

PowerVision®

STARTUP GUIDE



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System Requirements

PowerVision has certain system requirements; exceeding these specifications will enhance the performance of the program. In smaller sites, the Server and Client programs can be installed on the same computer. The following minimum system configuration is necessary to run the PowerVision Server Application:

- ☐ A PC with a 200 MHz Pentium Processor or compatible (*Recommended: 366 MHz*)
- ☐ 600 x 800 VGA Monitor
(*Recommended: 17", 1024 x 768, 256-Color Super VGA with a 1 Mb Video Card*)
- ☐ Microsoft® Windows 95/98 or Windows NT® Operating System
- ☐ 32 Mb of RAM (*Recommended: 64 Mb*)
- ☐ 256K CPU Cache
- ☐ 250 Mb of available hard disk space
(*Recommended: 1.5 Gb; depending on the number of Devices being monitored*)
- ☐ Network Interface Card for Ethernet or Token-Ring
- ☐ CD-ROM Drive
- ☐ Mouse

Optional equipment includes:

- ☐ ConnectUPS™ Network Adapter
- ☐ Serial Hub Expander for Device connections to an Ethernet Network
- ☐ Tape Backup for backing up archived data and PowerVision configurations
- ☐ Local printer for hardcopy outputs
- ☐ Sound Card for assigning sounds to specific alarm conditions
- ☐ 28,800 Baud Modem for remote Server access and PowerVision Clients and Message Management functions

Installation Considerations

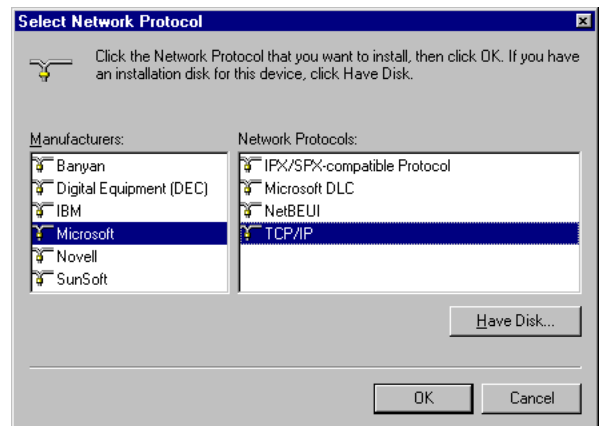
Software prerequisites consist of verifying that the Windows operating system is installed and TCP/IP Protocol properly configured. Ensure that the Windows or Windows NT operating system is installed on both the PowerVision Server and the Client PC. In smaller site installations, the PowerVision Server and Client may be installed on the same computer.

TCP/IP Protocol

TCP/IP Protocol must be enabled in the PowerVision Server/Client computer(s). Before starting, determine the unique network address(es) for the PowerVision PC(s).

To activate this network software component:

1. Select **Settings>Control Panel** under the Start button on the Windows task bar.
2. Double-click on the **Network** icon to access that dialog box. Check the list to determine if the TCP/IP component is installed. If it is, click **Cancel**; if not, click the **Add...** button under the **Configuration** tab.
3. Highlight Protocol and click **Add...** in the **Select Network Component Type** dialog box.
4. Select **Microsoft** as the Manufacturer and **TCP/IP** as the Network Protocol, then click **OK** to enable that software component.



POWERVISION SETUP CHECKLIST

Verify minimum system requirements have been met (page 1)



Verify TCP/IP Protocol is enabled (page 1)



Determine which type of UPS configuration has been installed
to determine the best way to connect the UPS Devices to the PowerVision System



Single-Module UPS System

For network connectivity, obtain the appropriate ConnectUPS device for your system:

- For all Powerware reverse transfer (stand-alone) 9315 and IPM BP-III UPS products, use ConnectUPS-9315 (Part Number: 103001458)
- For all Powerware UPS products with a built-in communication slot, use ConnectUPS-MX (Part Number: 05146288-5501)
- For all other Powerware and IPM UPS products, use ConnectUPS-M (Part Number: 101690002-001)

Obtain the IP address and program it into the ConnectUPS Adapter. Consult your Network Administrator, if necessary.

For direct serial connection, use the supplied RS-232 cable; for distances greater than 50 feet, obtain an RS-232/422 converter (Part Number: 41158)

Multi-Module UPS Systems

For network connectivity, obtain the appropriate Serial Hub/Ethernet Converter for your system:

- For all Powerware 9315 Hot Sync Parallel Redundant Systems, Hot Sync Parallel Capacity Systems, and all other parallel UPS configurations with four or less modules including the System Bypass Module, use a 4-Port Serial Hub/Ethernet Converter (Part Number: 41147)
- For systems with up to eight modules including the System Bypass Module, use an 8-Port Serial Hub/Ethernet Converter (Part Number: 41148)

Note: An IP Address need not to be programmed into these Devices; using the MAC address is sufficient. An IP Address may be programmed, if desired. Consult your Network Administrator if necessary.

Install the supplied Device Driver with the Serial Hub on the computer. The computer must be running Windows NT to be able to install the Serial Hub Device Driver.



Document all Device configuration settings (i.e., IP Addresses, COM Port Setting, etc.)
for all installed UPS Devices on the supplied Configuration Checklist (insert)



Install PowerVision Program Software (page 3)



Configure PowerVision Server (page 4)



Install Devices (page 5)

Install Power Units
(page 12)



Configure PowerVision Client (page 8)



Autoview Client Configuration (page 9)



Backup PowerVision Server Configuration (page 11)

PowerVision Installation

PowerVision installation and configuration is a five-step process: Program Installation, Server Configuration, Device Configuration (including Installing Power Units), Client Configuration and Autoview Configuration. All use a series of InstallShield® Wizards to simplify the procedure and user prompts guide you through the entire installation process. Refer to the *PowerVision Server/Client Application Guide* or *PowerVision Online Help* for comprehensive information on program operation.

Verify that the Server and Client PC are communicating. It is the responsibility of the User to obtain TCP/IP network names and addresses for both the Client and the Server.

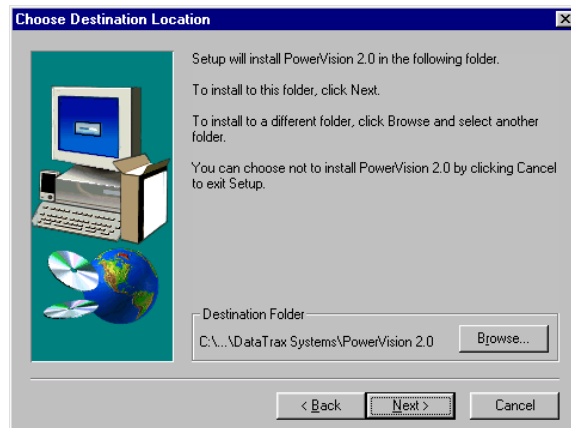
Program Installation

PowerVision program installation is performed automatically from the CD-ROM and includes all of the required files. You are prompted for the drive destination and the application is placed in the specified location.

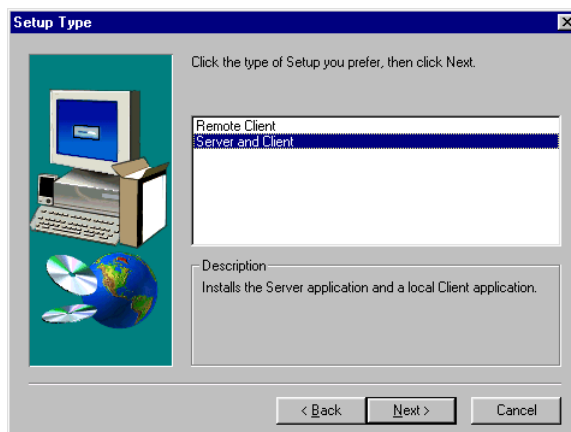
To install PowerVision program software:

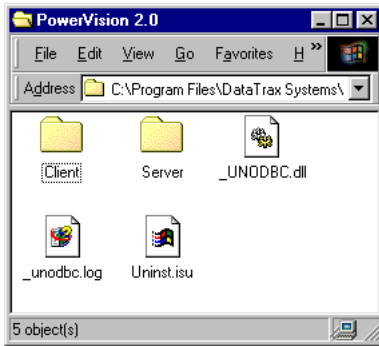


1. Insert the PowerVision Installation CD into the Server (or the Server/Client) computer's CD-ROM drive.
2. Select **R**un... in the Windows **S**tart menu and that dialog box is displayed.
3. Specify the appropriate drive and type setup (**E:**:\setup, for example) or **B**rowse to locate the setup file, then click **O**K. Installation setup begins and its ongoing progress is reported until complete, at which time a **W**elcome dialog box is presented.
4. Click **N**ext> to view the **S**oftware **L**icense **A**greement; read it and click **Y**es to continue. A dialog box is displayed to identify the program's Destination Location.



5. Accept the default Destination Location for the PowerVision Server application and its associated files, or specify another drive location. Click **N**ext> to continue with the installation.
6. Specify whether to install both the Server and Client applications, or just the Remote Client program (this installation assumes the Server and Client software is being installed on the same computer). Click **N**ext> and PowerVision reports when all of the required files have been copied.





A **PowerVision 2.0** folder is created; the application is also accessible through the **Start>Programs** menu.


7. Click Finish on the final Wizard screen to complete the installation. If required, you are prompted to reboot the system. Rebooting is not always necessary, however.

In the case of a PowerVision Remote Client installation, proceed to **Client Configuration**; otherwise, a Server and Client installation advances to the **Server Configuration Wizard**.

Server Configuration

The initial step in setting up PowerVision is to configure the Server. This includes establishing password authorization, if desired, to protect the basic administrative operations governing the maintenance of the Device database.

To configure the PowerVision Server:

1. Locate the PowerVision Server icon in the program folder that was created during program installation and double-click on it, or select **Powervision 2.0>PowerVision 2.0 Server** from the Windows **Programs** menu, to launch the application. 
2. When the first **Server Configuration** screen is displayed, read the information then click **Next>** to continue with the procedure.
3. You optionally may require authorization before changes can be made to the Server. Password protection is recommended in critical installations to prevent inadvertent changes which could adversely affect the PowerVision system. You must enter the Password in both fields to confirm it (asterisks are displayed to maintain system security). Click **Next>** to continue.

***Note:** PowerVision Passwords are case-sensitive; thus, "USER," "User" and "user" are all recognized as different entries.*

PowerVision Server Configuration Wizard Step 2 of 3

To ensure that only authorized personnel are allowed to change the server configuration or stop the server, you should assign an administrative password.

When an administrative password is assigned, a user must enter the password before the server can be accessed.

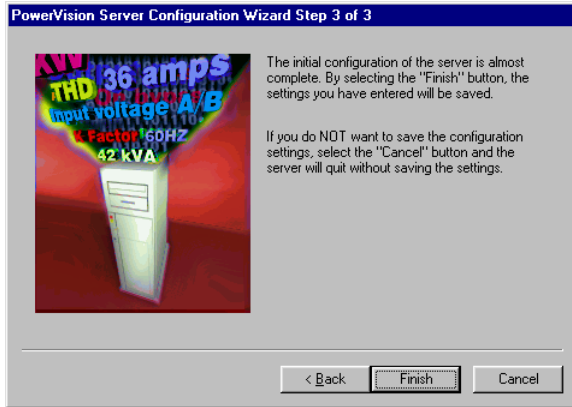
If you do not want a password, then leave the following password fields blank.

Password

Verify Password

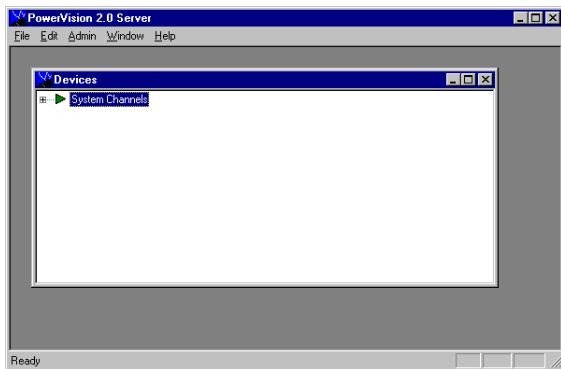
Select the "Next" button to continue.

< Back Next > Cancel



4. Go <Back to change any of the chosen parameters, if necessary, then click Finish to save the Server Configuration settings.

The Server software is launched automatically and within a few moments the **Devices View** window is displayed before the screen proceeds to the **Device Installation Wizard**. A notice is issued that you have a 30-day trial license in which to purchase and install the necessary number of Power Units to support your system. You may elect to install them now (see [Power Units](#)), or you can continue with Device installation and address Power Units later.



Device Installation

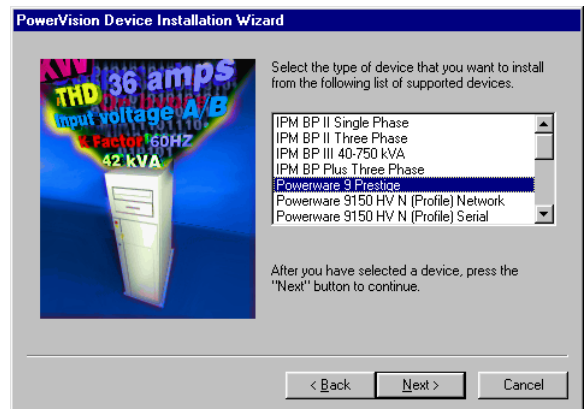
The next step in the installation procedure is to populate the **Devices View** with the UPS equipment that is to be monitored. You will want to have the completed [CONFIGURATION CHECKLIST](#) on hand to verify proper connections.

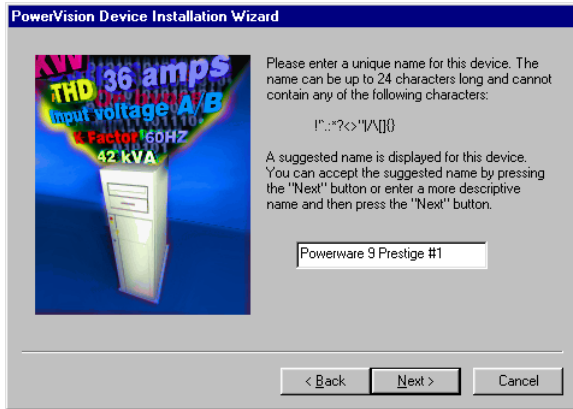
New Devices are added to the PowerVision Server using a step-by-step installation procedure similar to that employed during its initial configuration. A **Device Installation Wizard** guides you through the procedure, prompting the necessary information and applying default parameters based on a standard list of points to monitor for each Device. Individual default settings for these points may be changed later (refer to the *PowerVision User Guide* or *Online Help* for more information).

To install a Device on the PowerVision Server:

1. Read the initial **Device Installation Wizard** screen, then click Next> to continue.
2. Select the appropriate Device from the displayed list of supported equipment and click Next>.

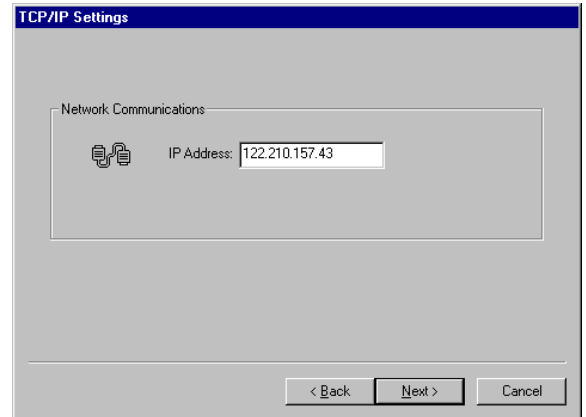
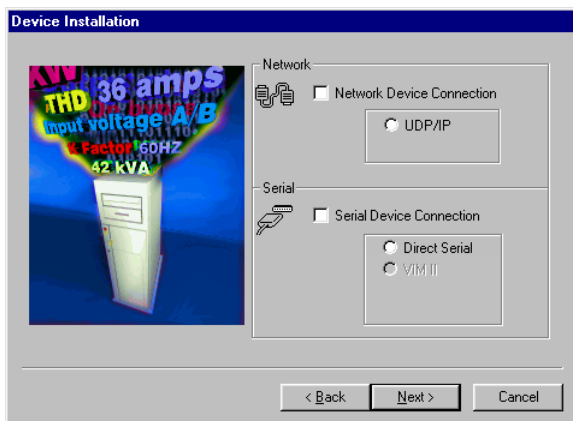
Note: The Device should be correctly wired and running in a normal operational mode to successfully connect to it.





3. Accept the suggested Name for the Device, or enter another unique description, up to 24 characters, then click **Next>** to continue.
4. Specify whether the interface between the Server and the Device is a Network (UDP/IP) or a Serial (Direct Serial or VIM II) connection.

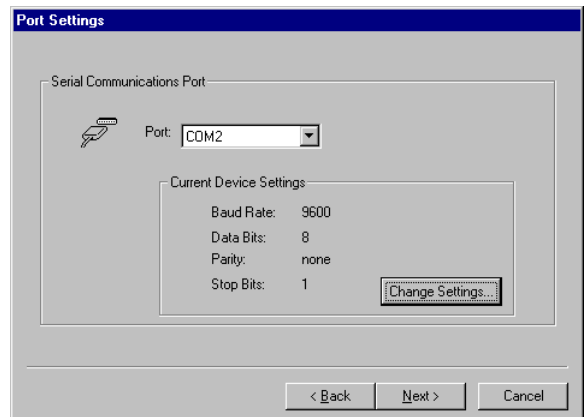
Note: TCP/IP protocol previously must be installed on the Server PC regardless of the type of Device connection (see [Software Considerations](#)). When utilizing a ConnectUPS Network Adapter, specify a UDP/IP connection.

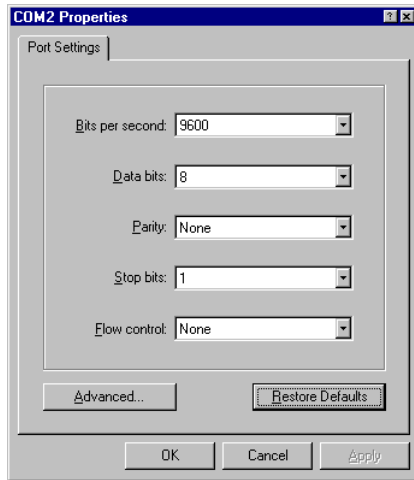


5. Click **Next>**, then enter the requested Device Connection information:

For a Network Connection, enter the IP Address of the target equipment. This Address *must be correct* or the Server will be unable to communicate with the Device. Click OK to accept the entry and return to the **Device Installation Wizard**.

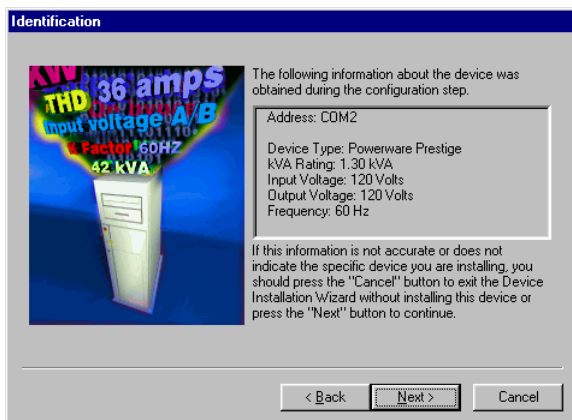
Selecting Serial Connection prompts you for additional interface information. A Direct Serial Connection, for instance, requires that you specify the COM Port to which the Device is connected and its communications settings. Accept the displayed serial Port or assign another from the drop list of selections in the Serial Communications Port field.



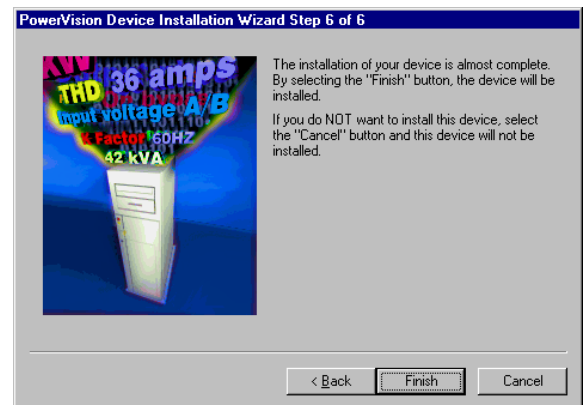


Press the **Settings...** button to display the Port's **Properties** dialog box containing additional serial interface parameters. Clicking **Restore Defaults** loads the settings specified in your operating system. Click **OK** to enable the displayed parameters and return to the **Device Installation Wizard**.

6. Once the Device Connection is properly configured, click **Next>** and PowerVision will attempt to establish connections with the specified UPS. Connection with the target Device displays a summary of its connection and power information.



7. Verify that the information displayed about the Device corresponds to the information recorded on your **CONFIGURATION CHECKLIST**. If not, **Cancel** the installation and recheck the Device. With the correct Device Information displayed, click **Next>**.
8. With the target Device and the interface connection defined, click **Finish** to complete the installation of that Device. The new equipment will appear in the **Devices View** window. Install any additional Devices using the same procedure for each.
9. With all the desired Devices installed, you are given the option of installing Power Units before proceeding. It is recommended that you install Power Units at this time to ensure that the initial Trial License does not expire and interrupt continuous Device monitoring. Click **OK** to proceed to the **Power Units Management** dialog box (see **Power Units**). Otherwise, simply click **Cancel** to conclude Device installation.
10. Click **Finish** to complete Device installation and advance to the PowerVision **Client Configuration** Wizard.




Client Configuration

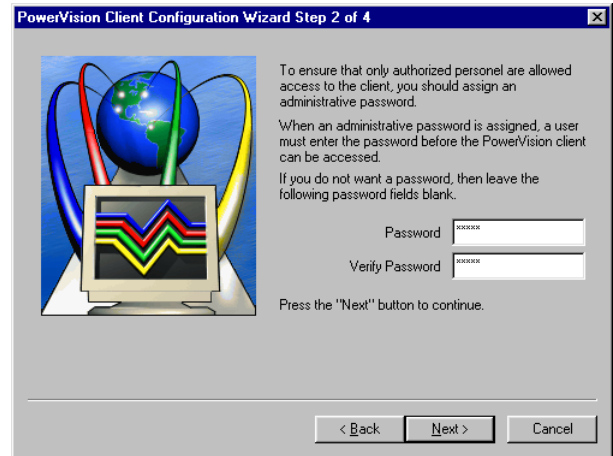
Once the Server and its Devices are defined, the PowerVision Client must be configured. Client configuration is similar to the process used to configure the PowerVision Server. The procedure includes entering the serial number supplied with the program software, optionally specifying password access and identifying the associated Server.

Note: The PowerVision Server must be running to establish Client connections.

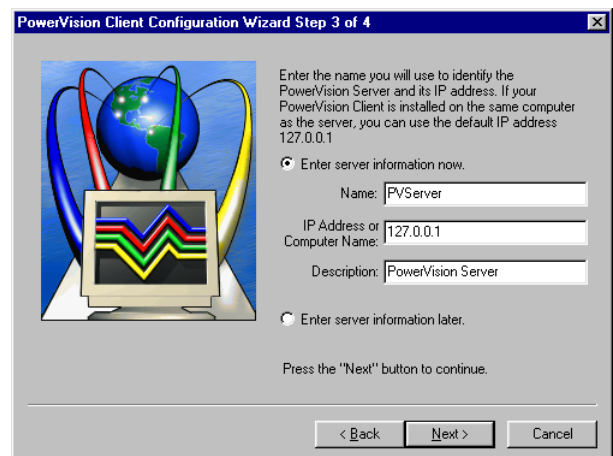
To initialize PowerVision on the Client PC:

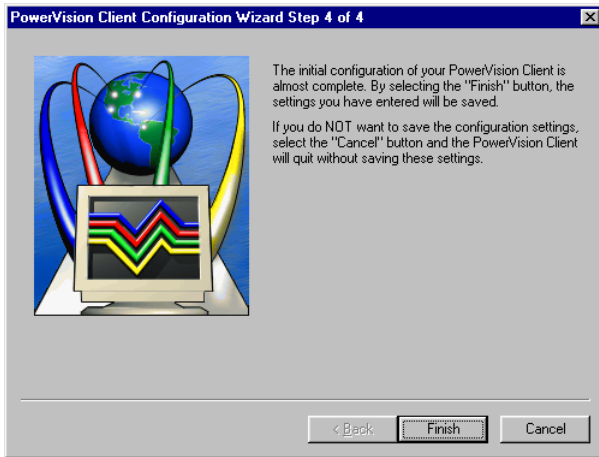
1. If necessary, locate the PowerVision Client icon in the program folder created during program installation and double-click on it, or select **Powervision 2.0>PowerVision 2.0 Client** from the Windows **Programs** menu, to launch the application. 
2. Read the **Client Configuration Wizard** screen and press **Next>** to proceed with configuration.
3. As with the Server configuration, you can choose to require Password authorization to modify protected Client features. This Client password is independent of a Server password and allows administrative access to selected PowerVision features. Password protection is strongly recommended in critical installations to prevent inadvertent changes which could adversely affect the PowerVision system. You must enter the same administrative authorization in the Verify Password field to confirm it. With the desired Password entered (asterisks are displayed in both fields to maintain security), press **Next>** to proceed.

Note: PowerVision Passwords are case-sensitive; thus, "USER," "User" and "user" are all recognized as different entries.



4. Identify the PowerVision Server for this Client by Name and enter its IP Address. An Address of 127.0.0.1 (the default) assumes the Server and the Client are installed on the same PC. If they are installed on different computers, the Server's IP Address *must* be entered correctly or the Client will not be able to establish communications. Also enter a Description, if desired, to further identify the Server. Choosing to "Enter server information later" allows you to bypass this setup and continue with Client software installation, although it is suggested that you provide this information. Click **Next>** to continue.





5. Go <Back to change any of the settings if necessary, then click Finish on the final **Wizard** screen to save the configuration. Within a few moments, connections should be established with the Server and the **Autoview Configuration Wizard** is presented.

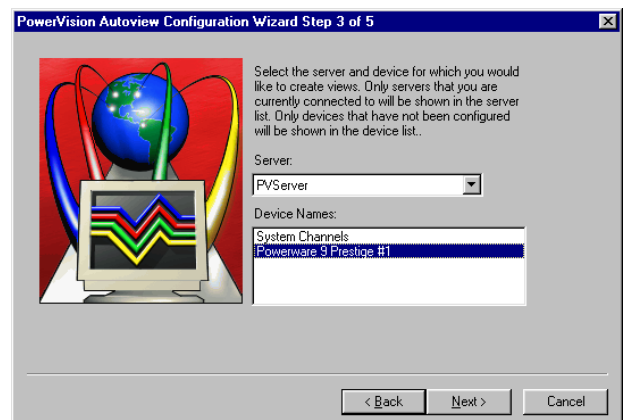
Autoview Configuration

The final step in the PowerVision installation procedure (or whenever a new Device is installed) is to establish the corresponding equipment View(s) on the Client computer. This procedure requires the **CONFIGURATION CHECKLIST** to verify proper connections.

***Note:** The PowerVision Server must be running and actively collecting data to be able to establish Client connections and configure a View. Also be sure **Start Database** under the Server's **Admin** menu is enabled.*

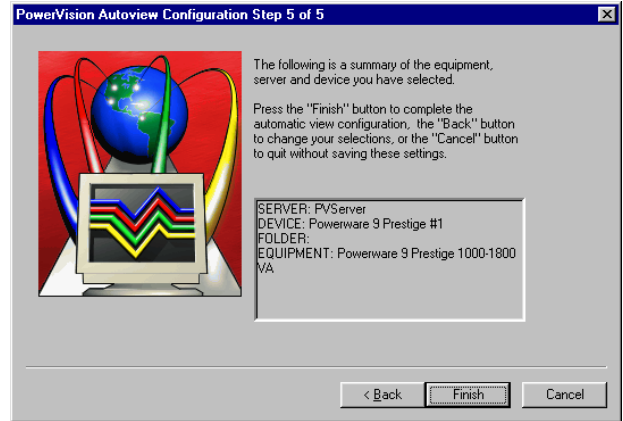
To automatically configure a PowerVision View:

1. Read the **Welcome** screen and then click **Next>** to continue with the View configuration. With existing installations, select **View Configuration>Add Views...** from the Client's **File** menu to display that series of **Configuration Wizard** screens.
2. Specify whether the icon representing the Device will be displayed in the Client System Overview, or placed in a New Folder, or in an Existing Folder. In the latter instances, name or identify the desired Folder. Up to 16 Folders can be created, each containing as many as 16 Uninterruptible Power Systems, thereby supporting a total of 256 Devices. You may, for example, want to create several folders containing specific types of equipment, or you may prefer to group Devices by location. With the display location specified for the Device's icon, press **Next>** to proceed.

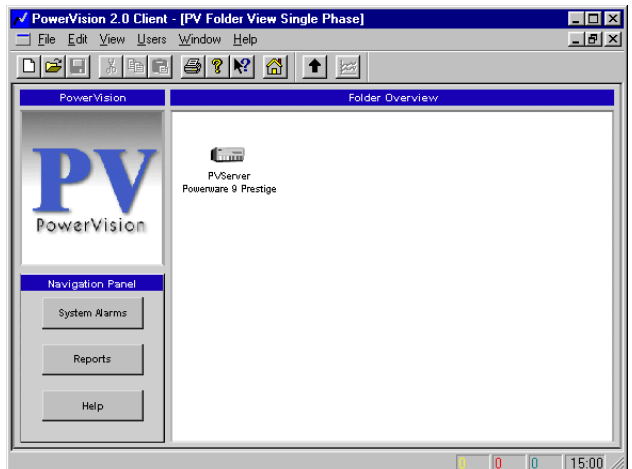
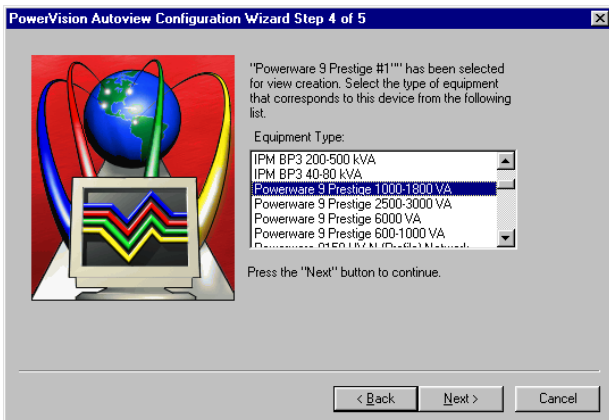




3. Select the Server from the associated drop list and specify the Device Name of the equipment to be autoconfigured on the Client. The Name was assigned at the Server during *Device Installation*. Click Next> to continue.
4. Highlight the Equipment Type represented by the Device selected on the previous screen and click Next>.



5. The chosen SERVER, DEVICE and EQUIPMENT are summarized on the final screen. Verify that the information is correct and that it corresponds to the [CONFIGURATION CHECKLIST](#). If any of the entries are wrong, press the <Back button to return to the appropriate **Autoview Configuration** screen and change them as necessary. Click Finish to complete the configuration process. A **Client Progress** dialog box reports the successful completion of configuration and you are given the option to Configure Another Device, or exit the Wizard if you are Done. The **Overview** displays the newly configured Device(s).



Backing Up the Server Configuration

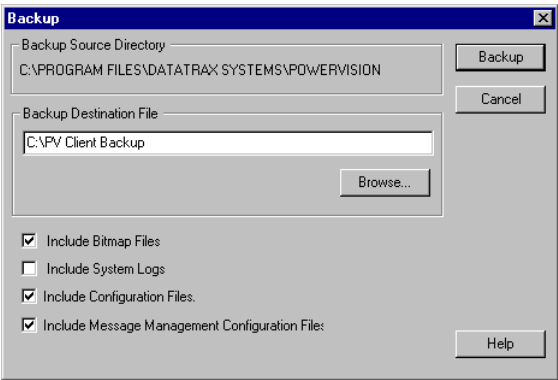
It is strongly recommended that a backup be performed after initial system configuration and subsequent to any significant modifications to ensure maximum disaster recovery capability. The backup archive includes the Server configuration, as well as any existing Log and Report files.

Note: Data files are not archived in this procedure. Automatic data backups can be scheduled under the **Admin** menu (see [Database Backups](#)).

To backup a PowerVision Server configuration:

1. Select **Configuration Backup** in the **Admin** menu and that dialog box is displayed.
2. Enter a File name for the backup, specify the destination directory if other than the PowerVision Restore folder, then click **Save** to create the archive file.

The procedure for backing up a PowerVision Client Configuration as a disaster recovery precaution is similarly performed through the **File|Administration>** submenu. Simply specify the desired destination in the subsequent dialog box and click **Backup** to initiate the process. You have the option to Include Bitmap (Graph) and System Log (User login/logoff), Configuration (View) and Message Management Configuration files in the archive, if desired.

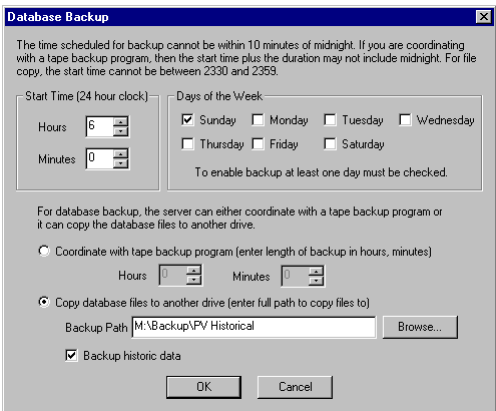


Database Backups

The PowerVision Server database can be scheduled to be archived on a regular basis to ensure logged data are backed up in the event of a hard disk problem. It is recommended this function be performed daily to a second hard drive as well as to a file server or a tape backup in network installations, and to a tape backup if the Server and Client reside on the same PC. The backup includes PowerVision data files, in addition to logged Alarms and Notes, and the procedure is executed automatically.

To schedule regular backups of the database:

1. Select **Database Backup...** in the Server's **Admin** menu followed by **Database Backup...** and that dialog box is displayed.



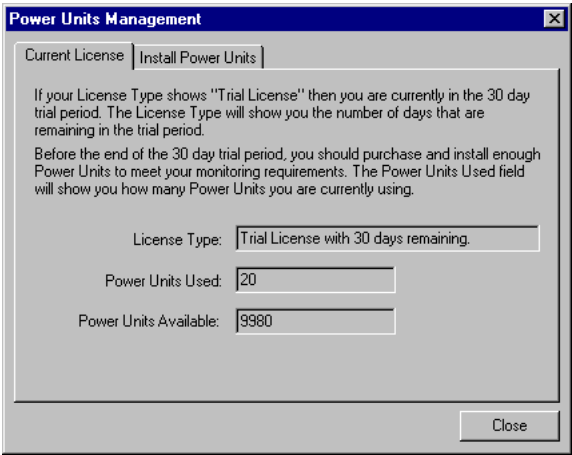
2. Specify when the backup is to be performed (paying attention to the stated limitations) and its destination. You also have the option of coordinating the archiving procedure with an existing tape backup program or specifying a secondary Backup Path.
3. Click **OK** to enable the PowerVision Database Backup feature. All archived data will be backed up automatically at the specified time (any current data is not included as it is not yet part of the database archive).

Power Units

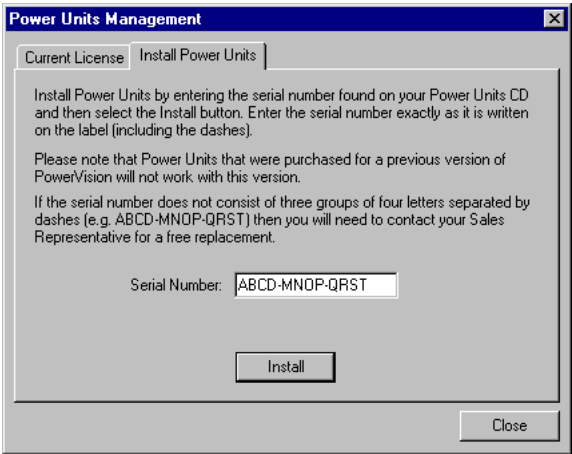
Power Units are employed by Invensys Power Systems to extend the capability of your PowerVision monitoring system past the initial 30-day trial period for use on a permanent basis. Power Units also give you the ability to expand your existing system’s monitoring capabilities. The **Power Units Management** dialog box reports relevant account information for your site. All account transactions (Power Units and Power Units Available) are updated dynamically as changes are made to the configuration.

On initial installation, 10,000 Power Units are available to the Server system to configure any number of UPS Devices (and extended program features such as SNMP and Modbus Gateway options) to allow you to become familiar with the PowerVision program. Once you have installed all of the equipment and features that you wish to monitor, you can use the **Power Units Management** dialog box to determine the number of Power Units necessary to meet the needs of your current configuration. Please contact your local Powerware Sales Representative to obtain pricing information when ordering Power Units for your PowerVision system. Power Units are purchased in denominations and charged on a graduated scale based primarily on the kVA rating of the UPS:

<i>PowerVision Function</i>	<i>Power Units Required per Device (or extended Feature)</i>
UPS (0 – 6 kVA)	2
UPS (7 – 15 kVA)	5
UPS (16 – 20 kVA)	10
UPS (21 – 45 kVA)	15
UPS (46 – 80kVA)	20
UPS (81 – 160 kVA)	25
UPS (161 – 300 kVA)	30
UPS (301 – 500 kVA)	35
UPS (501 – 750 kVA)	40
SBM	40
SNMP Option	100
Modbus Gateway	350



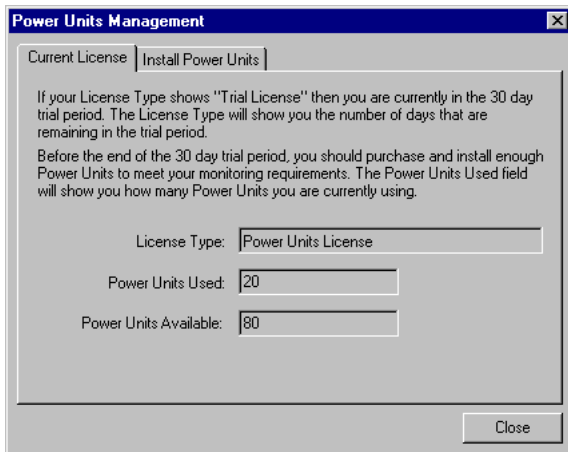
Power Units are provided in the form of a *Certificate* with a unique serial number that must only be used on one PowerVision Server at a time. After receiving your *Power Units Certificate*, you can use the **Power Units Management** dialog box once again to install your Power Units. The **Power Units Management** dialog box reports **Current License** information: **Install Power Units** loads Power Units into the PowerVision application. Installed Power Units can be applied as desired to the PowerVision configuration. Any unused Power Units can be applied at any time for installing additional Devices or establishing Client connectivity.



Note: Administrative Authorization is required to install Power Units.

To install PowerVision Power Units:

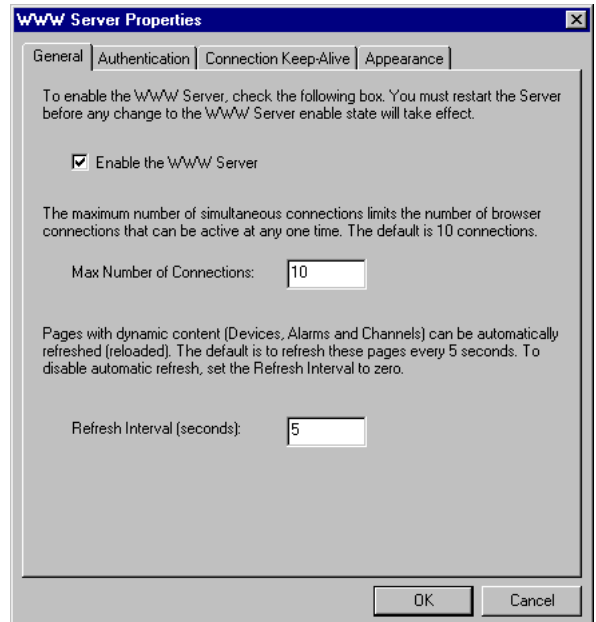
1. Select **Power Units** in the **Admin** menu in the PowerVision Server application to display the **Power Units Management** dialog box.
2. Click on the **Install Power Units** tab to access those settings.
3. Enter the unique Serial Number found on the *Power Units Certificate* shipped with the PowerVision program.
4. Click **Install** to activate the Power Units. A dialog box reports that they have been installed successfully.
5. Click **OK** to return to the **Power Units Management** dialog box. The number of Power Units Used and still Available are reported.



Enabling the PowerVision WWW Server Feature

A PowerVision Server can be configured for access through the World Wide Web to allow remote viewing of Device status and Channel values, as well as permitting limited Report and Alarm Management capabilities. To enable the PowerVision WWW Server feature:

1. Select **WWW Server...** in the **Admin** menu of the PowerVision Server application to display the **WWW Server Properties** dialog box.
2. Click on the **General** tab and check the **Enable the WWW Server** setting.
3. See [Configuring PowerVision WWW Server](#) below to further configure PowerVision Server application properties for Web access.
4. Close the **WWW Server Properties** dialog box.
5. Restart the PowerVision Server application to enable the WWW Server feature.



Configuring PowerVision WWW Server Properties

The **WWW Server Properties** dialog box is used to configure the PowerVision Server for Web Browser access. It offers the following user-configurable settings:

General settings limit the number of simultaneous Web connections as well as the interval between display updates.

Maximum Number of Connections: specifies the maximum number of connections allowed.

Refresh Interval (seconds): determines how often the screen information is updated.

Authentication settings optionally require a name and password for Web access.

User Name: is a secure identification.

Password: validation allows access to Web Server information.

Acknowledge/Rearm Enabled: checking permits Users to perform these alarm management functions through a Browser.

User Name and Password: allow separate security access to be defined for these alarm management functions.

Connection Keep-Alive settings establish how long the Internet connection with the PowerVision Server is maintained.

Maximum Number of Requests: defines the data request limit for this connection.

Timeout (seconds): specifies the interval the connection is maintained between update requests before being terminated.

Appearance settings define how the Web Server information is displayed in the Browser.

Border: defines the lines that separate the displayed data.

Browser Format: specifies the alarm state image type appropriate for the Browser.

CONFIGURATION CHECKLIST — UPS PARAMETERS

			Serial Settings						
		Network Settings							
Device Number	Device Name	IP Address	Serial Port	Baud Rate	Parity	Data Bits	Stop Bits	Handshaking Flow Control	
Example	UPS #1	N/A	COM 2	9600	None	8	1	Disabled / None	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

Record Communications Parameters Settings on other side

CONFIGURATION CHECKLIST — COMMUNICATIONS PARAMETERS

		Network Settings	Serial Settings					
Device Number	Device Name	IP Address	Serial Port	Baud Rate	Parity	Data Bits	Stop Bits	Handshaking Flow Control
Example	UPS #2	189.100.150.22	N/A	N/A	N/A	N/A	N/A	N/A
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

1. An IP Address is required if using a ConnectUPS and network connections.
2. Serial Communications Settings must be configured on both the UPS front panel and within PowerVision if using serial connections.