

PowerChute™ Business Edition Virtualization Support

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POWERCHUTE INTRODUCTION

PowerChute™ Business Edition software ships with APC Smart-UPS (5kVA and below) providing UPS management, safe system shutdown and energy reporting for up to 25 servers using dedicated serial or USB connections.

Advanced analysis features help to identify the causes of potential UPS and power-related problems before they occur; ensuring the health of your protected equipment.

PowerChute Business Edition v9.1 (and higher) now supports VMware® ESXi and Microsoft® Hyper-V® virtualization platforms.

Applications

Use PowerChute Business Edition software to safely shut down servers protected by APC Smart-UPS in the event of an extended power outage.

CUSTOMER BENEFITS

- Safe Server Shutdown
- Centralized UPS Management
- Energy Reporting
- Risk Assessment Reporting
- Data and Event Logging



Virtualization Introduction

Virtualization provides the capability to create a virtual (rather than physical) operating system or server allowing one physical server to run multiple 'virtual machines' at the same time. It has transformed the business IT landscape due to server consolidation as previously underutilized servers can now run multiple virtual machines resulting in fewer servers, less energy consumption and less maintenance.

Virtualization is a hot topic in IT circles with wide acceptance of mainstream adoption as virtual servers have been outselling physical servers since 2010. Indeed, it's estimated that more than two-thirds of all installed workloads run on virtual machines.

In addition to Windows and Linux support, PowerChute Business Edition v9.1 (and higher) has added support for the VMware® ESXi® and Microsoft® Hyper-V® virtualization platforms. As VMware and Microsoft release new virtualization versions, these will be tested and added to the operating system compatibility chart once support is verified. The latest support list is always available here: <http://www.apc.com/wp/?um=100>

“With PowerChute™ Business Edition installed, it’s as if the outage never happened”

Richard Verry, Systems Administrator and Software Engineer, The Children’s Institute

VMware® ESXi® Support

VMware ESXi (v5.0 and above) is supported via Serial connection only.

Installation

The VMware vSphere Management Assistant (vMA) enables you to manage your ESXi Hosts and must be installed to use PowerChute Business Edition v9.1 (and higher) with VMware. For ESXi platforms, PowerChute must be installed on the vMA running on the ESXi server and cannot be installed directly on the host operating system.

Shutting down virtual machines on VMware

The ESXi host controls the shutdown of the virtual machines.

To configure a guest virtual machine (VM) to shut down with the ESXi host:

1. Log in to the vSphere Client, select a Virtual Machine and click on the Console tab.
2. Right click on the VM and select Guest - Install/Upgrade VMware Tools.
3. In the console, run the VMware tools installer and reboot the VM.
4. In the vSphere client, select the ESXi host and click on the Configuration tab.
5. Select Virtual Machine Startup/Shutdown and click Properties.
6. Enable the option "Allow virtual machines to start and stop automatically with the system"
7. Select Guest Shutdown as the Shutdown action from the drop down list.
8. You can also change the Startup Order if required.

More information

For more installation and configuration details, please go to www.apc.com/support/index.cfm/faq and search for: **FA165747** and **FA166093**.

What does PowerChute not support?

- Free version of ESXi.
- VMware ESX platform.
- High Availability clustered environments as the vMA shares the Serial port with the ESXi

host so the vMA cannot be moved around a cluster.

Microsoft® Hyper-V® Support

Windows Server operating systems with Hyper-V service enabled is supported via Serial and USB.

Installation

PowerChute™ must be installed on the host server.

Select the standard installation to install the Windows PowerChute Agent for Hyper-V.

Shutting down virtual machines on Hyper-V

In order for the virtual machine to shutdown gracefully when the host is commanded to shutdown, you need to configure a guest operating system shutdown on each Virtual Machine.

To configure a guest virtual machine (VM) to shut down with the Hyper-V host:

1. Using Hyper-V Manager on the Windows Server, choose a VM and open its console.
2. Install the Integration Services on the VM: From the Action menu, choose Insert Integration Services setup disk.
3. Double-click the VM guest disk to continue with the installation.
4. In Hyper-V Manager, choose the VM and then "Settings".
5. Choose "Automatic Stop Action".
6. From the three options available, choose "Shut down the guest operating system".

Ensure that you enter a sufficient value in "Time for Operating System to shutdown" under Shutdown Settings to accommodate the safe shutdown of the Hyper-V Server and the Virtual Machines. Hyper-V Server will shut itself down only after shutting down the virtual machines.

What does PowerChute not support?

- Hyper-V host clusters.
- Live Migration on a non-clustered set-up with Windows 2012.

Table 1 – PowerChute Business Edition Virtualization Platform Support

| | VMware® ESXi | Microsoft® Hyper-V® |
|-------------------|--------------|---------------------|
| Serial Connection | Yes | Yes |
| USB Connection | No | Yes |
| PowerChute Agent | Linux Agent | Windows Agent |

For the latest information on supported VMware® and Hyper-V® versions, please check the Operating System Compatibility Chart on the APC web site at <http://www.apc.com/wp/?um=100>

For virtualization support using network connections, use PowerChute Network Shutdown: <http://www.apc.com/products/family/index.cfm?id=127>

Centralized Management

The PowerChute Business Edition Server and Console components provide centralized management for the installed Agents. These components should be installed on a separate Windows machine and not the host server.