# Using ESXi with PowerChute Business Edition

This document describes how to:

- Install vMA for an ESXi Host Server
- Configure and Run ESXi



PowerChute™ Business Edition does not support the HA environment.

# Install vMA for an ESXi Host Server

vSphere Management Assistant (vMA), from the VMware<sup>®</sup> company, enables you to manage your ESXi host servers.

You need to install it in order to use PowerChute Business Edition with an ESXi host, as that OS does not allow a direct installation.

The installation steps below assume that you have:

A supported version of vMA – version 6.5 See the VMware website for more information.



PowerChute Business Edition does not support ESXi v6.7 and above.

For up-to-date information on supported versions, see the APC website at http://www.apc.com/wp/?um=100.

- An operational ESXi host server.
- An operational vSphere Client in order to log on to the host server.

You can download the vSphere Client from www.vmware.com or by browsing to https://<ESXi Host IP Address> and clicking on the **Download vSphere Client** option. The Client requires AMD Opteron, rev E or higher CPU or Intel processors, with EM64T and VT support.

**NOTE:** The desktop client for vMA is not included in the 6.5 release. This is replaced by the web client which can be accessed by browsing to https://<ESXi Host IP Address>.

To perform the vMA installation, you should be an administrator with basic knowledge of Linux. The web page vSphere Management Assistant has in-depth background information on the topics mentioned above. Alternatively, you can call VMware customer support.

The APC by Schneider Electric Knowledge Base (http://www.apc.com/us/en/faqs/home/), has some information on installing the Client also. Type a search query like "vMA ESXi" to display the relevant articles.



vSphere Management Assistant (vMA) was previously known as VMware Infrastructure Management Assistant (VIMA).

# Install vMA

**NOTE:** VMware uses the term *deploy* with vMA and other applications, meaning to install, configure, test, and use the application. See: versions 6.0 and earlier and version 6.5.

For versions 6.0 and earlier:

- 1. Download the vMA installation files from vSphere Management Assistant, and extract the files.
- 2. Log on to the ESXi host or vCenter server using your vSphere Client.

3. You need the URL of the host server, its user name, and password, in order to do this. Select **File** - **Deploy OVF Template** from the menu.

Vew	ntory D T Inventory	
eploy OVF Template		
xport	▶	
leport	localhost.apa.gad.schneider-electric.com VMware ESXi, 5.5.0, 324854	7
rowse VA Marketplace	Getting Started Summary Virtual Machines Resource Allocation Perfo	ormance Configuration Local Users & Groups Events Permis
rint Maps	<b>&gt;</b>	close tab 🗴
xit	What is a Host?	
	A host is a computer that uses virtualization software, such as ESX or ESXI, to run virtual machines. Hosts provide the CPU and memory resources that virtual machines use and give virtual machines access to storage and network connectivity. You can add a virtual machine to a host by creating a new one or by deploying a virtual appliance. The easiest way to add a virtual machine is to deploy a virtual appliance. A virtual appliance is a pre-built virtual machine with an operating system and software already installed. A new virtual machine will need an operating system installed on it, such as Windows or Linux.	Virtual Machines Host
	Basic Tasks 🚰 Deploy from VA Marketplace	
	🗗 Create a new virtual machine	Explore Further
		Learn about vSphere Manage multiple hosts, eliminate downtime, load balance your datacenter with vMotion, and more     Evaluate vSphere

4. At the **Deploy from a file or URL** field, enter the path to the OVF file you extracted at step 1 above.

Deploy OVF Template	_		×
Source Select the source location.			
Source OVF Template Details Name and Location Disk Format Ready to Complete	Deploy from a file or URL          C:\Users\       \Downloads\vMA-5.5.0.0-1387931\vM	]	
Help	< Back Next >	Ca	ancel

5. The vMA and OVF details are displayed. Click the Next button.

Deploy OVF Template				×
<b>OVF Template Details</b> Verify OVF template details.				
Source OVF Template Details End User License Agreement	Product:	vSphere Management Assistant (vMA)		
Name and Location Disk Format	Version:	5.5.0.0		
Ready to Complete	Vendor:	VMware, Inc.		
	Publisher:	🤣 VMware, Inc.		
	Download size:	622.8 MB		
	Size on disk:	1.6 GB (thin provisioned) 3.0 GB (thick provisioned)		
	Description:	The vSphere Management Assistant (vMA) allows administra and developers to run scripts and agents to manage ESX/ES vCenter Server systems.		

6. When the End User License Agreement (EULA) is displayed, click **Accept** and then Next.

Next >

Cancel

< Back

Help

7. Accept the default vMA name (and location) or enter alternatives, and click Next.

⊘ Deploy OVF Template - □ ×

 Name and Location

 Specify a name and location for the deployed template

Source OVF Template Details	Name:
End User License Agreement	vSphere Management Assistant (vMA) The name can contain up to 80 characters and it must be unique within the inventory folder.
Name and Location Disk Format	The name can contain up to so characters and it must be unique within the inventory lotter.
Ready to Complete	
Help	< Back Next > Cancel

8. At **Disk Format**, choose the default disk layout option by clicking Next.

🕜 Deploy OVF Template	<u> </u>	×
Disk Format In which format do you want to store the virtual disks?		

Source OVF Template Details	Datastore:	datastore2			
End User License Agreement Name and Location	Available space (GB):	513.7			
Disk Format					
Ready to Complete					
	Thick Provision Lazy Ze	eroed			
	C Thick Provision Eager 2				
		Lerbeu			
	C Thin Provision				
Help			< Back	Next >	Cancel
					11

9. The options you have chosen display again, click Finish.

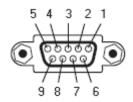
Source OVF Template Details	When you click Finish, the deployr	nent task will be started.	
End User License Agreement	Deployment settings:		
Name and Location	OVF file:	C:\Users\	\Downloads\vMA-5.5.0.0-1387931
<u>Disk Format</u> Ready to Complete	Download size:	622.8 MB	
Ready to Complete	Size on disk:	3.0 GB	
	Name:	vSphere Manage	ement Assistant (vMA)
	Host/Cluster:	localhost.apa.g	ad.schneider-electric.com
	Datastore:	datastore2	
	Disk provisioning:	Thick Provision	Lazy Zeroed
	Network Mapping:	"Network 1" to "	VM Network"
	Power on after deployment		

The vMA software is now installed, and it should be displaying in the left-hand pane.

- 10. Select the installed vMA in the left-hand pane.
- 11. Click on the **Getting Started** tab along the top of the screen and choose **Edit Virtual Machine Settings** in the right-hand pane.
- 12. In the Virtual Machine dialog, click the Add button on the hardware tab.

This launches the Add Hardware wizard.

13. Select Serial Port, as the type of device to add and click Next.



14. Under Serial Port Type, select Use physical serial port on the host and click Next.

🕝 Add Hardware		×
Serial Port Type What media should this	virtual serial port access?	
Device Type Select Port Type	Select the type of media you would like the virtual serial port to access.	

Select Physical Port Ready to Complete	Serial Port Output  Use physical serial port on the host  Output to file  Connect to named pipe  Connect via Network
Help	< Back Next > Cancel

15. Select your physical serial port from the drop down list, enable the option **Connect at power on** and enable the option **Yield CPU on poll**. Click Next.

🕝 Add Hardware	×
Select a Physical Serial Port	
Which physical drive should this serial port connect to?	

Device Type Select Port Type Select Physical Port Ready to Complete	Select the physical port you would like to connect to this virtual serial port. Physical Serial Port Port /dev/char/serial/uart0
	Device Status Connect at power on
	I/O Mode ✓ Yield CPU on poll Allow the guest operating system to use this serial port in polled mode rather than in interrupt mode.
Help	< Back Next > Cance

16. Click **Finish** and then click OK to finish adding the new serial port.

17. Power on the vMA virtual machine – follow the instructions on configuring IP address, setting viadmin password etc.

#### For version 6.5:

- 1. Download the vMA installation files from vSphere Management Assistant, and extract the files.
- 2. Log on to the ESXi host using your vSphere web Client.
- 3. Create a virtual machine by selecting Virtual Machines Create / Register VM from the menu.

vmware <sup>,</sup> ESXi <sup>-</sup>		-A			
Bandarigator		ß	- Virtual Machines		
✓ ☐ Host Manage Monitor		Create / Register VM	Console   🕨 Power on 🔳 Power off	Suspend	
📲 Virtual Machines	0	- vilua macime		U.	
<ul> <li>E Storage</li> <li>Storage</li> <li>Networking</li> </ul>	1				

4. In Select creation type, select the Deploy a virtual machine from an OVF or OVA file option.

🔁 New virtual machine		
1 Select creation type	Select creation type	
2 Select OVF and VMDK files 3 Select storage	How would you like to create a Virtual Machine?	
4 License agreements 5 Deployment options 6 Additional settings 7 Ready to complete	Create a new virtual machine Deploy a virtual machine from an OVF or OVA file Register an existing virtual machine	This option guides you through the process of creating a virtual machine from an OVF and VMDK files.
<b>vm</b> ware <sup>.</sup>		
		Back Next Finish Cancel

5. Insert a name into the **Enter a name for the virtual machine** field and select the OVF and VMDK files you extracted at step 1 above.



6. Select a datastore to store the configuration and disk files for your virtual machine.

1 Select creation type 2 Select OVF and VMDK files 3 Select storage	Select storage Select the datastore in which to store the o	configuration and dis	sk files.				
4 License agreements 5 Deployment options	The following datastores are accessible fro virtual machine configuration files and all o		esource that you	i selected. Sele	ct the destinatio	on datastor	e for t
6 Additional settings 7 Ready to complete	Name	~ Capacity ~	Free ~	Туре ~	Thin pro ~	Access	~
	datastore1 (1)	227.75 GB	100.74 GB	VMFS5	Supported	Single	
						11	tems

7. When the End User License Agreement (EULA) is displayed, click Accept and then Next.

8. Choose your **Deployment options** and click Next.

1 Select creation type 2 Select OVF and VMDK files 3 Select storage	Deployment options Select deployment options				
4 License agreements 5 Deployment options	Network mappings	Network 1	VM Network	¥	
6 Additional settings 7 Ready to complete	Disk provisioning	O Thin 🖲	Thick		
	Power on automatically				
<b>vm</b> ware					

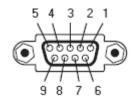
9. In **Additional settings**, enter the network details or leave blank if vMA needs to use DHCP. Click Next.

1 Select creation type 2 Select OVF and VMDK files	Additional settings Additional properties for the VM	
3 Select storage 4 License agreements 5 Deployment options	✓ Networking Properties	
6 Additional settings	Network 1 IP Address	6
7 Ready to complete	Network 1 Netmask	
	Network 1 Default Gateway	
	Network 1 DNS	

- PNew virtual machine vMA\_6.5\_VM ✓ 1 Select creation type Ready to complete ✓ 2 Select OVF and VMDK files Review your settings selection before finishing the wizard ✓ 3 Select storage ✓ 4 License agreements Product vSphere Management Assistant (vMA) ✓ 5 Deployment options VM Name vMA\_6.5\_VM 6 Additional settings 7 Ready to complete Disks vMA-6.5.0.0-4569350-system.vmdk datastore1 (1) Datastore Provisioning type Thick Network mappings Network 1: VM Network Guest OS Name SUSE Linux Enterprise Server 11.3 64bit Properties Click to expand Do not refresh your browser while this VM is being deployed. **vm**ware<sup>®</sup> Back Next Finish Cancel
- 10. The options you have chosen display, verify them and click **Finish**.

The vMA software is now installed, and it should be displaying in the left-hand pane.

- 11. Select the installed vMA in the left-hand pane. Right-click the vMA and select Edit settings.
- 12. Under Virtual Hardware click Add Another Device.
- 13. Select Serial Port, as the type of device to add and click Next.



**NOTE:** You cannot configure PowerChute to communicate over USB using vMA 6.5 due to the SUSE kernel used. The minimum SUSE kernel to support USB in PowerChute is 3.0.101-63. However, vMA 6.5 uses 3.0.101-0.47.79.1.11283.0.PTF-default.

14. Select **Use physical serial port** from the drop down list and select your physical serial port under **Connection**. Enable the option **Connect at power on**.

Virtual Hardware VM Options			
🔜 Add hard disk 🛛 🛤 Add netw	ork adapter 🗧 Add other device		
🕨 🔲 CPU	1 🔻 🚺		
Memory	600 MB •		
▶ 🚍 Hard disk 1	9 GB <b>v</b>		8
SCSI Controller 0	LSI Logic Parallel	•	0
New Serial Port	Use physical serial port	•	0
Status	Connect at power on		
Connection	/dev/char/serial/uart0	T	
Network Adapter 1	VM Network	▼   Connect	8
CD/DVD Drive 1	Host device	▼ Connect	8
Video Card	Specify custom settings	•	

- 15. Click Save to finish adding the new serial port.
- 16. Power on the vMA virtual machine follow the instructions on configuring IP address, setting viadmin password etc.

### Copy PowerChute to vMA

Use WinSCP (Windows Secure CoPy) to copy the PowerChute Business Edition Agent installation directory to vMA. (WinSCP is **available for free** on the Internet).

You have two alternatives to using the WinSCP software.

i. You can **map a network drive** by

first creating a new folder, e.g. "share" where the network drive will be mapped: sudo mkdir /mnt/share

then mounting the network share:

```
sudo mount -t cifs //<server name or share name> /mnt/share -o
username=<user name>,password=<password>
```

For example:

```
sudo mount -t cifs //11.111.111.111/public /mnt/share -o
username=mmmftp,password=rrrftp
```

ii. Or you can mount the CD: \*

first create the directory if it does not already exist, then mount it.

```
sudo mkdir /mnt/cdrom
```

sudo mount -o ro /dev/cdrom /mnt/cdrom

\* Prior to mounting the CD, you must edit the **CD/DVD Drive** (specifically its **Device Status** and **Device Type**) in the VM settings.

See: versions 6.0 and earlier and version 6.5.

For versions 6.0 and earlier:

If you're inserting the CD in the host drive, select the relevant vMA in the left pane of vSphere CIIent, and click on the CD icon on the toolbar and select **Connect to host device**.

æ	- vSphere Client			
File Edit	View Inventory Admini	stration Plug-ins Hel	p	
	🔥 Home 👂 🚮 Inve	entory 👂 🗊 Inventor	у	
	G 10 G	12 🛛 🄛 🔇	» 🎶	
□ <b>10.1</b>		vSphere Manager	CD/DVD drive 1	Connect to ISO image on local disk
-	HEL6.4-x86 MA_5503	Getting Started Sum	mary Resource Allocation	Connect to host device
d v d	MA5.5.0.3			Connect to ISO image on a datastore
1 v	ma553-new Sphere Management Assis	What is a Virtua	I Machine?	

If you're inserting the CD in the client drive, select the relevant vMA in the left pane of vSphere Client, and click on the CD icon on the toolbar and select **Connect to <drive>**, e.g. **Connect to E:**.

C	- vSphere Client			
File	Edit View Inventory Admin	istration Plug-ins Help		
•	🗈 🔥 Home 🕨 🚮 Inv	ventory 🕨 🗊 Inventory		
	II 🕨 🧐 🚳 🚳	13 2 6 🔗 🕷	6	
		vSphere Manager 🕥 🛛 Cl	D/DVD drive 1 🕨	Connect to E:
	RHEL6.4-x86 vMA_5503	Getting Started Summary	Resource Allocatio	Connect to ISO image on local disk
	vMA5.5.0.3 vma553-new vsphere Management Assis	What is a Virtual Ma	chine?	Connect to host device Connect to ISO image on a datastore

### CD placed in the CD/DVD drive of the ESXi host:

ardware Options Resources	Add Remove	Virtual Machine Version Device Status Connected
Hardware	Summary	Connect at power on
Memory CPUs Video card VMCI device SCSI controller 0 CD/DVD drive 1 (edited) Hard disk 1 Network adapter 1 Serial port 1	600 MB 1 Video card Restricted LSI Logic Parallel /vmfs/devices/cdr Virtual Disk VM Network /dev/char/serial/uart0	Device Type C Client Device Note: To connect this device, you must power on the virtual machine and then click the Connect CD/DVD button in the toolbar.  Host Device //vmfs/devices/cdrom/mpx.vmhba34:C0:T0:L0  Datastore ISO File Browse
		C Passthrough IDE (recommended)

### CD inserted in the CD/DVD drive of Windows/Linux server running vSphere Client:

<b>@</b> \	Sphere Management Assistan	t (vMA) - Virtual Machine Prop	erties		120		×
Hard	ware Options Resources				Virtual Ma	achine Ver	sion: 7
	Show All Devices	Add Remove		vice Status Connected			
Har	dware	Summary		Connect at power on			
	Memory CPUs Video card VMCI device SCSI controller 0 <b>CD/DVD drive 1 (edited)</b> Hard disk 1 Network adapter 1 Serial port 1	600 MB 1 Video card Restricted LSI Logic Parallel <b>Client Device</b> Virtual Disk VM Network /dev/char/serial/uart0	C C MC	vice Type	hba34:C0:T0	CD/DVD	_

#### For version 6.5:

If you're inserting the CD in the host drive, select the relevant vMA in the left pane of vSphere Client, and click on **Edit** on the toolbar.

Under CD/DVD Drive 1 select Host device and enable the option Connect at power on.

Select the CD ROI	/I under CD/DVD	Media and	click Save

Memory		MB 🔻		
🔚 Hard disk 1	9	GB 🔻		8
SCSI Controller 0	LSI Logic	: Parallel	v	8
oro Serial Port 1	Use phys	sical serial port	▼	onnect 😒
Network Adapter 1	VM Netw	rork	▼	onnect 😒
o OD/DVD Drive 1	Host devi	ice	•	0
				-
Status	Connect	t at power on		
Status CD/DVD Media		t at power on DS CD-ROM (mpx.vmhba0:C0	:T1:L0)	•
		DS CD-ROM (mpx.vmhba0:C0	:T1:L0)	

### Install PowerChute

To start the PowerChute installation, select the installation package suitable for your system which is located in the /Linux/ directory:

32-bit Linux: pcbeagent-9.X.X-301.i386.tar.gz 64-bit Linux: pcbeagent-X.X.X-301-XX.x86 64.tar.gz

**NOTE:** PowerChute v10.0+ is a 64-bit only application.

- 1. Change the locale of your system.
  - i. Open the profile file using the following command: vi /etc/profile
  - ii. Add one of the following to the end of the profile file:

```
#English
export LC_ALL=en_US.utf8
export LANG=en_US.utf8
export LANGUAGE=en_US.utf8
#Chinese
export LC_ALL=zh_CN.utf8
export LANG=zh_CN.utf8
export LANGUAGE=zh CN.utf8
```

- iii. Remove any lines in the profile file that contain "export LANG=C.utf8".
- iv. Reboot your operating system.
- v. Confirm that your system locale successfully changed by executing the locale command.
- 2. Use the tar command to extract and decompress the contents of the file:

```
tar -xzvf pcbeagent-X.X.X-301.XX.tar.gz
```

3. If you are not logged on as the root user, you need to run the installer using sudo, or switch to root user context using the sudo sh command and then run the installer:

After a web download you need to grant execute permissions:

./install\_pbeagent\_linux.sh



chmod +x install pbeagent linux.sh

- 4. Accept the license agreement.
- 5. The config.sh script will run automatically.

**NOTE:** You cannot configure PowerChute to communicate over USB using vMA 6.5 due to the SUSE kernel used. The minimum SUSE kernel to support USB in PowerChute is 3.0.101-63. However, vMA 6.5 uses 3.0.101-0.47.79.1.11283.0.PTF-default.

- 6. Your selected configuration settings are then displayed which you have the option to change if incorrect.
- 7. In order to shut down the ESXi host using vMA, it must be added as a fastpass target. To do this, add the ESXi Host IP when prompted.
- 8. Choose whether to start the Agent immediately. Your installation is complete.
- 9. Confirm that the ESXi host has been added as a target server using the following command:

```
sudo vifp listservers
```

**NOTE:** To launch the Agent after installation, type one of the following in your browser: https://<vMA IP address>:6547

- 10. In order to ensure graceful shutdown of the VMs running on the ESXi server you need to install VMWare tools on each VM. See VMware Tools.
- 11. Additionally you need to set Virtual Machine shut down options. See VM Shutdown Options.

# **Configure and Run ESXi**

See the sections below to fully configure ESXi to facilitate using PowerChute Business Edition.

# **Fastpass Target**

In order to shut down an ESXi host using vMA, you must add the ESXi server as a fastpass target for that vMA.

- 1. Use the command: vifp addserver <hostname/ IP address of ESXi host>
- 2. When prompted, enter the root password for the ESXi host.
- 3. Confirm that the ESXi host has been added as a target server with this command: vifp listservers

**NOTE:** You are prompted to add the ESXi server during the installation. If you skipped this step, you must manually add the ESXi server as a target host after the installation completes.



You can add additional ESXi hosts for shutdown if required by using the sudo vifp addserver command.

See vSphere Management Assistant for further information on adding a target server to VIMA.

## VMware Tools

You must have an installation of VMware Tools for each guest operating system on VMware. This ensures graceful shutdown of the virtual machines (VM) running on the ESXi server.

To install the VMware Tools:

- For versions 6.0 and earlier: right-click on the VM in vSphere Client, and select Guest Install/Upgrade VMWare Tools.
- For version 6.5: right-click on the VM in vSphere Client, and select Guest OS Install VMWare Tools.

For additional information, consult your ESXi documentation.

## **VM Shutdown Options**

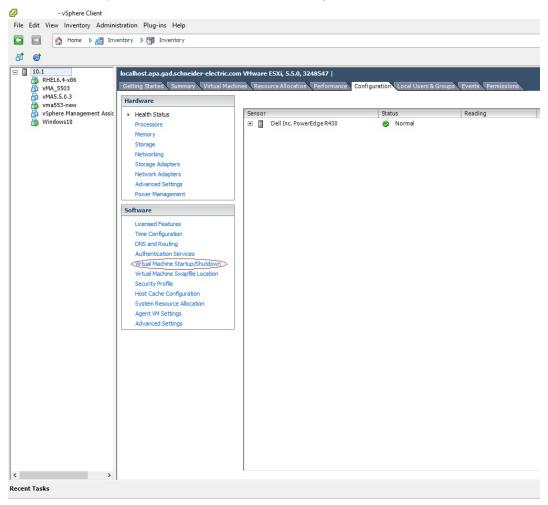
You need to set the virtual machine (VM) shutdown options. See: versions 6.0 and earlier and version 6.5.



It is possible that your virtual machine might not shutdown or might not shutdown gracefully. This issue is recognized by the VMware company. Please refer to the workaround published by VMware (Knowledge Base article 1008182) on their **website**.

#### For versions 6.0 and earlier:

- 1. Select the ESXi host in vSphere Client and choose the **Configuration** tab.
- 2. In the Software pane, select Virtual Machine Startup/Shutdown.



- 3. Click on **Properties** in the top-right corner.
- 4. Select the check box Allow virtual machines to start and stop automatically with the system.
- 5. Set the **Default Start Delay** and **Default Shutdown Delay** (which both have a default of 30 seconds). It is recommended you provide higher delays (e.g. 120 seconds) so that the virtual machines can shutdown gracefully.

#### 6. Set the Shutdown Action to Guest Shutdown.

Default S	Stortur	Delay			- Dofoult Ch	nutdown Delay		
			- fran				au alautalauna fans	
		al machine, delay startu econds	ip for:			virtual machine, dela seconds	ay shutdown for:	
120	St	econds			120			
Con	ntinue	immediately if the VMwa	are Tools st	art	Shutdov	vn Action:	Guest Shutdown	
Order	the sp	ecified virtual machines al Machine	when the s Startup	ystem starts. Durir Startup Delay		they will be stopped Shutdown Delay	d in the opposite order	
Order Autom	the sp Virtu	ecified virtual machines al Machine						
Order	the spo Virtu atic S rder	ecified virtual machines al Machine ta <b>rtup</b>	Startup	Startup Delay	Shutdown	Shutdown Delay		Move Uj
Order Autom	the spo Virtu atic S rder	al Machine al Machine tartup vMA5.5.0.3	Startup Enabled	Startup Delay	Shutdown	Shutdown Delay		Move Uj
Order Autom	Virtu atic S der	ecified virtual machines al Machine ta <b>rtup</b>	Startup Enabled	Startup Delay	Shutdown Shut do Shut do	Shutdown Delay		Move Uj
Order Autom	the spo Virtu atic S rder	edified virtual machines al Machine tartup vMA5.5.0.3 vSphere Managem	Startup Enabled Enabled	Startup Delay 120 seconds 120 seconds	Shutdown Shut do Shut do	Shutdown Delay 120 seconds 120 seconds		Move Up Move Dov
Order Autom	Virtu atic S der	edfied virtual machines al Machine tartup vMA5.5.0.3 vSphere Managem vma553-new	Startup Enabled Enabled Enabled	Startup Delay 120 seconds 120 seconds 120 seconds	Shut do Shut do Shut do Shut do	Shutdown Delay 120 seconds 120 seconds 120 seconds		Move Up Move Dov

7. You can move VMs from **Manual Startup** to **Any Order** or **Automatic Startup**, by selecting the VM and using the **Move Up** button.

To prevent machines from starting up automatically, move them under **Manual Startup** by using the **Move Down** button.

For version 6.5:

- 1. Select the ESXi host in vSphere Client and choose the Manage option underneath.
- 2. In the System pane, select Autostart.

vmware <sup>.</sup> ESXi <sup></sup>	
Navigator	
▼ 📱 Host	System Hardware Licensing Packages Services Security & users
Manage	
Monitor	Advanced settings 🥒 Edit settings
✓      ✓ Virtual Machines     ✓	Autostart         Enabled         Yes           Swap         Start delay         30s
	Stop delay 90s
Storage	Stop action Shut down
P 🧕 Networking 🛛 🚺 1	Wait for heartbeat No

- 3. Click on **Edit settings** above the table.
- 4. Ensure the **Yes** radio button is selected to enable autostart.
- 5. Set the **Start delay** (default 30 seconds) and the **Stop delay** (default 90 seconds). It is recommended you provide higher delays (e.g. 120 seconds) so that the virtual machines can shutdown gracefully.

#### 6. Set the Stop action to Shut down.

nabled	• Yes O No
Start delay	120 seconds
Stop delay	120 seconds
Stop action	Shut down 🔻
Vait for heartbeat	⊖ Yes ● No

7. Click Save to finish.

### Start and Stop PowerChute

Use the commands below to stop and start PowerChute Business Edition on ESXi.

To stop PowerChute, type the following at the command line:

sudo /etc/init.d/PBEAgent stop

To start PowerChute manually, type the following at the command line:

```
sudo /etc/init.d/PBEAgent start
```

### **Uninstall PowerChute**

To uninstall, type the following command:

sudo rpm -e pbeagent

### **Remove Target Server**

Targets previously added with the vifp addserver command need to manually be removed after uninstalling PowerChute Business Edition.

To remove an ESXi host, type the following command:

sudo vifp removeserver <esxi Address>

See the VMware website for more information.

As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this publication.

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