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Veriteq
vNet PoE Device
User Guide

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Veriteq, a Vaisala company
13775 Commerce Parkway
Richmond, BC V6V 2V4
Canada

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The Veriteq vNet device has been tested using a variety of network systems. However, the large number of possible hardware and network configurations makes testing under every circumstance impossible. If you have trouble using the Veriteq vNet device, contact Veriteq Instruments.

Technical Support

Call Veriteq for free technical support (8am-4pm Pacific Standard Time).

In North America, call 1-866-861-3388. Outside North America, call 604-273-6850.

Email customersupport@veriteq.com

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About this Manual

The Veriteq vNet Power over Ethernet Device User Guide includes the information you need to install, configure and operate your vNet device with a Veriteq data logger.

Who this Manual is for

This manual is for administrators who will install and configure the vNet device to be used with a Veriteq data logger and Veriteq viewLinc, Spectrum, or vLog software. This manual covers several topics, including how to:

- configure IP settings, Ethernet settings and device information
- set administrator passwords
- view clients connected to your vNet device
- back up and restore vNet device configuration
- update the vNet device
- restart the vNet device

Conventions Used in this Document

This document uses the following conventions:

- A sequence of actions is indicated by a list separated by a vertical line. For example:
“From the vNet Configuration and Management interface, choose **Configuration | Network | IP Settings**”
- Menu selections, items you select, the names of buttons and tabs are shown in **bold**.

Related Documentation and Software Products

For a visual overview of the installation of your vNet device, consult the Quick Start Guide for viewLinc with vNet or Digi Devices.

Use Veriteq viewLinc software and their associated online Help to:

- monitor channels
- set and acknowledge alarms
- view and graph logger data
- transfer data from multiple networked Veriteq loggers

Use Veriteq vLog and Spectrum software and their related online help to set up individual data loggers.

Getting Started with the Veriteq vNet Power over Ethernet Device

Welcome to the Veriteq vNet Power over Ethernet User Guide. The following sections will assist you in setting up the vNet device:

- Installing the vNet device at your Site
- Launching the vNet Configuration and Management Interface
- Viewing Network Configuration Settings
- Configuring IP Settings
- Creating a NetBIOS Name
- Changing Ethernet Settings
- Editing Serial Port Settings
- Setting Device Information
- Changing the Administrator Password
- Setting an Idle Timeout for the Web Session
- Viewing Connections and Network Statistics
- Viewing Power Settings
- Setting the System Fan
- Enabling 15V Loop Power Excitation
- Backing Up or Restoring Configuration Settings
- Updating the vNet Device
- Restarting the vNet Device
- Restoring Factory Default Settings
- Getting Help

Digi Devices

While the focus of this User Guide is the Veriteq vNet PoE device, the instructions in the two driver installation sections, ***Installing Drivers Using Device Setup*** and ***Installing Drivers Using RealPort Setup***, can also be used to install Digi devices.

Getting Started

When installed, the vNet Power over Ethernet (PoE) device becomes part of a data monitoring system comprised of several software components (including viewLinc, Veriteq vLog or Spectrum), and hardware components (Veriteq data loggers, a PC with a supported Web browser, and the vNet device).

Before you start using your vNet device, complete the installation and configuration instructions included in this User Guide.

Once your vNet device is installed (connected to the data logger and your network), you are ready to complete the configuration steps detailed in this User Guide.

Installing the vNet device at your Site

There are a few things to remember when connecting your data logger to the vNet device:

- Remove the protective label on the bottom of the data logger.
- Be sure to slide the logger as far right as possible towards the two tabs before pushing down into the vNet device bed (you should hear a 'click'). Refer to Figure 2, "Inserting data logger into vNet device" on page 3.
- If you are mounting the vNet device on a wall, ensure the device is in the upright position (the fan on top and data connections on the right).
- Use the wall anchors and screws provided for use with the vNet device mounting brackets.

Important: Do not drop the device as the impact may damage it.

Connecting Loggers

The following diagram shows how to use vNet devices to connect data loggers to a network:

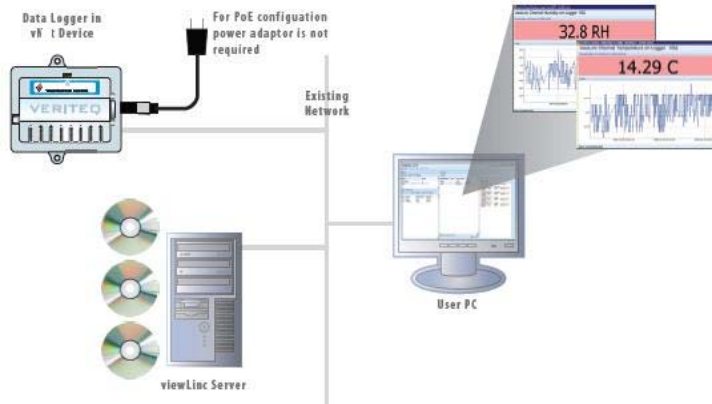


Figure 1: Connecting data loggers to your network

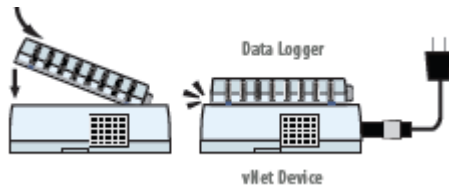


Figure 2: Inserting data logger into vNet device



Figure 3: Inserting power supply

Attaching Main Hardware

- 1 Remove the protective label on the bottom of the data logger.
- 2 Connect the data logger to the vNet device.
- 3 Connect the vNet device to the power supply and Ethernet outlet. When power is supplied to the vNet device, the red power LED will blink for 7-8 seconds, then stay on. When a network connection is made, the LNK LED will light up and stay on, and the ACT LED will blink intermittently.

Note: To ensure a secure connection, insert the power supply barrel-end connector into the device and turn 1/4 to the right (see Figure 3 on page 3). However, if your network supports Power over Ethernet, you do not need to connect to an external power supply .

Installing Drivers Using Device Setup

Device drivers must be installed in Windows[®] for *each* of the vNet or Digi devices that are connected to the network. This allows the Veriteq software to access the data loggers.

Use the instructions in this section if the drivers will be installed on a PC that is on the *same* subnet as the vNet or Digi devices. If the PC is on a *different* subnet, use the ***Installing Drivers Using RealPort Setup*** section instead.

- 1 Obtain an IP address for each of the vNet or Digi devices from your IT department. They should either be reserved IP addresses supplied by DHCP or static IP addresses. If the IP addresses are being reserved, the DHCP server must be updated *before* you proceed with the installation.
- 2 Insert the Veriteq vNet Device Drivers CD into the PC. If the Software Installation menu does not display automatically, click **Start** on the Taskbar, then select **Run**. Type **D:\setup.exe** (replace 'D' with the drive letter of your CD-ROM drive), then click **OK**.
- 3 Additional information can be found on the CD by clicking on **Documentation Index** on the Software Installation menu. Click on **vNet PoE Readme** to see if there are any updates to the information in the User Guide, especially to the installation instructions. For information on Digi

devices, click on **Digi Documentation Index**, then select the desired document for the Digi device you will be using.

- 4 Click on **Device Setup Wizard** on the Software Installation menu.
- 5 Connect the vNet PoE Logger Interface or Digi device to an open Ethernet port on your network. If the device and your network both support Power over Ethernet, an external power supply is not needed. Otherwise, connect the power supply barrel plug into the vNet or Digi device (see Figure 3 on page 3), and plug the power supply into a wall outlet.
- 6 When the Welcome to the Digi Device Setup Wizard screen is displayed, click **Next**.
- 7 Scroll down the device list until you find the MAC address of the device you are installing. (The MAC address is on the side of the vNet device above the serial number, or on the bottom of the Digi device.) If the device does not appear in the list, wait a few seconds, then click **Refresh**. Select the device, then click **Next**.

Note: If the device you are installing is not shown, you may need to change some settings in your fire-wall software:

- Allow the dgrunwiz.exe and dgcfgwiz.exe programs to receive incoming network connections. You will find these programs in a folder similar to:
C:\Documents and Settings\user\Local Settings\Temp\RarSFX0 where 'user' is your Windows® account.
- Unblock UDP port 2362 and multi-cast address 224.0.5.128, as these are used by device discovery.

- 8 Specify the IP settings:
 - If DHCP will be used to supply a reserved IP address, select **Obtain IP settings automatically using DHCP**, then click **Next**.
 - If a static IP address will be assigned to the device, select **Use the following IP settings**, enter the desired IP address, Subnet Mask, and Default Gateway, then click **Next**.

- 9 From the Scenario List, select **RealPort (COM Port Redirection)**, then click **Next**.
- 10 Ensure the **Install Digi RealPort on this computer** checkbox is checked, click **Next**, then click **Next** on the following screen. Wait for the new settings to be saved to the device. This will take up to 3 minutes, depending on the device.
- 11 If you have another device to install, check the **Configure another device** checkbox, then click **Finish**. Repeat steps 5 through 11.
- 12 When the last device has been installed, clear the **Configure another device** checkbox, then click **Finish**.
- 13 A list of all installed devices that use the RealPort driver will be displayed in the Command Prompt window after a short delay. Record the COM port number(s) of the device(s) you installed, as you will need to know them when using the Veriteq software products. Close the Command Prompt window by selecting the title bar, then pressing any key on the keyboard.
- 14 Refer to the **Launching the vNet Configuration and Management Interface** section for further instructions on opening the web-based interface to change the password or other settings.

Installing Drivers Using RealPort Setup

Device drivers must be installed in Windows® for *each* of the vNet or Digi devices that are connected to the network. This allows the Veriteq software to access the data loggers.

Use the instructions in this section if the drivers will be installed on a PC that is on a *different* subnet than the vNet or Digi devices. If the PC is on the *same* subnet, use the **Installing Drivers Using Device Setup** section instead.

- 1 Obtain an IP address for each of the vNet or Digi devices from your IT department. They should either be reserved IP addresses supplied by DHCP or static IP addresses. If the IP addresses are being reserved, the DHCP server must be updated *before* you proceed with the installation.

- 2 Insert the Veriteq vNet Device Drivers CD into the PC where the drivers are to be installed. If the Software Installation menu does not display automatically, click **Start** on the Taskbar, then select **Run**. Type **D:\setup.exe** (replace 'D' with the drive letter of your CD-ROM drive), then click **OK**.
- 3 Additional information can be found on the CD by clicking on **Documentation Index** on the Software Installation menu. Click on **vNet PoE Readme** to see if there are any updates to the information in the User Guide, especially to the installation instructions. For information on Digi Devices, click on **Digi Documentation Index**, then select the desired document for the Digi device you will be using.
- 4 If you are installing a vNet device, click on **vNet RealPort Setup** on the Software Installation menu. If you are installing a Digi device, click on **Digi RealPort Setup**.
Note: It is very important to select the correct setup option. If you accidentally select the wrong option, click **Cancel** when the Welcome screen is displayed.
- 5 If the Welcome screen asks you to ensure that the device is powered up and connected to the network, disregard the message and click **Next**. If the **Add a New Device** option is displayed instead, select it, then click **Next**.
- 6 Scroll to the bottom of the device list, wait until "Searching..." is no longer displayed, select **<Device not listed>**, then click **Next**.
- 7 Enter the Device Model Name. For a vNet device this name is on the serial number label, for example, **CDL-VNET-P**. The model name for a Digi device typically appears on the top and bottom of the device, for example, **Digi One SP** or **PortServer TS 4**.
- 8 Enter the IP address that you obtained in step 1.
- 9 Under COM Port Settings set No. Ports to 1 for a vNet device. For Digi devices specify the number of ports supported by the device, usually 1,2 or 4.
- 10 Under COM Port Settings, set Starting COM to the lowest COM port number that the setup wizard is allowed to use. The wizard will automatically choose the first

available Windows COM port and map it to the first physical port on the device. If the device has more than one physical port, the wizard will assign the next available COM port(s) to the remaining physical port(s).

Note: The Windows Device Manager can be used to change the assigned COM port number(s) after the device is installed.

- 11 Click **Finish**.
- 12 If your vNet or Digi device is not yet connected to the network, or is not yet configured with the IP address you entered in step 8, you will be presented with a message indicating that no device could be located. Click **Yes** to proceed.
- 13 Wait for the setup wizard to finish. This could take up to 3 minutes. Click **Finish**.
- 14 A list of all installed devices that use the RealPort driver will be displayed in the Command Prompt window after a short delay. Record the COM port number(s) of the device(s) you installed, as you will need to know them when using the Veriteq software products. Close the Command Prompt window by selecting the title bar, then pressing any key on the keyboard.
- 15 Repeat steps 4 through 14 for any additional devices that need to be installed. Do not continue with step 16 until all devices have been installed.
- 16 If any of the vNet or Digi devices you installed drivers for are not yet connected to the network, connect them to an open Ethernet port on the desired subnet of your network. If the device and your network both support Power over Ethernet, you do not need an external power supply. Otherwise, connect the power supply barrel plug into the vNet or Digi device (see Figure 3 on page 3) and plug the power supply into a wall outlet.
- 17 If all of the vNet or Digi devices you installed are using IP addresses reserved with DHCP, go to the **Launching the vNet Configuration and Management Interface** section for further instructions on opening the web-based interface to change the password or other settings. However, if one or more of the devices are to have static IP addresses assigned, proceed with step 18.

- 18 Insert the Veriteq vNet Device Drivers CD into a PC that is on the *same* subnet as the device(s) you installed. If the Software Installation menu does not display automatically, click **Start** on the Taskbar, then select **Run**. Type **D:\setup.exe** (replace 'D' with the drive letter of your CD-ROM drive), then click **OK**.
- 19 Click on **Device Discovery Install** on the Software Installation menu to install the Digi Device Discovery program onto this PC.
- 20 Run the Digi Device Discovery program from **Start | Programs**. The program will display a list of all vNet and Digi devices found on this subnet.

Note: If the device you need to configure is not shown, you may need to change some settings in your firewall software:

 - Allow the dgdiscvr.exe program to receive incoming network connections. It is typically found in the folder C:\Program Files\Digi\Digi Device Discovery.
 - Unblock UDP port 2362 and multi-cast address 224.0.5.128, as these are used by device discovery.
- 21 Scroll down the device list until you find the MAC address of a device that is to have a static IP address assigned. (The MAC address is on the side of the vNet device above the serial number, or on the bottom of the Digi device.) If the device does not appear in the list, wait a few seconds, then click **Refresh**. Select the device, then click **Configure network settings**.
- 22 Select **Manually configure network settings**, then enter the IP Address, Subnet Mask, and Default Gateway values for this device. Click **Save**, then click **OK** to allow the device to be restarted.
- 23 Wait until the device has been restarted and the device list updated.
- 24 Repeat steps 21 through 23 for each additional device.
- 25 When all devices have their desired IP address, refer to the **Launching the vNet Configuration and Management Interface** section for further instructions on opening the web-based interface to change the password or other settings.

Launching the vNet Configuration and Management Interface

Your vNet device is shipped with a web-based application, vNet Configuration and Management Interface. You can use this application to complete the vNet device configuration activities.

To launch the vNet Configuration and Management interface from a Web browser:

- 1 In a Web browser, enter the IP address of your vNet device (obtained from your IT administrator) or enter the NetBIOS name. The default NetBIOS name is VERITEQXXXXXXXX (X denotes the 8-digit serial number of the vNet device.) If the vNet device has been configured with a TCP port for HTTP other than the default value of 80, enter the port number after the IP address or NetBIOS name, with a colon separating them.

For example:

http://192.168.1.58

http://VERITEQ09075101

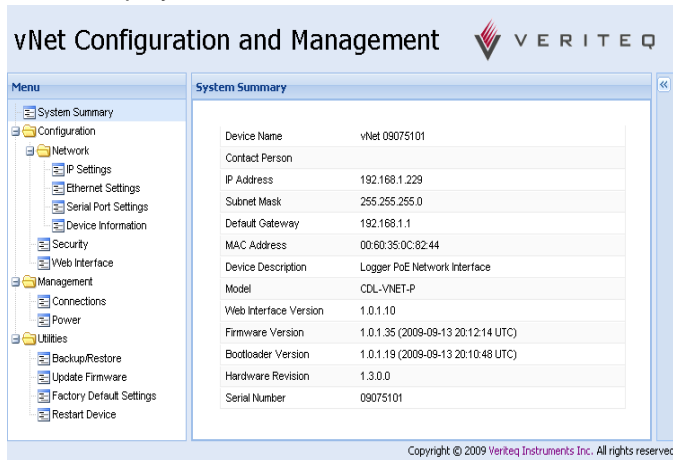
http://192.168.1.58:8000

- 2 At the login screen, enter the user name: **root**.



- 3 Enter the default password: **dbps**. You can change this password later (see **Changing the Administrator Password**).

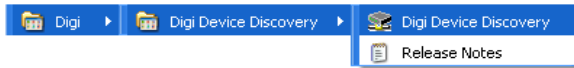
- 4 Click **OK**. The vNet Configuration and Management screen displays:



To launch the vNet Configuration and Management interface using Digi Device Discovery:

Note: If the vNet device has been configured with a TCP port for HTTP other than the default value of 80, you need to launch the interface from a web browser.

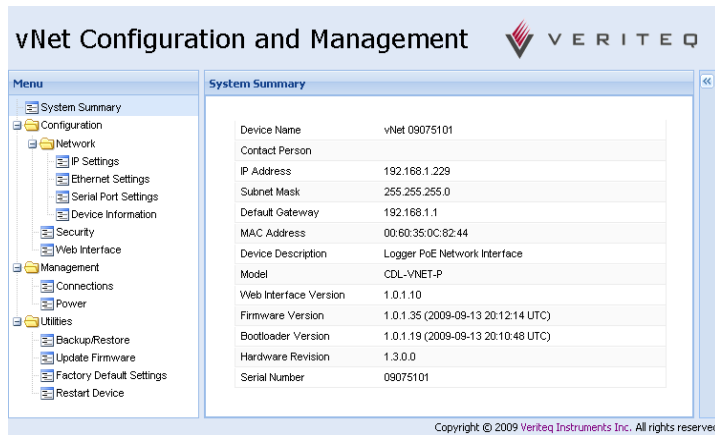
- 1 From the Start menu select **Digi | Digi Device Discovery | Digi Device Discovery**.



- 2 Locate your vNet device's MAC address (found on the side of your vNet device) in the MAC address list, and double-click on it to open the login screen.



- 3 Enter the user name: **root**.
- 4 Enter the default password: **dbps**. You can change this password later (see **Changing the Administrator Password**).
- 5 Click **OK**. The vNet Configuration and Management screen displays:



Viewing Network Configuration Settings

To view vNet device IP settings:

- 1 Launch the vNet Configuration and Management interface.

- 2 From the vNet Configuration and Management interface, click **System Summary**.

System Summary	
Device Name	vNet 09075101
Contact Person	
IP Address	192.168.1.229
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
MAC Address	00:60:35:0C:82:44
Device Description	Logger PoE Network Interface
Model	CDL-VNET-P
Web Interface Version	1.0.1.10
Firmware Version	1.0.1.35 (2009-09-13 20:12:14 UTC)
Bootloader Version	1.0.1.19 (2009-09-13 20:10:48 UTC)
Hardware Revision	1.3.0.0
Serial Number	09075101

Note: This summary includes all the important information about your vNet device, such as device name, contact person, current IP address, MAC address, model name, and firmware version.

Configuring IP Settings

There are three methods to assign an IP address to a Veriteq vNet device:

- 1 Configure a DHCP server to reserve a specific IP address for the device (by MAC address) and automatically assign it to the device.
- 2 Manually assign a static IP address to the device.
- 3 Allow a DHCP server to automatically assign any available IP address to the device.

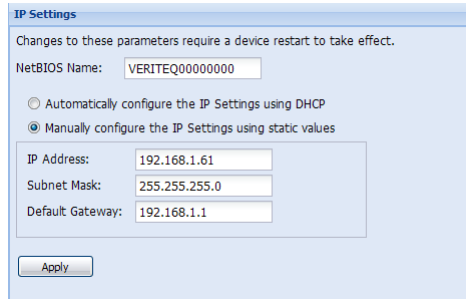
Either of the first two methods is recommended. The Veriteq vNet device has DHCP enabled by default. If your network does not have a DHCP server, you will need to manually assign a static IP address.

The last method is not recommended because the DHCP server could periodically assign a different IP address to the device. If this occurs, viewLinc and the other Veriteq software will be unable to communicate with the data logger or the vNet device until Windows Device Manager is used to

manually reconfigure the device driver to point to the new IP address.

To manually configure IP settings for your vNet device:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Network | IP Settings**.



- 2 Select the option **Manually configure the IP Settings using static values**, then enter the IP Address, Subnet Mask, and Default Gateway supplied by your IT administrator.
- 3 Click **Apply**.
- 4 A message will appear stating that the vNet device needs to be restarted. Click on the [here](#) link to restart the device.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

Creating a NetBIOS Name

A NetBIOS name provides an easy way to connect to your vNet device through a Web browser without having to remember the device's IP address.

To access the device using the NETBIOS name, simply enter the name in the address line of your Web browser:

http://NetBIOSname

The factory default NetBIOS name is VERITEQXXXXXXXX (X denotes the 8-digit serial number of the vNet device).

To change the NetBIOS name:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Network | IP Settings**.

- 2 In the NetBIOS name field you can enter up to 15 characters (using letters, numbers, and underscores). Do not assign the same name to another device.
- 3 Click **Apply**.
- 4 A message will appear stating that the vNet device needs to be restarted. Click on the [here](#) link to restart the device.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

Changing Ethernet Settings

Depending on the network hub or switch the vNet device is connected to, you may want to change the Ethernet mode from the default setting, half-duplex, to full-duplex.

To change the Ethernet settings for your vNet device:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Network | Ethernet Settings**.
- 2 Choose the desired Duplex Mode (Half or Full).
- 3 Click **Apply**.
- 4 A message will appear stating that the vNet device needs to be restarted. Click on the [here](#) link to restart the device.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

Note: The speed setting is fixed at 10Mbit and cannot be changed.

Editing Serial Port Settings

Use the Serial Port Settings screen to set the TCP port numbers that the vNet device will use for serial communication. The vNet device communicates with the Veriteq data logger through a serial port.

The serial port is accessed by the client PC using serial port redirector (virtual COM port) software that communicates over the Ethernet connection using TCP ports. The vNet device needs to be configured to use the same TCP port as the serial port redirector software.

About Loopback Test Mode

The loopback test mode **should only** be enabled when doing diagnostic tests to solve problems with logger communication. The Loopback Test Mode checkbox must be unchecked to communicate with the connected data logger. Unchecked is the default setting.

When the loopback test mode is enabled, it enters a diagnostic mode where data received from the client PC is transmitted back to the PC, but not to the data logger. This can help to determine if a communication problem is due to the data logger, the vNet device, or the driver on the PC. A change to this setting only takes effect when the port is closed, then reopened. The checkbox is automatically cleared when the vNet device is restarted, or if more than 1 hour has elapsed since it was checked.

Using RealPort

The serial port on the vNet device can be accessed using the Digi RealPort protocol. If a RealPort driver is installed on a client PC, it can be configured to access the serial port using the RealPort TCP port number.

The factory default setting is 771.

It is important to note that only one RealPort client can connect to the vNet device at a time. The RealPort driver should only be installed using a Veriteq vNet Device Driver installation disk to ensure that the client PC will only connect to the vNet device when trying to open the serial port. When the serial port is closed, the TCP connection is also closed, allowing another client PC to connect to the vNet device.

If the driver is installed from a Digi Software & Documentation CD, the RealPort driver on one client PC will connect to the vNet device when the PC starts and keep the TCP connection open. No other PC will have access to the vNet device.

If needed, there is a setting in the RealPort driver that can be changed to permit access from multiple computers (see page 17).

Using Raw TCP

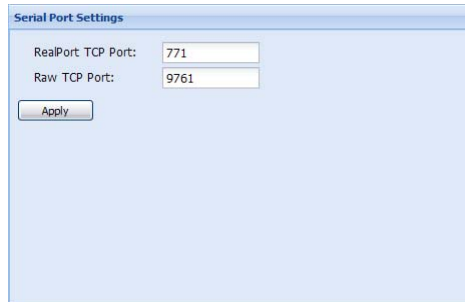
The serial port on the vNet device can also be accessed using generic third-party Ethernet-to-serial port redirector software. These applications can send and receive data using the Raw TCP port number.

The factory default setting is 9761.

When using the serial port in Raw mode, the client PC can only send and receive data. There is no access to serial port settings such as baud rate or control lines (the serial port is automatically set to 19200 bps, 8 data bits, no parity bit, one stop bit).

To set the Serial Port settings for your vNet device:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Network | Serial Port Settings**.



The screenshot shows a dialog box titled "Serial Port Settings". It contains two input fields: "RealPort TCP Port:" with the value "771" and "Raw TCP Port:" with the value "9761". Below the fields is an "Apply" button.

- 2 Enter new port numbers.
- 3 Click **Apply**.
- 4 A message will appear stating that the vNet device needs to be restarted. Click on the [here](#) link to restart the device.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

To allow multi-user RealPort access to a vNet device:

- 1 Open the Windows Control Panel and double-click **System**.
- 2 On the System Properties screen, select the **Hardware** tab, then click **Device Manager**.
- 3 On the Device Manager screen, open **Multi-port serial adapters** to find your adaptor.
- 4 Right-click on your adaptor name, then select **Properties**.

- 5 Select the **Advanced** tab, then click **Properties**.
- 6 Select the **Network** tab, then click **Connection Settings**.
- 7 Check the **Wait for COM open request before connecting to device** checkbox, then click **OK** and close all open dialogs.
- 8 Repeat these steps for all client PCs that have this vNet device installed.
Note: With this option selected, you can access the data logger connected to your vNet device from multiple client PCs.

Setting Device Information

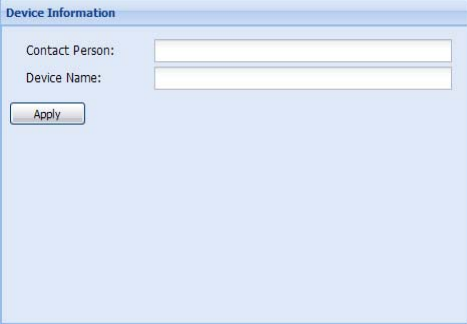
The Device Information settings screen allows you to:

- Identify a contact person who will provide assistance in case of a problem connecting with this interface. Note that the contact person information is stored in the vNet device configuration for reference purposes only.
- Specify a name for your vNet device to make it easy to locate on your network. This name displays in the Name column of the Digi Device Discovery screen (**Start | Digi | Digi Device Discovery**).

Hint: The default device name is **vNet XXXXXXXX** (X denotes the 8-digit serial number of the vNet device).

To set the device information for your vNet device:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Network | Device Information**.



The screenshot shows a window titled "Device Information" with a light blue background. It contains two text input fields: "Contact Person:" and "Device Name:". Below the "Device Name:" field is an "Apply" button.

- 2 Enter the contact person for your vNet device (name, phone number and/or email address, maximum 63 characters).
- 3 To change the device name, enter a description (maximum 63 characters).
- 4 Click **Apply**.

Changing the Administrator Password

You can change the administrator password for your vNet device. The password is case-sensitive, and must be 4 to 16 characters long. The default administrator password is “dbps”.

Note: The administrator name, **root**, cannot be changed.

To change the administrator password:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Security**.



The screenshot shows a web interface titled "Security Settings". It contains the following text: "Enter a new administrator (root) password below. Passwords must be 4 to 16 characters long." Below this text are two input fields: "New Password:" and "Confirm Password:". At the bottom of the form is an "Apply" button.

- 2 In the Security Settings screen, enter and confirm your new administrator password.
- 3 Click **Apply**.
- 4 A message will appear stating that the vNet device needs to be restarted. Click on the **[here](#)** link to restart the device.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

- 5 The new password takes effect after the restart has completed.

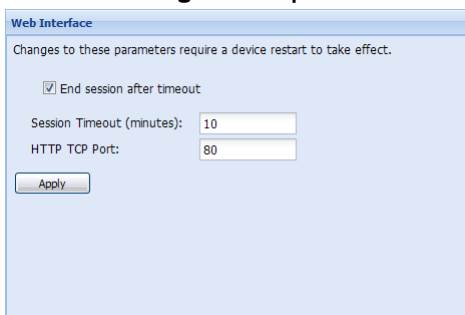
Setting an Idle Timeout for the Web Session

You can set a timeout period for the vNet device's Web interface session, after which the session will automatically close. This protects you from others altering your vNet device configuration settings if you accidentally leave the vNet device configuration session open.

You can also specify the HTTP TCP port number used by Web browsers to display the vNet device's Web interface. In most circumstances you will not need to change the default HTTP TCP port number (80), unless port 80 is blocked.

To set the timeout period and HTTP port:

- 1 From the vNet Configuration and Management interface, choose **Configuration | Web Interface**.



Web Interface

Changes to these parameters require a device restart to take effect.

End session after timeout

Session Timeout (minutes):

HTTP TCP Port:

- 2 In the Web Interface screen, choose to either select (recommended) or deselect the option **End session after timeout**.
- 3 Enter the session timeout period in minutes.
- 4 Enter the HTTP port you want to use (change the default, 80, only if it is blocked).
- 5 Click **Apply**.
- 6 If the TCP port number was changed, a message will appear stating that the vNet device needs to be restarted. Click on the [here](#) link to restart the device.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

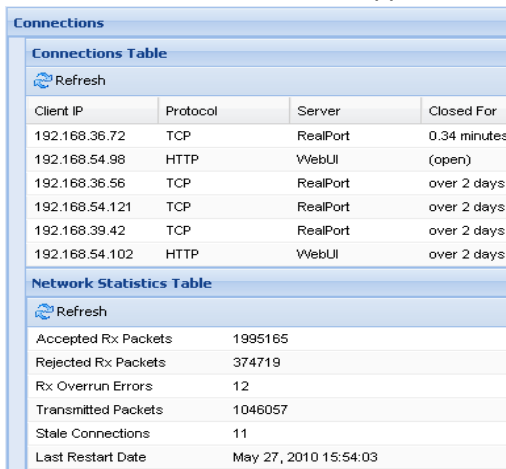
Viewing Connections and Network Statistics

The vNet Configuration and Management interface includes a Connections table that shows which computers are, or have been, connected to this vNet device.

The Connections screen also includes a Network Statistics table that monitors network activity.

To see the Connections and Network Statistics tables:

- 1 From the vNet Configuration and Management interface, choose **Management | Connections**. The Connections and Network Statistics tables appear:



The screenshot displays two tables within a web interface. The top table, titled 'Connections Table', has a 'Refresh' button and a table with four columns: Client IP, Protocol, Server, and Closed For. The bottom table, titled 'Network Statistics Table', also has a 'Refresh' button and a table with two columns: Metric and Value.

Connections Table			
Refresh			
Client IP	Protocol	Server	Closed For
192.168.36.72	TCP	RealPort	0.34 minutes
192.168.54.98	HTTP	WebUI	(open)
192.168.36.56	TCP	RealPort	over 2 days
192.168.54.121	TCP	RealPort	over 2 days
192.168.39.42	TCP	RealPort	over 2 days
192.168.54.102	HTTP	WebUI	over 2 days

Network Statistics Table	
Refresh	
Accepted Rx Packets	1995165
Rejected Rx Packets	374719
Rx Overrun Errors	12
Transmitted Packets	1046057
Stale Connections	11
Last Restart Date	May 27, 2010 15:54:03

- 2 Click one of the **Refresh** buttons to update the list to show the current status.

Connections Table

Use the Connections table to find out if a client PC is holding the serial port on the vNet device open too long, how many client PCs are accessing the serial port, or if the web interface is being accessed from another computer.

Only the six most recent connections are shown. Restarting the device will clear the list.

Network Statistics Table

Use the Network Statistics table to monitor the network activity:

- Accepted Rx Packets: The number of received Ethernet packets that were accepted for further processing.
- Rejected Rx Packets: The number of received Ethernet packets that were rejected for various reasons, such as protocol not supported, multicast address not supported, or packet errors.
- Rx Overrun Errors: The number of times a receive overrun was detected, i.e., one or more packets were dropped because the receive buffer was already full with previously received packets that had not yet been processed.
- Transmitted Packets: The number of Ethernet packets that were transmitted by the device.
- Stale Connections: The number of times a TCP connection for RealPort or Raw TCP was closed because it was “stale” or “half-open”.
- Last Restart Date: The date/time when the device was last restarted.

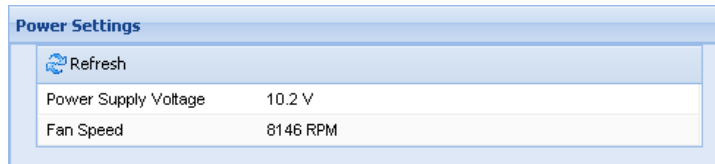
Note: Restarting the device will reset these five network statistics counters (packets, connections, errors) to 0 and update the last restart date.

Viewing Power Settings

To view current settings such as fan speed, power supply voltage and more, from the vNet Configuration and Management Interface, choose **Management | Power**.

Current settings will display. You may be able to change some of these settings, depending on which version of the vNet device you have.

If the power supply input voltage and fan speed are displayed, click **Refresh** to update the values.



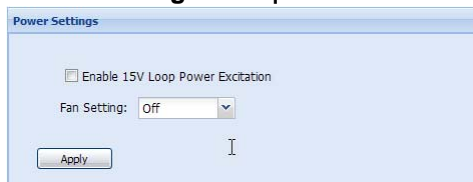
Setting the System Fan

Some vNet devices are equipped with an internal fan. This fan is provided to cool the internal electronics so they do not affect data logger measurements. If the logger connected to your vNet device does not include any internal measurement channels, you may be able to turn the fan off if this option is supported by the vNet device (if available, the option displays on the Power Settings screen). By default, the fan is turned ON.

Note: If your vNet device is powered using Power over Ethernet, the fan must be turned ON. The Power over Ethernet (PoE) standard requires that a minimum amount of load current be drawn from the supply; the fan provides this minimum load.

To turn the system fan on or off:

- 1 From the vNet Configuration and Management interface, choose **Management | Power**.



- 2 In the Power Settings screen, use the drop-down list to select **On** or **Off** for the **Fan Setting** option.
- 3 Click **Apply**.

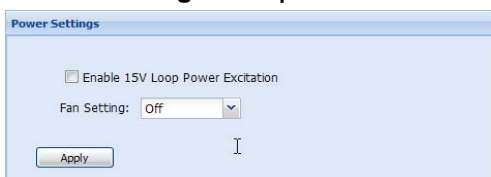
Enabling 15V Loop Power Excitation

The Veriteq vNet device may include a 15V loop power output, which allows you to provide power to a sensor or transducer connected to a Veriteq data logger recording 4-20 mA currents or DC voltage signals.

If your vNet device is equipped with this feature, the option to enable or disable loop power displays on your screen.

To enable or disable 15V Loop Power Excitation:

- 1 From the vNet Configuration and Management interface, choose **Management | Power**.



- 2 In the Power Settings screen, check or uncheck the **Enable 15V Loop Power Excitation** checkbox to enable or disable loop power.
- 3 Click **Apply**.

Backing Up or Restoring Configuration Settings

We recommend you save your current vNet device configuration settings to a backup file so they can be restored at a later time. You can also use this backup file to configure another vNet device.

When restoring settings from a configuration backup file that was created by a different vNet device, consider the following:

- The configuration backup file is a plain text file that can be edited.
- You can remove items from the configuration backup file if you do not want to change their settings (such as NetBIOS name).

- There are vNet device-specific items in the configuration backup file that are for informational purposes only and do not get applied when the file is restored (such as serial number, MAC address, model name and description).

Item	Configuration
UseDhcp	When UseDhcp = true , DHCP is enabled and the vNet device will try to automatically acquire IP settings. When UseDhcp = false , the vNet device will use the user defined IP address, Subnet mask and Gateway items in the configuration file.
IpAddr	The IP address that will be used if UseDhcp = false
Subnet-Mask	The Subnet mask that will be used if UseDhcp = false.
Gateway-Addr	The Gateway address that will be used if UseDhcp = false.
NetBios-Name	The NetBIOS name that can be used to access the device. It must be 1 to 15 characters long. You can use any alphanumeric combination and the underscore character (_).
EthDuplex	The Ethernet mode that the device will use on the network to which it will be installed. Valid duplex values are Half or Full .
CloseTimeout	The control setting to enable or disable the web interface idle timeout. Valid values are true or false .
IdleTimeout	The timeout value in minutes (1 to 120) that will be used if the CloseTimeout = true.
HttpPort	The TCP port number that the vNet device will use to display the web interface.

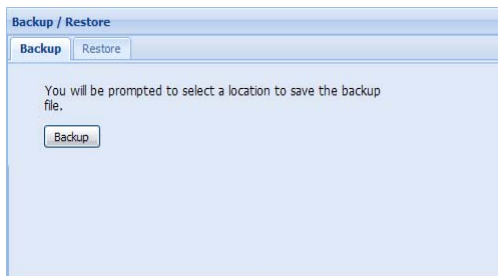
Table 1: Configuration Backup File

Item	Configuration
Device-Name	The device name that will be shown in the Digi Device Discovery software. It can be up to 63 characters in length.
Contact	An informational description that is saved in the vNet device. It can be up to 63 characters in length.
RealPort	The TCP port number that the RealPort driver will use to access the serial port on the vNet device.
RawPort	The TCP port number that the Raw TCP driver will use to access the serial port on the vNet device.
EnableFan	The control setting for the vNet device fan. Valid values are on or off .
Enable15V	The control setting to enable or disable the 15V loop power supply output. Valid values are true or false .

Table 1: Configuration Backup File

To save configuration settings:

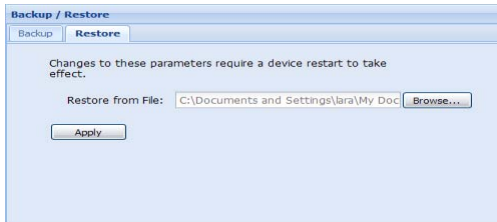
- 1 From the vNet Configuration and Management interface, choose **Utilities | Backup/Restore**.



- 2 Select the **Backup** tab and click **Backup**.
- 3 At the **File Download** prompt, click **Save**.
- 4 Choose a location where you want to save the file and specify a file name. The default file name is **vNetConfigBackupXXXXXXXX** (X denotes the 8-digit serial number of the vNet device).
- 5 At the **Download Complete** prompt, click **Close**.

To restore settings from a previously saved configuration backup file:

- 1 From the vNet Configuration and Management interface, choose **Utilities | Backup/Restore**.



- 2 On the **Restore** tab, click **Browse** to locate the configuration file to restore, then click **Open**.
- 3 Click **Apply**.
- 4 If a message appears stating that the vNet device needs to be restarted, click on the [here](#) link to restart the device. If you do not need to restart the device, click on the browser's **Refresh** button to update the web interface with the new values.

To configure another vNet device from a backup file:

- 1 Open the configuration backup file in a text editor (such as Notepad or Wordpad).
- 2 Edit the file by modifying lines or deleting lines (refer to Table 1, "Configuration Backup File," on page 25 for a list of editable lines).
- 3 Save the modified file with a different name but the same file extension (.txt)
- 4 Locate the new vNet device on your network (**Start | Digi | Digi Device Discovery | Digi Device Discovery**).
- 5 Select the device, then click **Open web interface** to open the vNet Configuration and Management interface.
- 6 Choose **Utilities | Backup/Restore**.
- 7 On the **Restore** tab, click **Browse** to locate and select the modified configuration file, then click **Open**.
- 8 Click **Apply**.
- 9 If a message appears stating that the vNet device needs to be restarted, click on the [here](#) link to restart the device. If you do not need to restart the device, click on

the browser's **Refresh** button to update the web interface with the new values.

Updating the vNet Device

You may need to update the vNet device application software if a problem has been identified or if new features are available. You can update the application firmware, the boot loader, or the Web interface.

Important: Only update the vNet device when instructed to do so by a Veriteq representative, and ensure the update is complete before unplugging any cables.

Important: Communication with the data logger attached to the vNet device will be disrupted during the update.

To update the vNet device:

- 1 From the vNet Configuration and Management interface, choose **Utilities | Update Firmware**.
- 2 In the Update screen, from the drop-down list, select **Boot Loader, Firmware** or **Web Interface**.
- 3 Click **Browse** to locate and select the update file provided by a Veriteq representative, then click **Open**.
- 4 Click **Apply**. Updating the boot loader or firmware will take about 1 minute to complete. The vNet device will restart automatically, and the web interface will reload. It will take about 1 minute for a web interface update to complete and the new web interface to load.

Restarting the vNet Device

Sometimes it is necessary to restart the vNet device for new configuration settings to take effect. If restarting is necessary, you will be prompted to restart by using the link appearing at the top of your Web browser.

The device needs to be restarted for the latest changes to apply. Please click [here](#) to restart the device.

The restart process takes approximately 15 seconds to complete. During this time the vNet device is unavailable.

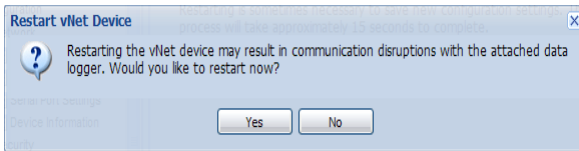
The vNet Configuration and Management interface takes about 1 minute to reload after restarting.

Important: Restarting the vNet device will disconnect all connected clients and close their sessions. Closing a connection to a client disrupts communication between the client and the data logger that is attached to the vNet device.

You can restart the vNet device from the vNet Configuration and Management interface or from the vNet device itself.

To restart the vNet device using the Web interface:

- 1 From the vNet Configuration and Management interface, choose **Utilities | Restart Device**.
- 2 From the Restart Device screen, click **Restart**.
- 3 At the Restart prompt, click **Yes**.



To manually restart the vNet device:

On the vNet device itself, press and immediately release the restart button. (Refer to Figure 4, “Restart button on vNet device”.)

Important: Do not press the restart button for more than one (1) second, or you might restore all settings to their factory default values.



Figure 4: Restart button on vNet device

Restoring Factory Default Settings

You may need to restore the vNet device configuration to factory default settings if:

- you forgot the administrator password
- you changed the TCP port for HTTP but don't remember what it is
- you want to remove all custom configuration changes

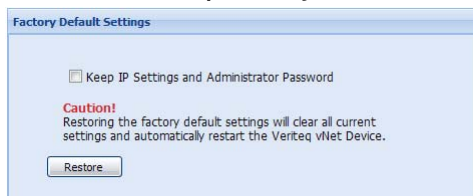
Before restoring factory default settings, you must choose whether or not you want to keep the IP settings and administrator password you have already set (recommended).

Important: If you do not check the option to keep the current IP settings, DHCP is automatically enabled. This could result in the vNet device acquiring a new IP address if it had previously been configured with a static IP address. If this happens, you will need to rediscover the vNet device using the Digi Device Discovery software (**Start | Digi | Digi Device Discovery**).

You can restore default settings on the vNet device using the web interface or from the vNet device itself using the restart button.

To restore factory default settings using the Web interface:

- 1 From the vNet Configuration and Management interface, choose **Utilities | Factory Default Settings**.



- 2 To keep the IP address settings and administrator password but reset all other settings to the factory defaults, select the option **Keep IP Settings and Administrator Password**.
- 3 If you do not want to keep IP address settings, clear the checkbox.

Note: If you do not keep IP address settings and password, the IP settings will revert to DHCP, and the administrator password will revert to 'dbps'.

4 Click **Apply**.

Restoring factory default settings will take about 45 seconds to complete. The vNet device will restart automatically and the web interface will reload.

To manually restore factory default settings:

On the vNet device itself, press and hold the restart button for at least five (5) seconds. (Refer to Figure 4, "Restart button on vNet device," on page 29). There is no warning before the factory default settings are restored.

List of Factory Default Settings

For an explanation of each setting shown below, refer to Table 1, "Configuration Backup File" on page 25.

These configuration items are changed to their factory default settings if the **Keep IP Settings and Administrator Password** checkbox is checked:

Item	Setting
RealPort	771
RawPort	9761
IdleTimeout	5
CloseTimeout	True
DeviceName	vNet XXXXXXXX, where "X" is the 8-digit serial number of the vNet device
Contact	(blank)
Enable15V	Off (if installed)
EnableFan	On (if installed)

Table 2: Factory Default Settings not including IP Settings and Administrator Password

If the **Keep IP Settings and Administrator Password** checkbox is unchecked, these additional items are reset to their factory default settings:

Item	Setting
UseDhcp	True
IpAddr	0.0.0.0
HttpPort	80
SubnetMask	255.255.255.0
GatewayAddr	0.0.0.0
NetBiosName	VERITEQXXXXXXXX, where "X" is the 8-digit serial number of the vNet device
EthDuplex	Half
Password	dbps

Table 3: Factory Default IP Settings and Administrator Password

Getting Help

If you need help, free technical support is available from Veriteq from 8am-4pm PST Monday through Friday.

In North America, please call 1-866-861-3388. All other locations, please call 1-604-273-6850.

Email customersupport@veriteq.com.

See also www.veriteq.com.

For sales, pricing, quotations, or general information, in North America please call 1-800-683-8374 (or 604-273-6850 for all other locations).

VERITEQ, A VAISALA COMPANY

13775 Commerce Parkway, Richmond, BC, Canada, V6V 2V4

Tel 1 800 683 8374 (N.America only) 1 604 273 6850

customersupport@veriteq.com

www.veriteq.com

www.vaisala.com

880-0401-02