the network interface simultaneously.

Because these network interfaces are shared by the scan loops, when a scan loop needs to use the network interface, the scan loop must determine how long it will use the interface. The Scan Time Budget option allows you to adjust the time that a NetPower DeviceServer scan loop uses the network interface before it attempts to share it with another scan loop.

#### **Note**

CONI III cards can be configured to accept multiple device data scan messages. CONI III cards send the messages and save the responses in a first in-first out communication control.

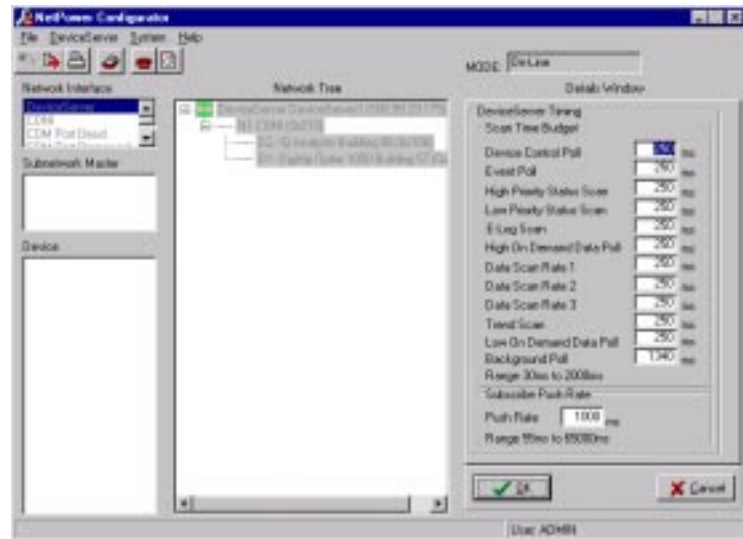
To edit the Scan Time Budget, do the following:

1. In the Network Tree list box, click on the NetPower DeviceServer you want to edit.

The Details Window updates to display the input settings for the particular NetPower DeviceServer.

2. Click Set Timing.

The Details Window updates to display the NetPower DeviceServer Timing settings. The Scan Time Budget section displays at the top of the window, and the Subscribe Push Rate section displays at the bottom of the window.



3. In the Scan Time Budget section, change the default scan rates for the individual scan types according to the following table:

| Scan Type                 | Description   |
|---------------------------|---|
| Device Control Scan       | Time limit for Device Control scan (which applies to setting a relay, motor control, etc.). |
| Event Poll Scan           | Time limit for Event Data scan (which applies to Time Stamp events or trips).               |
| High Priority Status Scan | Time limit for the user-defined high priority status scan.                                  |
| Low Priority Status Scan  | Time limit for the user-defined low priority status scan.                                   |
| E-Log Polling Scan        | Time limit for the Energy Log scan.   |

| Scan Type           | Description   |
|---------------------|---|
| On Demand Data Scan | Time limit for On Demand Data scan (which applies to one-time data requests, such as Setpoints or Waveform).                          |
| Data Polling Rate 1 | Time limit for the user-defined high priority data scan.  |
| Data Polling Rate 2 | Time limit for the user-defined medium priority data scan.  |
| Data Polling Rate 3 | Time limit for the user-defined low priority data scan.   |
| Trend Scan          | Time limit for the Device Trending data scan.   |
| Background Polling  | Time limit for background data scans (which applies to data values being viewed by the user via DDE or other monitoring application). |

This table lists the scan types in order of preset priority levels. Device Control polling for all devices always occurs at the expense of lower priority polling scans. If the CONI card has the resources, then lower priority polling scans are performed.

4. Click OK.

The new polling rates are sent to the NetPower DeviceServer.

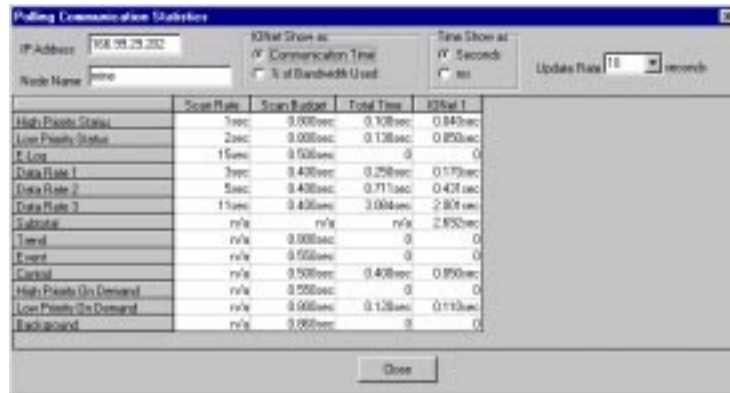
## Viewing the Polling Communication Statistics

The polling communication statistics can be viewed to see how long (in seconds or milliseconds) different polling functions take, and what percentage of bandwidth the polling scans use.

To view the polling communication statistics, do the following:

1. Click on the DeviceServer for which you want to view the polling communication statistics.
2. Click Comm Statistics.

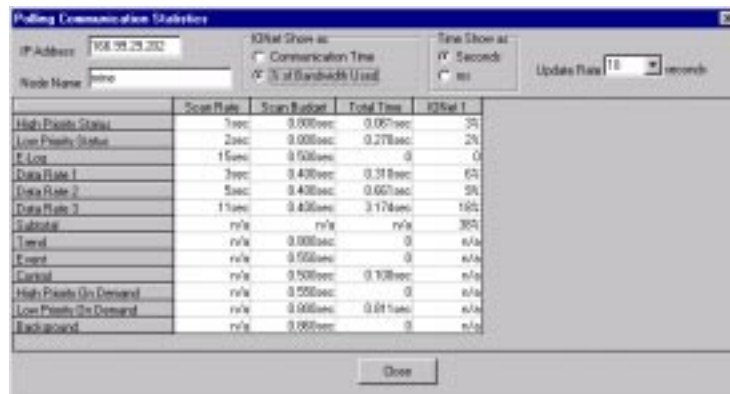
The Polling Communication Statistics dialog box displays.



The communication time, in seconds, displays by default.

3. To view the communication time in milliseconds, select the MS radio button.
4. To view the bandwidth used, click the % of Bandwidth Used radio button.

All IONet columns display the percent bandwidth used.



5. To change the update rate of the information in the dialog box, select a new update rate value from the Update Rate pull-down menu.

The following table describes the elements of the Polling Communication Statistics dialog box:

| Element            | Definition   |
|--------------------|--|
| IP Address field   | Lists the IP address off the selected NetPower DeviceServer.   |
| Node Name field    | Lists the name of the selected NetPower DeviceServer.  |
| Scan Rate column   | Displays the user-defined setting for the listed scan rates. For information about setting the scan rates for data polls, see the section <i>Assigning Polling Rates to a Device</i> .   |
| Scan Budget column | Displays the user-defined scan budgets. For information on setting timing scan budgets, see the section <i>NetPower DeviceServer Timing</i> .  |
| Total Time column  | <p>Displays the total time to complete a task.</p> <p>For the High Priority and Low Priority Status rows, the total time is the time needed to poll all the devices assigned to that respective priority level</p> <p>For the E-Log row, the total time is the time to poll for the energy values of all the devices that support Energy Logging</p> <p>For the Data Rate 1-3 rows, the total time is the time needed to poll for all the data assigned to that respective rate.</p> <p>The Subtotal row displays the total fixed polling rate time.</p> <p>The total time for the remaining rows is the time needed to perform the most recent communication activity related to that task.</p> |
| IONet columns      | The time (or bandwidth) actually used by the IO Network to perform the polling tasks.  |