PowerPanel® Business Edition Installation Guide

For

UPS with Remote Management Card

Rev. 14

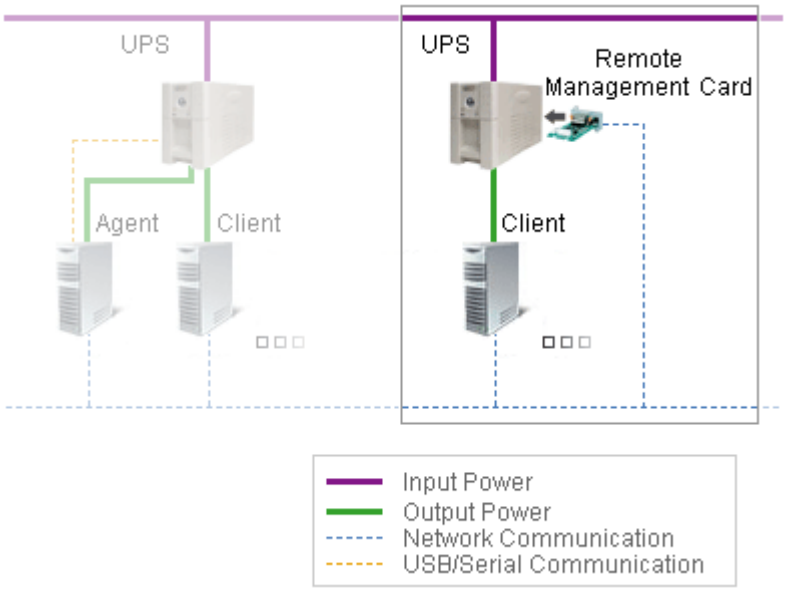
2014/09/10

Table of Contents

Introduction

A UPS with a remote management card (RMCARD) can provide access to the UPS directly via the network. It provides a service to monitor the status and configure the UPS through the network. It also logs the UPS status and power events.

The PowerPanel® Business Edition Client running on the host can communicate with the UPS via the network. In the event of power failure, the Client will be informed of this condition from the RMCARD and request the hosted computer to shut down completely before the UPS stops supplying power due to the battery power being exhausted. It can be installed on various platforms to initiate a shutdown during a power outage including Windows, Linux, Citrix XenServer and VMware ESX/ESXi. The following sections describe installation on the various platforms.



The UPS can establish communication with the PowerPanel® Business Edition Center via the network. The Center serves to simultaneously monitor and manage multiple UPS units. When the UPS stops supplying power, any computers running the PowerPanel® Business Edition Client, are shut down in advance to avoid a system crash or data loss.

Hardware Installation

Before installing the PowerPanel® Business Edition software, make sure that the following hardware installations are configured properly:

- Verify the computer's power is connected to the UPS outlet properly.
- Verify the computer's network is connected.
- Verify the RMCARD's network is connected.

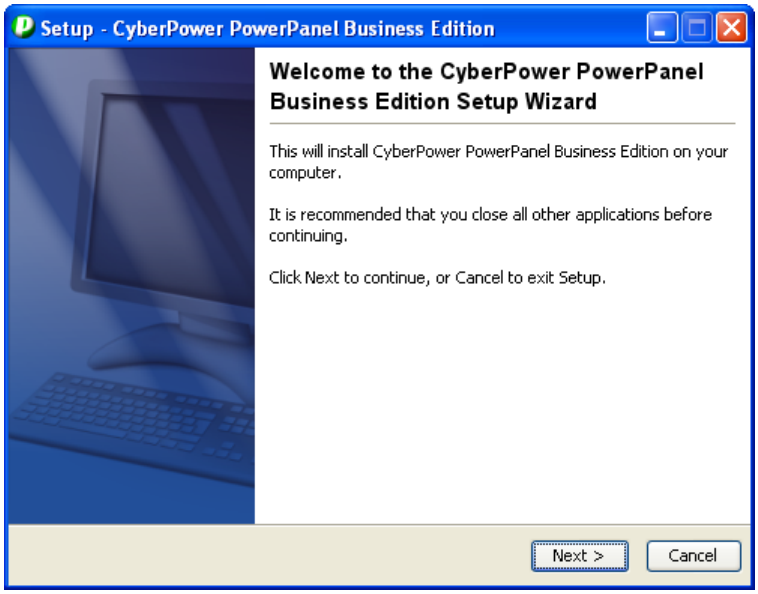
Please refer to the **Remote Management Card User's Manual** for a proper hardware installation.

Installing PowerPanel® Business Edition Software

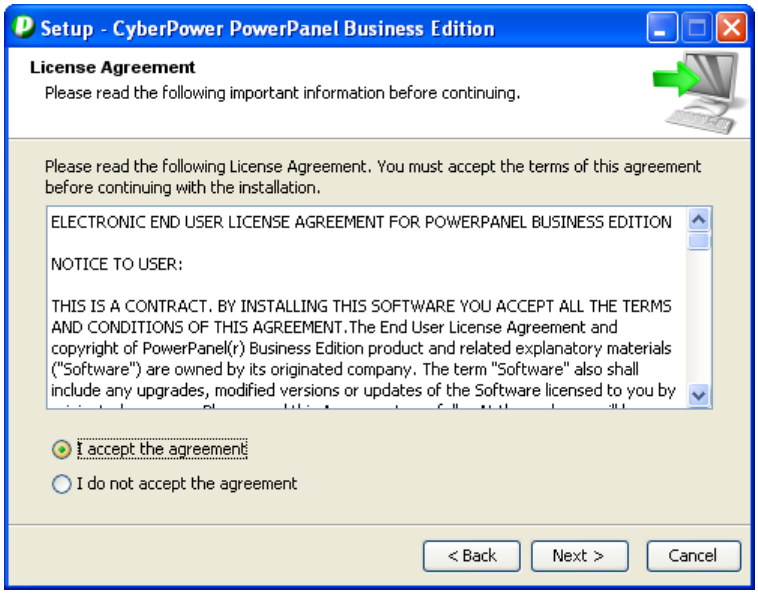
Installation on Windows

A popup window will be displayed automatically when inserting the PowerPanel® Business Edition installation CD. Users can click the **Install PowerPanel Business Edition software** shortcut on the window to initiate the installation procedure. If the popup window is not displayed when inserting the CD, browse to the CD drive and open the folder which locates at **/Software/Windows** then double click the file named **Setup.exe** to start the installation procedure. To install follow these steps:

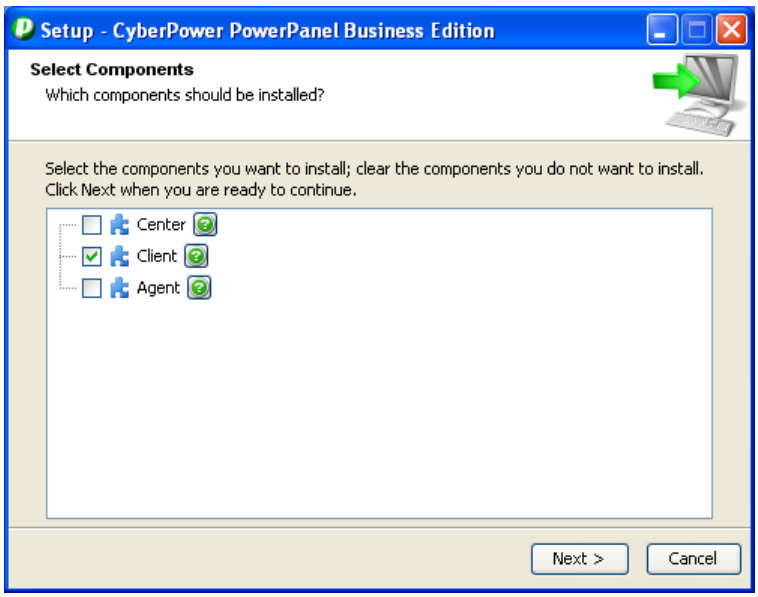
- Click the **Next** button to start the installation.



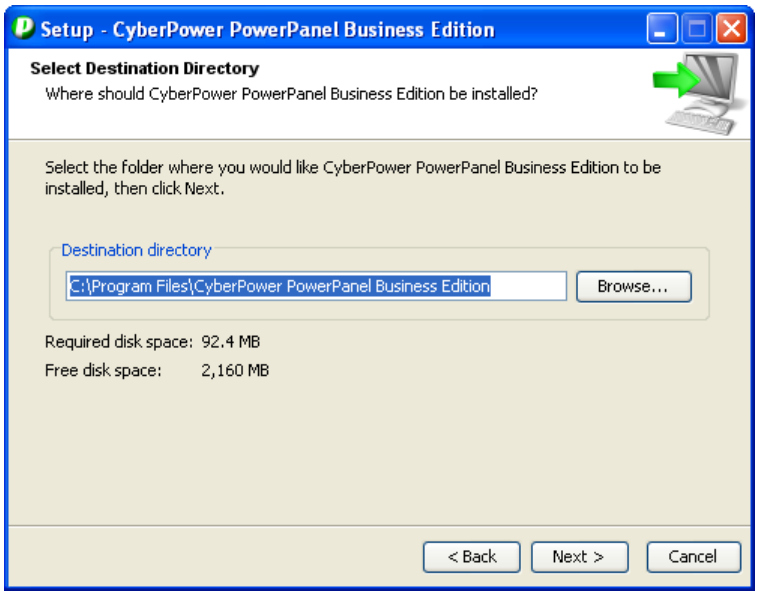
- Accept the license agreement.



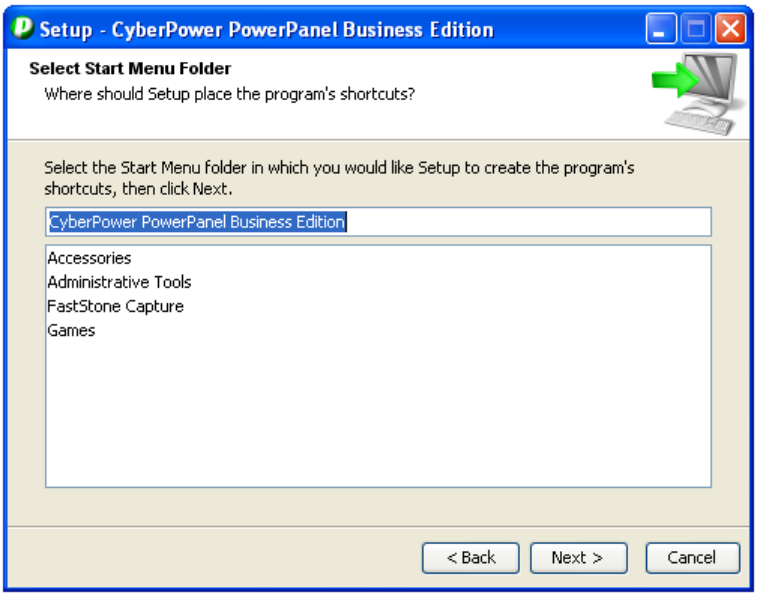
- **Choose the component.** In order to monitor multiple UPS units simultaneously, Center should be installed. If one single computer is powered by the UPS with an RMCARD installed, Client should be installed.



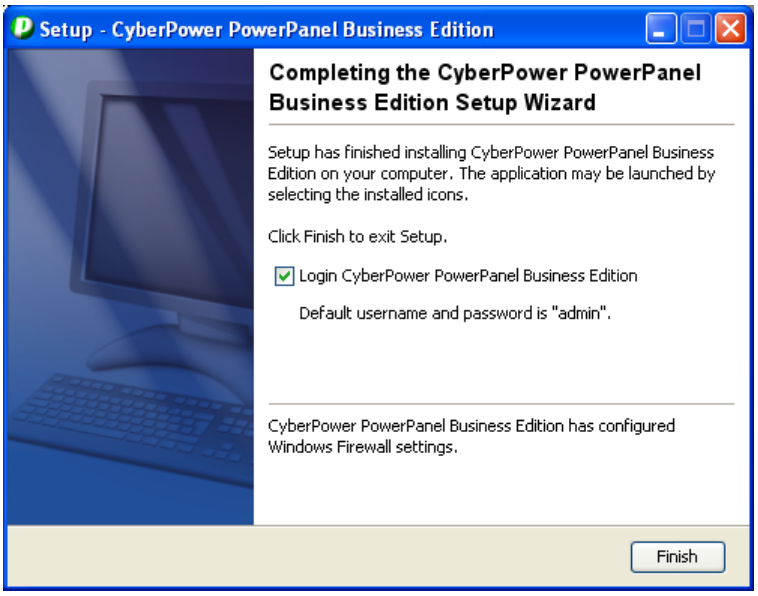
- Choose the destination directory.



- Choose the start menu folder.



- Click the **Finish** button to complete the installation.



Installation on Linux

The installer is used to install the Client and requires root permission. The installation wizard will guide users to complete the installation. Browse the CD and find the installer in the **/Software/Linux** folder. Initiate an installation wizard by running the **./ppbe-linux-x86.sh** command or double clicking **ppbe-linux-x86.sh** from desktop on 32-bit Linux systems. Initiate an installation wizard by running the **./ppbe-linux-x86_64.sh** command or double clicking **ppbe-linux-x86_64.sh** from desktop on 64-bit systems.

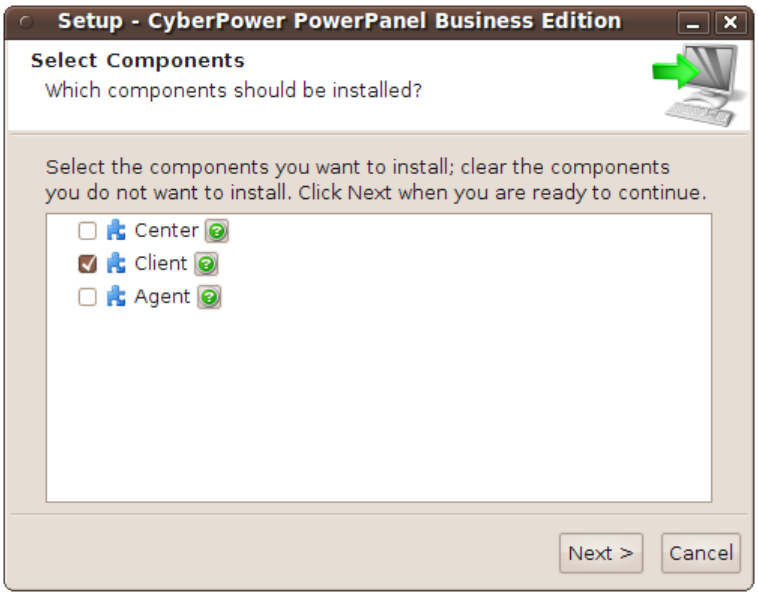
Note: *On Linux systems, users may mount the CD by using the mount command. Run* ***mount –t iso9660 /dev/cdrom /mnt/cdrom*** *as a root user. /dev/cdrom is the CD drive and /mnt/cdrom will be the mount point.*

To install follow these steps:

- Click the **Next** button to start an installation.

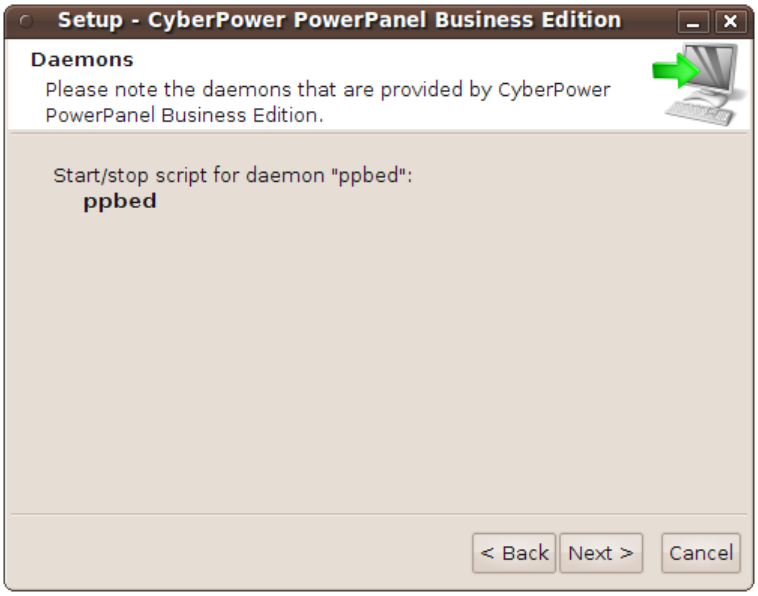
- Accept the license agreement.

- **Choose the component.** In order to simultaneous monitor multiple UPS, Center should be installed. If one single computer which is powered by the UPS requiring protection, Client should be installed.



- Choose the destination directory.

- The daemon **ppbed** will start during installation.



- Click the **Finish** button to complete the installation**.**

Installation on Text Mode

When the system does not support graphic mode, the Linux installation needs to be initiated in the terminal by using the **./ppbe-linux-x86.sh -c** command on 32-bit systems or use **./ppbe-linux-x86_64.sh -c** command on 64-bit systems.

The installation procedure will be initiated as following steps:

- Press **Enter** to start an installation.

```
Starting Installer ...
This will install CyberPower PowerPanel Business Edition on your computer.
OK [o, Enter], Cancel [c]
```

- **Accept the license agreement.**

```
YOUR ACCEPTANCE OF THE FOREGOING AGREEMENT WAS INDICATED DURING
INSTALLATION.

I accept the agreement
Yes [1], No [2]
```

- **Choose the component.** In order to monitor multiple UPS units simultaneously, Center should be installed. If one single computer is powered by the UPS, Client should be installed.

```
Which components should be installed?
1: Center
2: Client
3: Agent
Please enter a comma-separated list of the selected values or [Enter] for the de
fault selection:
```

- **Choose the destination directory.**

```
Where should CyberPower PowerPanel Business Edition be installed?
[/usr/local/ppbe]
```

- Installation procedure starts and once finished. It will end automatically.

```
Please wait for CyberPower PowerPanel Business Edition configuring
Default username and password is "admin".
CyberPower PowerPanel Business Edition may not do hibernation.
Finishing installation...
```

Installation on VMware ESXi and ESX

Installation on ESXi

Installation must be launched in the **vMA** (**vSphere Management Assistant**) which is also a virtual machine on the ESXi host. In order to deploy vMA on the ESXi host and install PPBE in the vMA, users must install the **vSphere Client** tool on another remote computer first. To download the vSphere Client installer, users can enter the ESXi host IP address to access the web page. Users can visit **VMware** website for ***vSphere Management Assistant Guide document*** about vMA deployment on VMware ESXi.

The installer will guide users in completing the installation. Refer to Installation on Text Mode section to follow the same steps to complete installation. The installer requires root permission to initiate the installation procedure. Mount CD by running **mount -t iso9660 /dev/cdrom /mnt/cdrom** as a root user.(**/dev/cdrom** is the CD drive and **/mnt/cdrom** will be the mount point.). Browse the CD drive and find the installer in the **/Software/Linux** folder. Initiate an installation procedure by running the **./ppbe-linux-x86_64.sh** command.

Note: *In order to allow the interactions between physical and virtual machines, VMware tools have to be installed on each virtual machine. Refer to VMware ESX/ESXi Server documentation for further information about VMware Tools.*

Installation on ESX

Installation must be launched in the **Service Console** (aka **Console Operation System**). To initiate the installation procedure on VMware ESX also requires root permission. Use the same command to mount CD and initiate the installation procedure. Refer to Installation on Text Mode section to complete the installation.

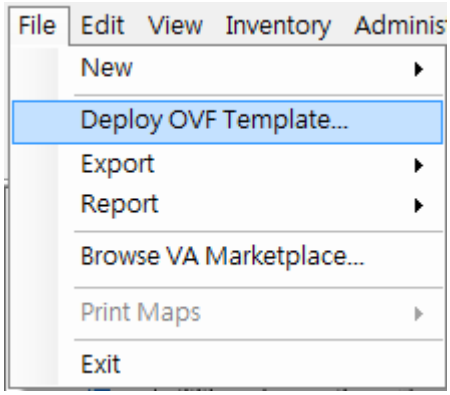
Virtual Appliance Deployment on ESXi

A virtual appliance (VA) is a prebuilt software solution, comprised of one or more virtual machines that is packaged, maintained, updated and managed as a unit. It is fundamentally changing how software is developed, distributed, deployed and managed.

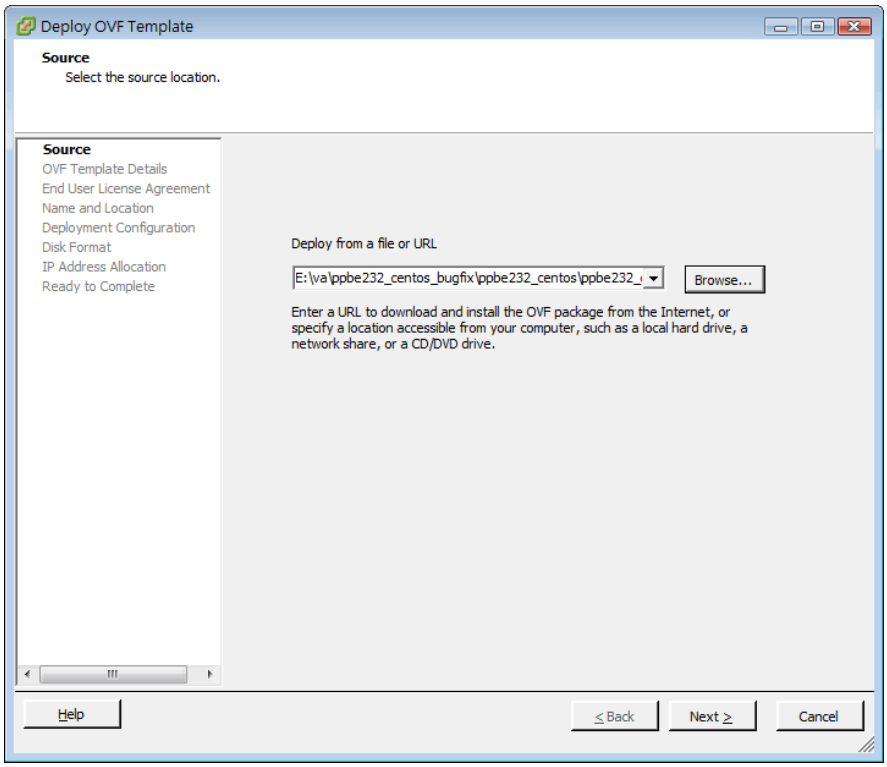
Download the PPBE virtual appliance which is pre-installed Client from CyberPower. In order to deploy the PPBE virtual appliance on VMware ESXi host, users must install **vSphere Client** tool first on another remote computer. To download the **vSphere Client** installer, users can enter the ESXi host IP address to access web page of ESXi host.

The deployment procedure will be initiated as below steps:

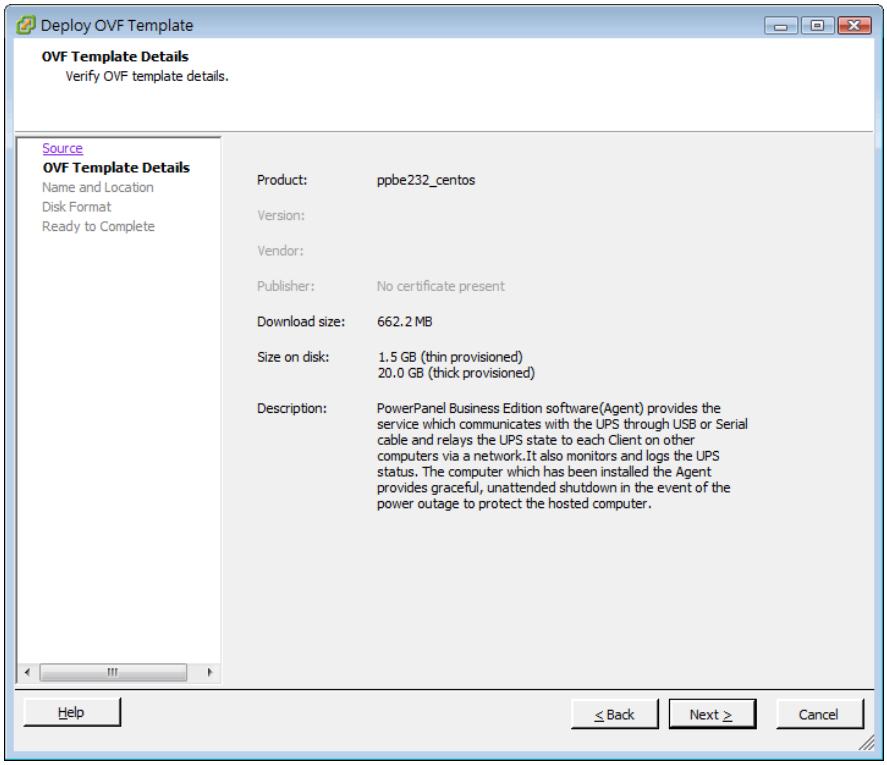
- Launch the vShpere Client. Open the **Deploy OVF Template** window from **File > Deploy OVF Template…** item.



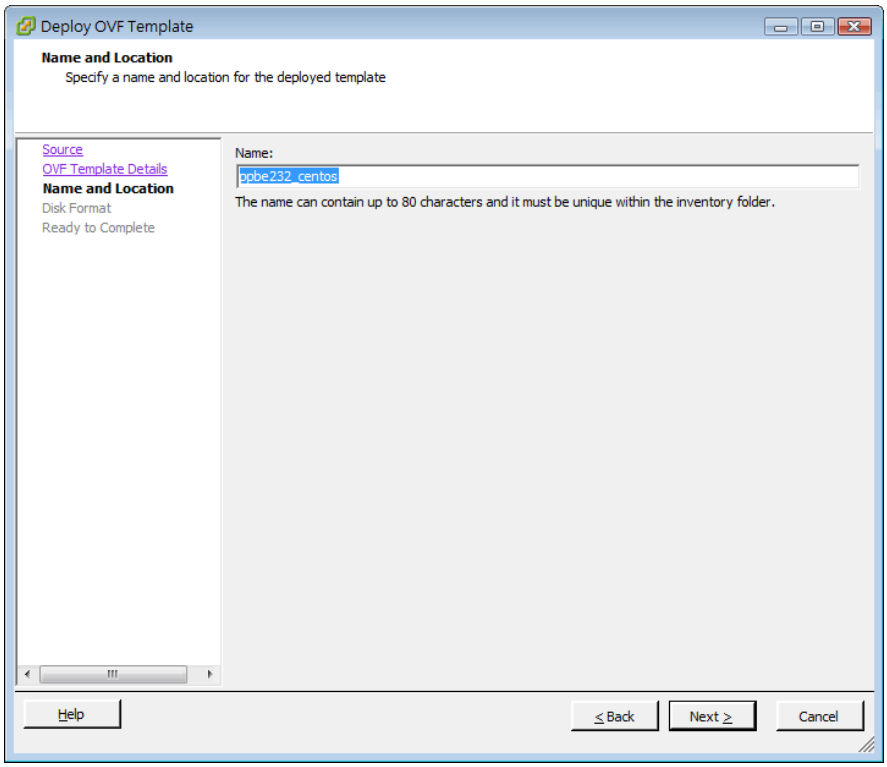
- Click **Browse** to import the **ppbeXXX_centos.ovf** extracted from the download zip file. Click **Next** to start a deployment task.



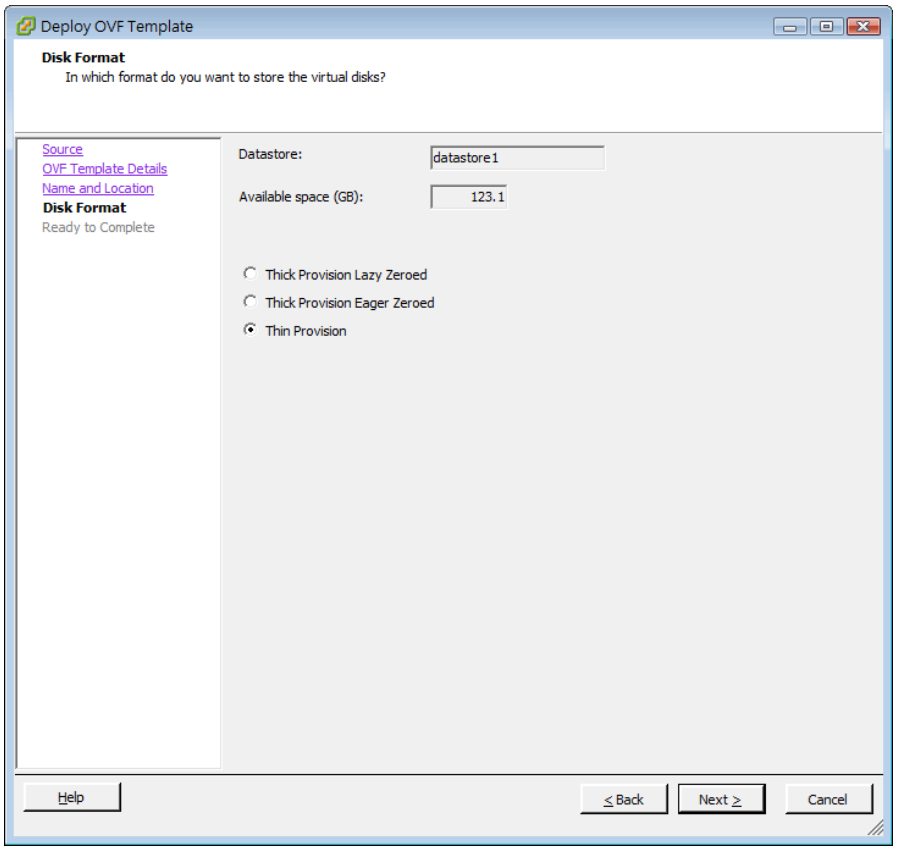
- The OVF template detail is displayed. Click **Next** to continue.



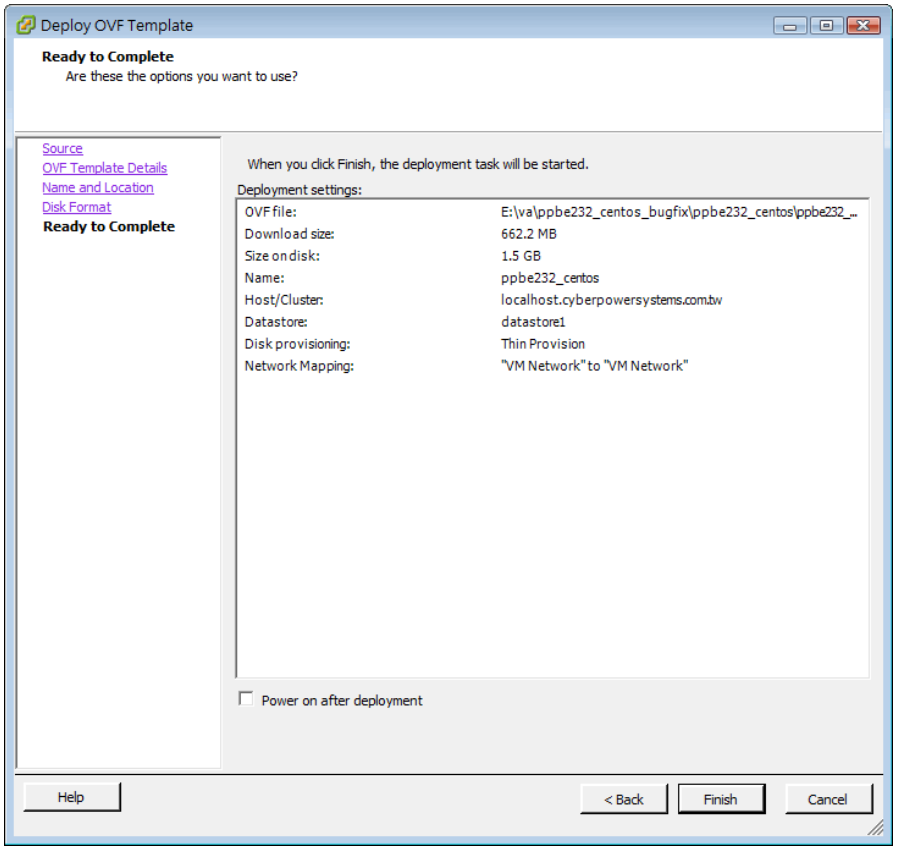
- Enter the name for the deployed PPBE virtual appliance. This name should be unique within the inventory.



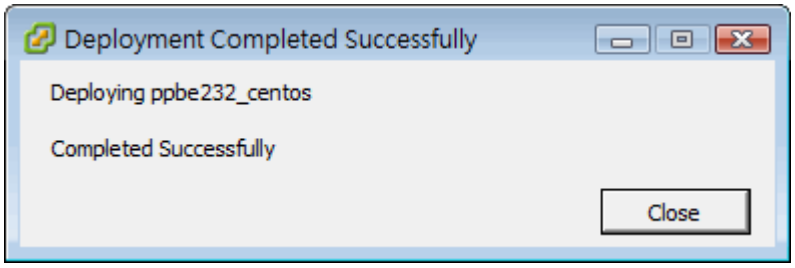
- Select the virtual disk format for the PPBE virtual appliance. The default option is **Thin Provision**. Refer to About Virtual Disk Provision Disk Policies for further information about how to select virtual disk format.



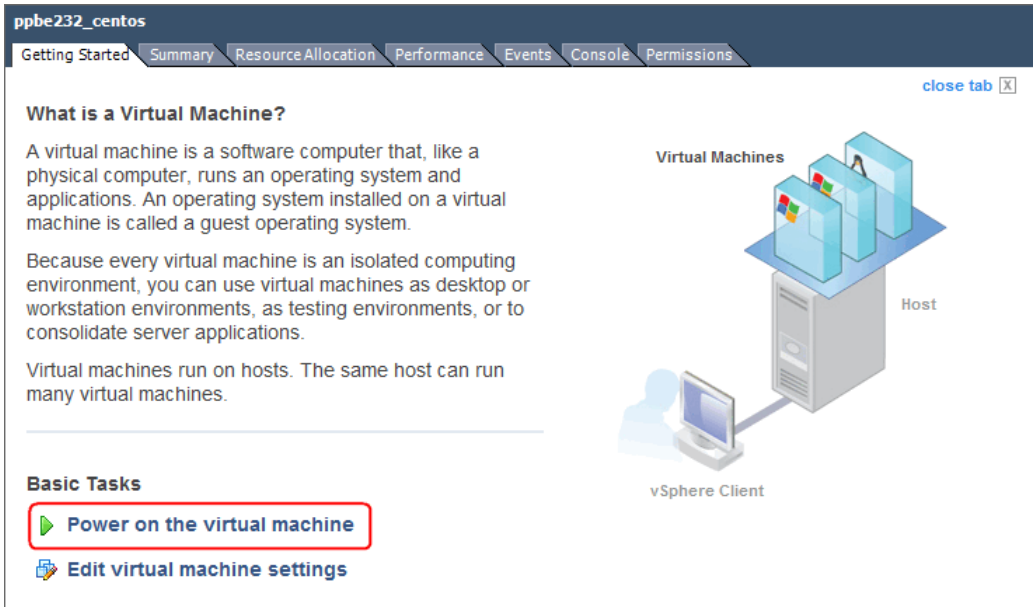
- A deployment detail is displayed. Click **Finish** to start the deployment task.



- After the deployment task is complete, the PPBE virtual appliance will be added into the inventory.



- Click **Power on the virtual machine** to power on the virtual machine and ready to access the Client.



- Login the virtual appliance. The default username and password are **admin.** In order to perform shutdown accurately, you must change the time zone settings of the virtual appliance.
  This can be a direct copy of the time zone file from the **/usr/share/zoneinfo** folder. We assume that the host is located under the Chicago CST zone in Chicago, and the time zone can be changed by running the command **cp /usr/share/zoneinfo/America/Chicago /etc/localtime**.

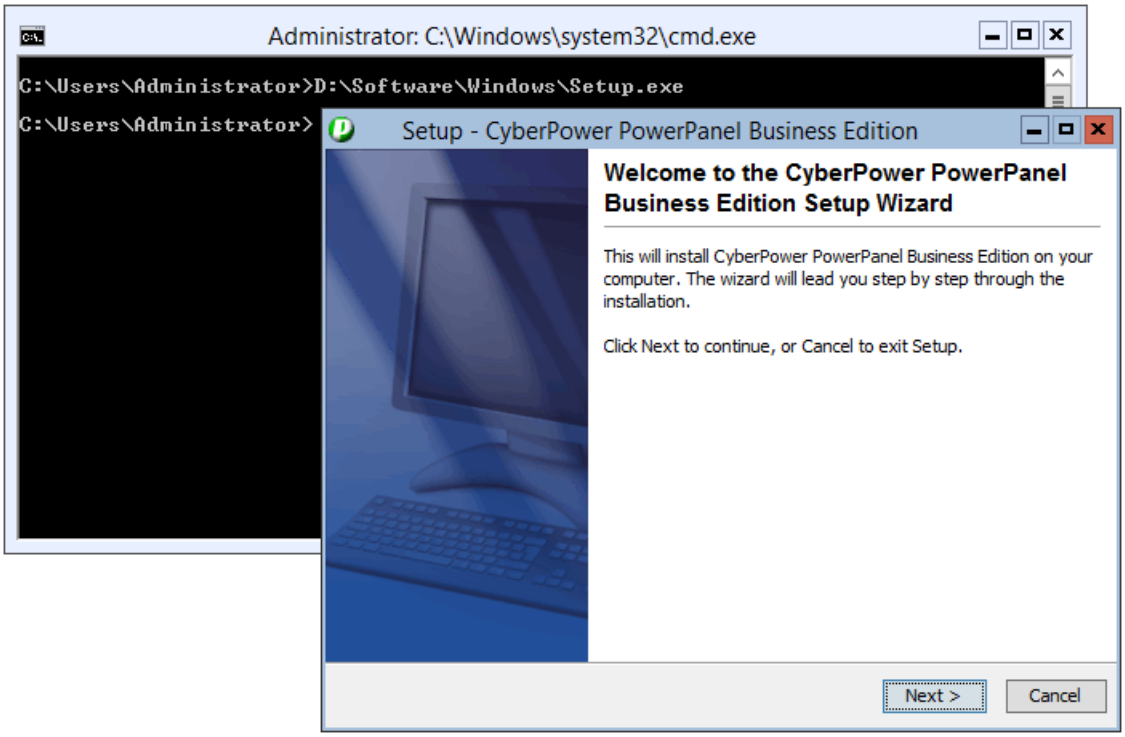
Installation on XenServer

The installer requires root permission to install the PowerPanel® Business Edition. Mount CD by running **mount -t iso9660 /dev/cdrom /mnt/cdrom** as a root user (**/dev/cdrom** is the CD drive and **/mnt/cdrom** will be the mount point.). Browse the CD drive and run **./ppbe-linux-x86.sh** command to initiate an installation procedure.

Installation must be launched on the **Dom0**. Refer to Installation on Text Mode section to complete the installation.

Installation on Hyper-V Server

Use the PowerPanel® Business Edition installation CD to complete the installation on the target computer. Run the ***<CD_Drive>\Software\Windows\setup.exe*** to start the installation procedure (***CD_Drive*** *is a CD drive formatted as* ***D:*** *or* ***E:***). A popup window will be displayed when the installation is launched. Refer to **Installation on Windows** section to follow the same steps to complete installation.



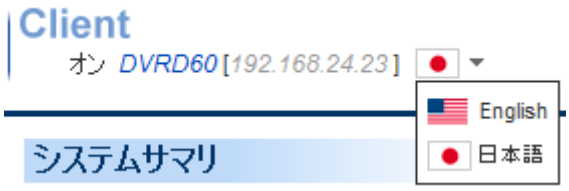
Access PowerPanel® Business Edition Software Interface

To access the PowerPanel® Business Edition interface in Windows, go to **Start > All Programs > CyberPower PowerPanel Business Edition > PowerPanel Business Edition Client** (or **PowerPanel Business Edition Center**), which will take you to the login page.

On Linux, user can also enter the URL as **http://localhost:3052/** in the address of the web browser to access to the interface. User can also enter the URL, **http://hosted_computer_ip_address:3052/**, in the address of the web browser to access the interface from a remote computer. **hosted_computer_ip_address** is the IP address of the host computer which has the PowerPanel® Business Edition installed. For vMA on the ESX or ESXi, **hosted_computer_ip_address** is the IP address of the vMA (**Note**: **hosted_computer_ip_address** is the IP address of the host computer on ESX.).

The default username is **admin** and the default password is **admin**. For security purposes, it is recommended you change the login username and password after the initial login.

PowerPanel® Business Edition supports multiple-language function and allows users to change language. It will choose the suitable language as the default one to display at the initial access. Users can change the language from the banner. After the language is changed, the page will refresh automatically and choose the assigned language as the default one to display.



Configure Power Protection for Computers

In order to ensure the computers which are connected to the UPS have sufficient time to complete the shutdown prior to turning off outlets, Client should be installed. The Client will establish communication with the UPS and receive commands from the UPS for a complete shutdown to avoid data loss or a system crash. Refer the **Install PowerPanel® Business Edition Software** chapter for installing the Client.

Assign IP Address of UPS Units and Connected Outlet

Communication can be established through the network by assigning the IP address of the UPS **RMCARD** and outlet assignment on the **Power/Configuration** page in the Client. In order to ensure the UPS RMCARD can respond to the Client normally, the community configuration must be setup properly.

Assign the IP address of the UPS RMCARD at the *Address* field or pick an address from the device list which shows all devices on the local network. Users have to assign the UPS output outlet which supplies power to the Client computer according to the actual connection. Click the **Apply** button for Client to establish the communication between Client and UPS.

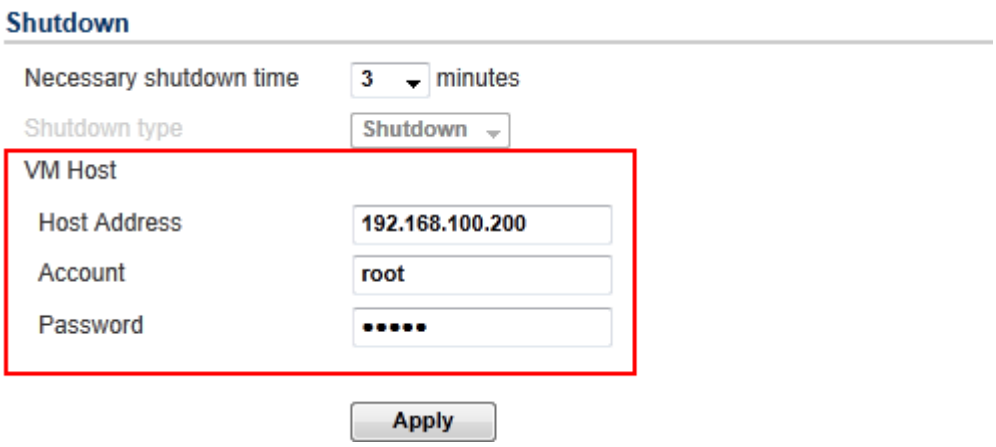
Setup Necessary Shutdown Time

Each computer running the Client requires sufficient time to be shut down completely before the UPS stops supplying power. Therefore users should set up this sufficient time at the *Necessary shutdown time* option on the **Event Action/Settings** page in the Client.

Configure Shutdown Action for ESXi

In order to ensure the ESXi host and all virtual machines can be shut down correctly in case of power events, users have to configure the host address, account and password of the root user for the host shutdown from vMA. Fill in the *Host Address, Account* and *Password* fields with actual username and password for ESXi host on the **Event Action/Settings** page.

***Note**: **Host Address** is the IP address of the ESXi host computer on which vMA is operating but not the IP address of vMA.*

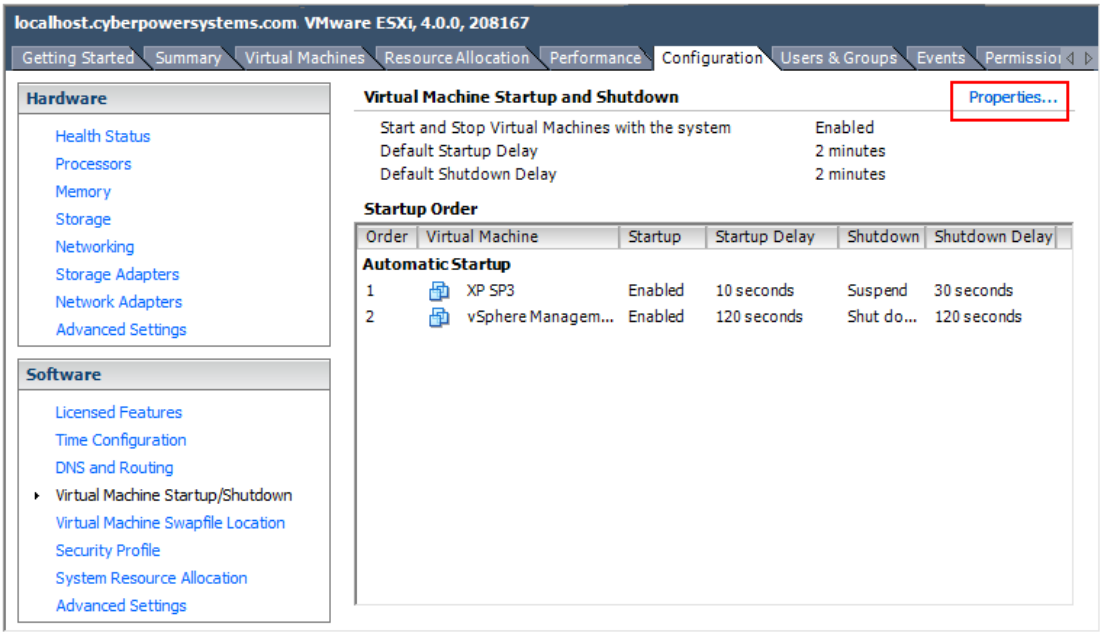


Note: *In order to allow the interactions between physical and virtual machines, VMware tools must be installed on each virtual machine. Refer to VMware ESX/ESXi Server documentation for further information about VMware Tools.*

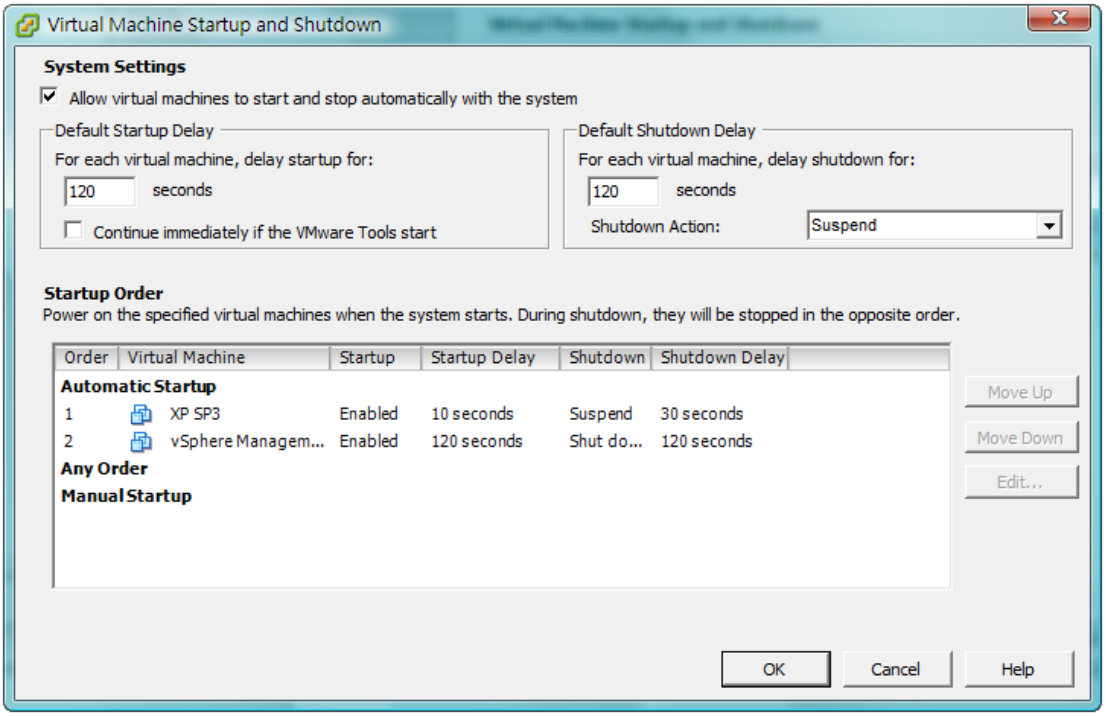
Configure Startup and Shutdown of Virtual Machines on ESX/ESXi

In order to ensure that all virtual machines and VMware ESX/ESXi server host can be shut down and restart gracefully.

- Select the topmost VMware ESX/ESXi server host from the tree hierarchy on the left side. Go to **Configuration** → **Virtual Machine Startup/Shutdown** menu → **Properties** of the vSphere Client.



- Enable the **Allow virtual machines to start and stop automatically with the system** option.

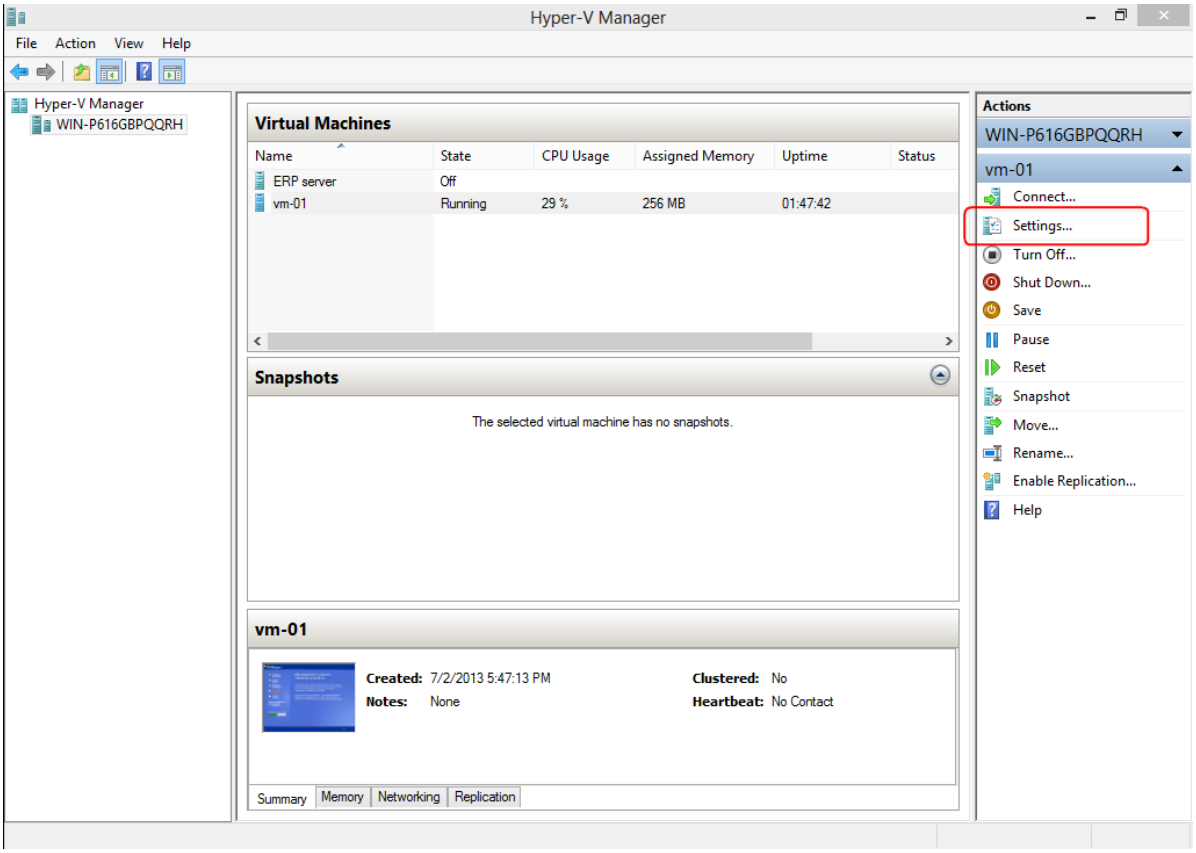


Configure Shutdown of Virtual Machines on Hyper-V Server

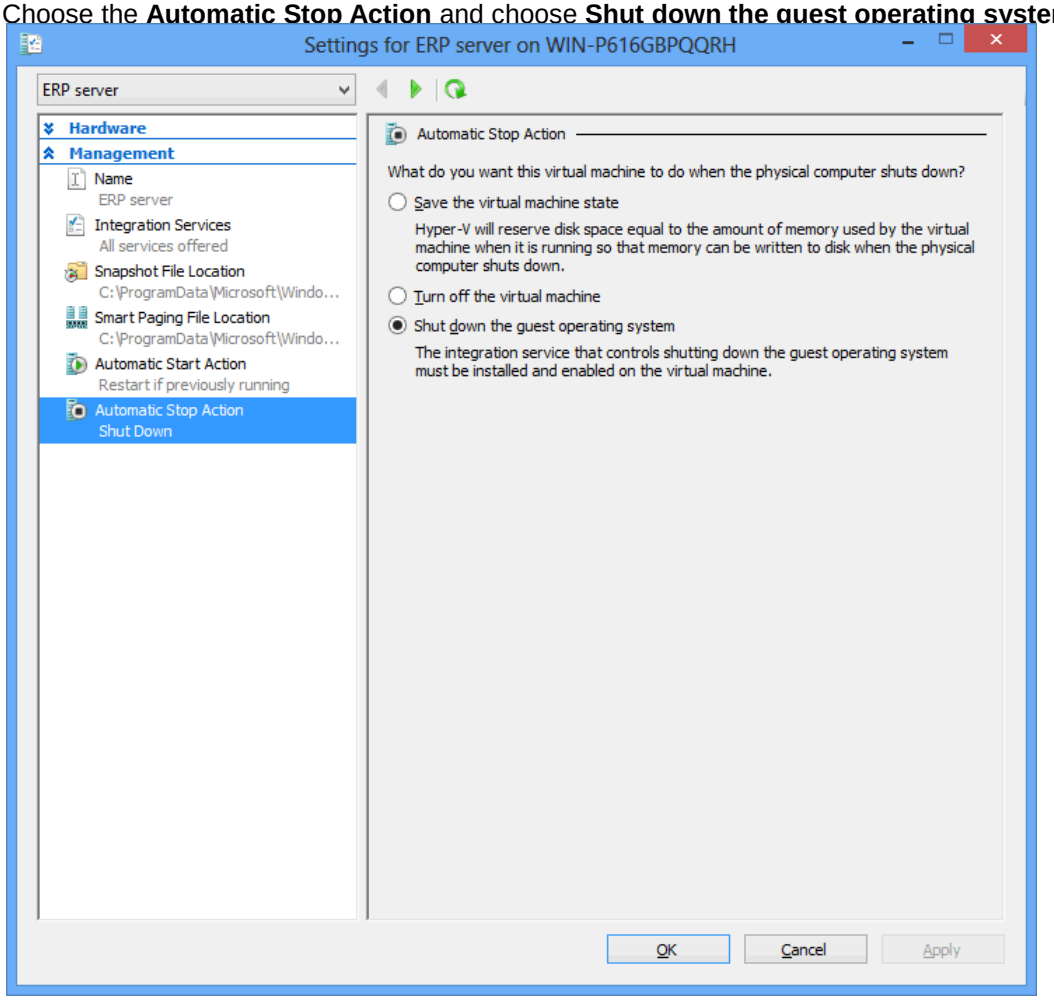
In order for the virtual machines to be shut down correctly when the Hyper-V host shuts down, users should configure a guest operating system shutdown on each virtual machine.

Follow below steps to configure the guest virtual machine to shut down with the host:

- Using the Hyper-V Manager to choose a VM and the click **Settings**.



- Choose the **Automatic Stop Action** and choose **Shut down the guest operating system**.



Hyper-V server will shut itself down only after the running virtual machines shut down. Ensure that the *Necessary shutdown time* in the **Event Actions/Settings** page must be sufficient to support the virtual machines to shut down and the Hyper-V server to shut down.

***Note**: In order to allow the interactions between physical and virtual machines, Hyper-V Integration Service (HIS) have to be installed on each virtual machine by accessing **Insert Integration Services setup disk** item from the **Action** menu of each virtual machine's console.*

If the virtual machine is running a Linux distribution, refer to the Linux Integration Services for Hyper-V page to download and re install the Linux integration service for Hyper-V.

Mass Deployment

In order to install Client on more computers and apply the same settings, users can follow below steps to complete the automatic deployment:

- **Export Profile.** Choose one target Client to export its power configuration and system settings to the profile on the **Preferences/Profile** page.
- Copy below example code to the text editor and save as new file named **setup.varfile**.

```
installModule=client
programGroupName=CyberPower PowerPanel Business Edition
```

```
installationDir=ppbe_installation_directory
profilePath=exported_zip_location
```

- Edit the **setup.varfile** to replace **installationDir** and **profile** parameters. **installationDir** indicates the absolute path of installation directory for Client (e.g. *C:/Programs/CyberPower PowerPanel Business Edition/PowerPanel Business Edition* or */opt/ppbe*). **profilePath** indicates the absolute path of profile (e.g. *C:/import/profile.zip* or */import/profile.zip*).
- Place the **setup.varfile** and installer in the same directory. Make sure that the filename must be the same (e.g. **setup.exe** and **setup.varfile**).
- For Windows users, running the below command in the command prompt to complete the installation.

```
setup.exe –q –console –Dinstall4j.detailStdout=true
```

- For Linux users, running the below command in terminal to complete the installation.

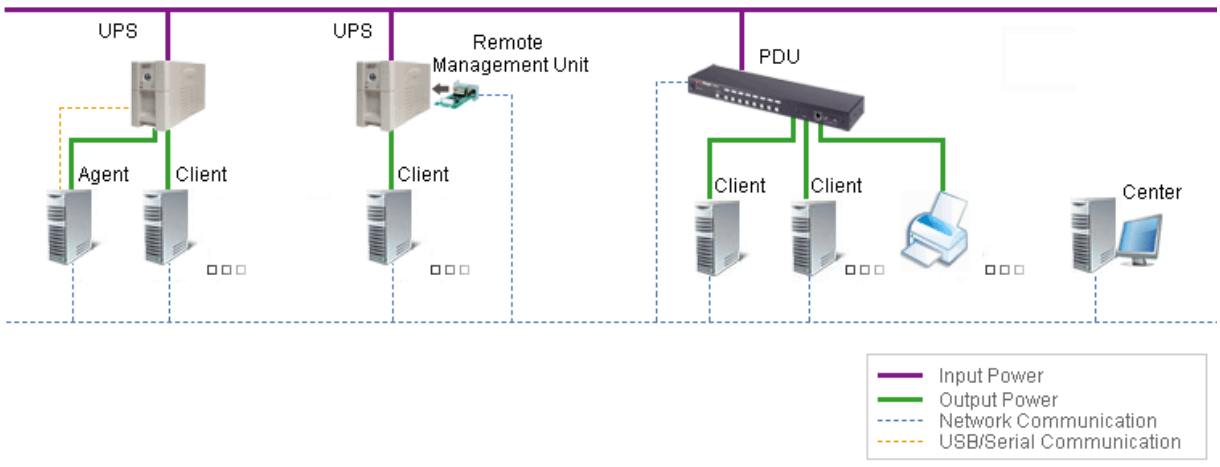
```
sudo setup.sh –q –console –Dinstall4j.detailStdout=true
```

***Note**. When you would like to upgrade the pre-installed Agent or Client during the unattended installation, set the **installationDir** parameter blank. The installer will automatically detect where preinstallation PPBE directory locates and attempt to complete the upgrade installation.*
*Computers which never installed Agent or Client can be installed the PPBE by assigning a valid path. Assigning a blank path to the **installationDir** parameter during the unattended installation will allow the installer to use the default path as the installation directory. **C:/Program Files/CyberPower PowerPanel Business Edition/** will be the default installation directory in Windows systems. **/opt/ppbe** or **/usr/local/ppbe** will be the default installation directory in most Linux distributions.*

Manage UPS Units in Center

If the administrator requires monitoring multiple UPS units on the local network at one time, PowerPanel® Business Edition Center should be installed. The Center can gather the state and events from the monitored UPS units and the monitored UPS units can also accept commands from the Center for shutting off or restarting. Computers running Client can be ordered to initiate a graceful shutdown. Refer to **Installing PowerPanel® Business Edition Software** chapter for further details about Center installation.

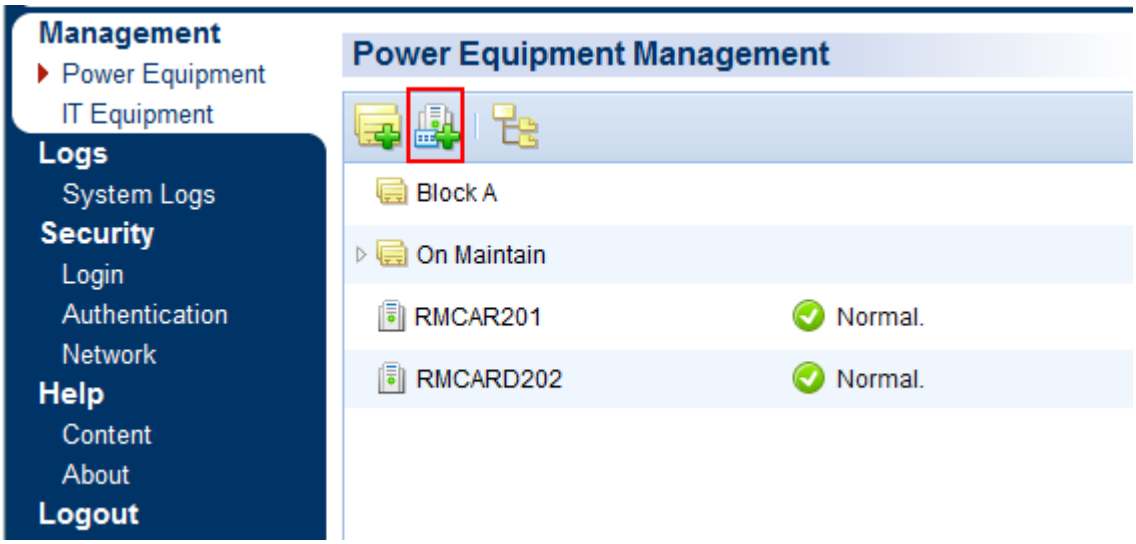
The Center can also establish communication with multiple UPS units. Monitored UPS units will relay the state to the Center and notify Center when and what power event occurs.



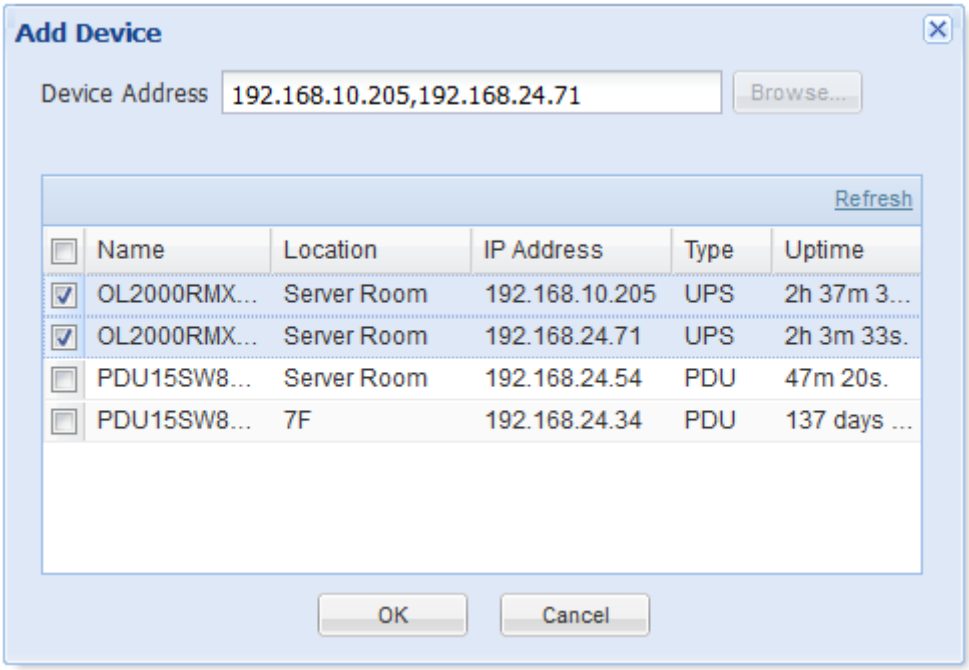
Add UPS Units

Users can monitor and control multiple UPS on the **Management/Power Equipment** page by accessing the *Add Device* window to add UPS to Center as below:

The *Add Device* window can be accessed by clicking the *Add Device* button of the toolbar or selecting the *Add Device* in the context menu of any one group node.



Either enter the IP address of the UPS RMCARD on the *Device Address* field or click the **Browse** button to display the device list and select the IP address from the list. Click **OK** to proceed to add the selected UPS.



Note: *If users require adding multiple UPS units to Center, repeat the aforementioned steps.*

Note: Please refer to **PPBE User's Manual** about further details of more functions about Center.