Software for VMware ESXi via USB/RS232 (paid version)

1 Over viewer	2
1.1 Topological structure	2
1.2 Shutdown Sequence	3
2 Configuring for critical guest OS(only need to be done for case1)	4
2.1 USB Communication	4
2.1.1 Earlier than ESXi 6.5:	4
2.1.2 Later than ESXi 6.5:	5
2.2 RS232 Communication	7
2.2.1 Earlier than ESXi 6.5:	7
2.2.2 Later than ESXi 6.5:	7
2.3 USB TO RS232 Communication	9
2.3.1 Earlier than ESXi 6.5:	9
2.3.2 Later than ESXi 6.5:	
3 Configuring for Software	
3.1 Software installation	
3.1.1 Software installation on Windows OS	
3.1.2 Software installation on Linux OS	
3.2 Software start	
3.2.1 Software start on windows OS	
3.2.2 Software start on Linux OS	
3.3 Software communication	
3.3.1 RS232 or USB	
3.3.2 USB TO RS232	
3.4 Set the shutdown condition	
3.5 Add the ESXi hosts	



1 Over viewer

1.1 Topological structure

• Case 1:

Software can be installed on any of the Guest OS, just as windows, Linux, Mac OSX, Solaris. Please make sure the **"VMware tools**" are installed for all the Guest OS. The guest OS that is installed Software is the Critical VM.



Case 2:

Software can be installed on the other physical Computer at the same network with VMware ESXi, just like Windows, Linux, Mac OSX, Solaris.

Please make sure the "VMware tools" are installed for the all the Guest OS.



1.2 Shutdown Sequence

Case 1 (Case 1 has two Instances) :

Software shut down the VMs and Hosts(Host disable Autostart)



2 Configuring for critical guest OS(only need

to be done for case1)

2.1 USB Communication

2.1.1 Earlier than ESXi 6.5:

• Choose the critical guest OS that Software is installed , Add the USB controller by the "Summary"->"Edit setting"->"add"->"USB Controller"



 Choose the critical guest OS that Software is installed, Add the USB device by the "Summary"->"Edit setting"->"add"->"USB device", make sure the UPS is connected.



The UPS USB can be added successfully as below image

🖉 VMA5.5 - Virtual Machine	Properties	
Hardware Options Resources	6	Virtual Machine Version: 7
Show All Devices	Add Remove	Phoenixtec Power HID UPS USB Unique ID:
Hardware	Summary	host: localhost path:5/0 version:2
Memory	600 MB	Device Status: Connected
Video card	1 Video card	Cannot migrate using vMotion while device is connected.
USB controller	Present	
USB 1	Host Device - Phoenixtec Power HID UPS	
USB 2	Host Device - Phoenixtec Power USB UPS	
SCSI controller 0	LSI Logic Parallel	
CD/DVD drive 1	CD/DVD Drive 1	
🔲 😅 Hard disk 1	Virtual Disk	
Network adapter 1	VM Network	

• Restart the guest OS after adding the USB controller and USB device

2.1.2 Later than ESXi 6.5:

Choose the critical guest OS that Software is installed, Add the USB device by the "Edit settings"->"add other device" ->"USB device"

Virtual Hardware VM Options				
🔜 Add hard disk 🛛 🛤 Add networ	k adapter	🚍 Add other device		
🕨 🔲 CPU	1	CD/DVD drive		
Memory		Floppy drive		
	504	oro Serial port		
Hard disk 1	32	Parallel port		\otimes
SCSI Controller 0	LSI	🚭 USB controller	•	8
SATA Controller 0		USB device		
SATA CONTIONER 0		Sound controller		8
🖶 USB controller 1	US	PCI device	•	\otimes
Matwork Adapter 1	VM	SCSI controller	▼ ✓ Connect	8
OD/DVD Drive 1	Hos	SATA controller	▼ ✓ Connect	0
		NVMe controller		

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• The UPS USB can be added successfully as below image

/irtual Hardware VM Options			
Memory	5048 MB V		
▶ 🛄 Hard disk 1	32 GB 🔻		\otimes
SCSI Controller 0	LSI Logic SAS	Ŧ	\otimes
SATA Controller 0			8
🚭 USB controller 1	USB 2.0	¥	8
Network Adapter 1	VM Network	▼ ✓ Connect	\otimes
▶ 🧐 CD/DVD Drive 1	Host device	▼ ✓ Connect	\otimes
Video Card	Specify custom settings	T	
BD New USB device	Phoenixtec Power Offline UPS	•	\otimes

2.2 RS232 Communication

2.2.1 Earlier than ESXi 6.5:

 Power off the critical guest OS that Software is installed, right click it. Add the serial port by the "Summary"->"Edit setting"->"add"->"Serial Port"->"Use physical serial port", the serial port name is "/dev/char/serial/uart0" as default.

lardware Options Resour	ces	Virtual Machine Version: vmx-09
Iardware Options Resour Show All Devices Hardware Memory CPUs Video card Video card VMCI device SCSI controller 0 Hard disk 1 CD/DVD drive 1 Network adapter 1 USB controller Serial port 1	Add Remove Add Summary 600 MB 1 Video card Restricted LSI Logic Parallel Virtual Disk CD/DVD Drive 1 VM Network Present /dev/char/serial/uart0	Virtual Machine Version: vmx-09 Pevice Status Connected Connection Use physical serial port: /dev/char/serial/uart0 Use output file: Browse Use named pipe: Pipe Name: Near End: Client Far End: A virtual machine Use network
4	4 111	C Server (VM listens for connection) C Client (VM initiates connection) Port URI: Use Virtual Serial Port Concentrator vSPC URI: I/O Mode Vield CPU on pol
Help		OK Cancel

• Restart the guest OS after adding the serial port

2.2.2 Later than ESXi 6.5:

 Power off the critical guest OS that Software is installed, right click it. Add the serial port by the "Edit settings"->"add other device"->"Serial Port"->

10				-	
0 1	10	142	19	1.11	(e)
	_				

🖆 Edit settings	- Windows7	(ESXi 6.7	virtual	machine)	

📃 Add hard disk 🛛 🛤 Add network a	dapter	Add other device		
CPU	1	CD/DVD drive Eloppy drive		
Memory	504	oro Serial port		
Hard disk 1	32	Parallel port		\otimes
SCSI Controller 0	LSI	USB controller	•	\otimes
SATA Controller 0		Sound controller		\otimes
WSB controller 1	US	PCI device	•	\otimes
Network Adapter 1	VM	SCSI controller	▼ ✓ Connect	8
o ⊚ CD/DVD Drive 1	Ho		 Connect 	8
Video Card			_	

Choose "Use physical serial port"

🖆 Edit settings - Windows7 (ESXi 6.7 vir	tual machine)	
Virtual Hardware VM Options		
		•
Memory	5048 MB v	
Hard disk 1	32 GB 🔻	8
SCSI Controller 0	LSI Logic SAS	8
SATA Controller 0		8
WSB controller 1	USB 2.0 v	8
▶ 🚥 New Serial Port	Use physical serial port	8
Network Adapter 1	VM Network	8
▹ iso CD/DVD Drive 1	Host device Connect	8
▶ Uideo Card	Specify custom settings	~
		Save Cancel

• Restart the guest OS after adding the serial port

2.3 USB TO RS232 Communication

2.3.1 Earlier than ESXi 6.5:

• Choose the critical guest OS that Software is installed, Add the USB controller by the "Summary"->"Edit setting"->"add"->"USB Controller"

🖅 172.18.139.102 - vSphere Cl	ient			
File Edit View Inventory	Administration Plug-ins Help			
Home 🕨	Inventory Inventory	🖉 vMA5.1 - Virtual Machi	ne Properties	
🗖 🖬 🕨 🗐 🚳	🚺 🖳 🌬 🧇 🦗	Hardware Options Resou	rces	Virtual Machine Ve
□ □ 172.18.139.102 □ VMA5.1 □ WIN7	VMA5.1 Getting Started Summary Resou	Show All Devices	Add Remove	Memory Contiguration
	General	Hardware Memory	🕢 Add Hardware	
	Guest OS: SUSE Linux VM Version: 7 CPU: 1 vCPU Memory: 600 MB Memory Overhead: 45.59 MB VMware Took: Ø Running IP Addresses: 172.18.135 DNS Name: localhost State: Powered O Host: localhost State: localhost Active Tasks: vocalhost.0 Active Tasks: vocal	 Pretroity CPUs CPUs Video card WhCI device SCSI controller 0 Hard disk 1 CD/DVD drive 1 Network adapter 1 USB controller 	Device Type What sort of device do you v Device Type USB Controler Ready to Complete	wish to add to your virtual machine? Choose the type of device you wish to add. Serial Port (unavaiable) Paralel Port (unavaiable) CO/DVD Drive (unavaiable) USB Device USB Device (unavaiable) Ethernet Adapter Hard Dsk SCSI Device

 Choose the critical guest OS that Software is installed, Add the USB device by the "Summary"->"Edit setting"->"add"->"USB device", Choose "prolific USB-Serial Controller", make sure the UPS is connected.

Add Hardware	And and a second				X
Select USB device Which USB device	do you want to use?				
Device Type USB Device Ready to Complete	VMotion Support	e is connected			
	Select the host USB device below:				
	Description	Connection			
	Prolific USB-Serial Controller	Available			
ļ,	1		1	1	
Help			< Back	Next >	Cancel



2.3.2 Later than ESXi 6.5:

 Choose the critical guest OS that Software is installed ,Add the USB device by the "Summary"->"Edit settings"->"add other device"->"USB device"

/irtual Hardware VM Options				
🔜 Add hard disk 🛛 🛲 Add networl	k adapter	Add other device		
🕨 🔲 CPU	1	OD/DVD drive		
Memory		Floppy drive		
		oio Serial port		
Hard disk 1	32	Parallel port		8
SCSI Controller 0		🚭 USB controller	•	•
		📷 USB device		Ø
SATA Controller 0		Sound controller		\otimes
🚭 USB controller 1	US	PCI device	v	\otimes
Main Network Adapter 1	VM	SCSI controller	▼ Connect	8
SD/DVD Drive 1	Ho	SATA controller		
		NVMe controller	- Ouncer	

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• The UPS USB-RS232 can be added successfully as below image

Virtual Hardware VM Options		
Memory	5048 MB V	
▶ 🛄 Hard disk 1	32 GB V	8
SCSI Controller 0	LSI Logic SAS	\otimes
SATA Controller 0		\otimes
🖶 USB controller 1	USB 2.0	\otimes
Network Adapter 1	VM Network Connect	\otimes
▶ 🧐 CD/DVD Drive 1	Host device Connect	\otimes
Video Card	Specify custom settings	
E New USB device	Prolific USB-Serial Controller D	\otimes

3 Configuring for Software

3.1 Software installation

Software can be installed on any of the OS, just like Windows, Linux, MACOSX, Solaris For more simply, just give the windows and Linux samples. Please check the Software user manual for more information.

3.1.1 Software installation on Windows OS

- Right click the "setup.exe", choose "Run as administrator" to complete the installation.
- The Software agent will be running automatically when the Windows boots

3.1.2 Software installation on Linux OS

- Download the software (Software_setup_LinuxAMD64.tar.gz) from the Website or from the CD attached. Upload the software from Windows to the Linux using WinSCP tools.
- Extract the software, there are two files including LinuxAMD64 and InstallerData.
- Enter the LinuxAMD64 and then enter the following command to install the software:

cd LinuxAMD64

./setup.bin (if the Linux is GUI Mode)

./setup_console.bin (if the Linux is CUI mode)

• Go to the installation path and enter the following command to start the Software agent manually:

cd /opt/MonitorSoftware

./agent start

Note: The Software agent will be running automatically when the Linux boots, you don't need to enter the command for every time.

3.2 Software start

3.2.1 Software start on windows OS

• Software agent will be started automatically, you can right click the green icon choose "start monitor" to start the Software manager.

3.2.2 Software start on Linux OS

• Software agent will be start automatically, you can input the command "./monitor" under the "/opt/MonitorSoftware" to start the Software manager

3.3 Software communication

3.3.1 RS232 or USB

If the Software communication with UPS via USB or RS232, just auto search it by "System"
 ->"Auto search device"

Windows OS:



Linux OS:



3.3.2 USB TO RS232

• If the Software communication with UPS via USB-RS232:

On the Windows OS, you should install the USB-RS232 driver, then restart the system and auto search the device.

On the Linux OS, you don't need to install the USB-RS232 driver, you should add the serial port name by "System" ->"Com port Setting", add the serial port name "/dev/ttyUSB0", then auto search the device

Communication Port Settings						
COM Port List						
/dev/ttyS0						
/dev/ttyS1						
/dev/ttyUSB0	Add					
	Remove					
ОК	Cancel					

3.4 Set the shutdown condition

• Open Software manager, Click "Device" -> "Shutdown Parameter", Set the shutdown

	DewerWalker
condition	

3.5 Add the ESXi hosts

 Open Software manager, Click "Device" -> "Shutdown Parameter", choose the "Shutdown ESXi hosts and VMs before Shutdown"

File Edit View Experites Tools Hole	ost/vms/10 D V Certificate error D P localhost.eaton.ad.etn.com X	10° X
vmware esxi	Ø Windows7 - Console - VMware ESXi - Internet Explorer	
	Shutdown Settings Recycle Bin Shutdown Options USB Shutdown Options USB Shutdown Inmediately when Battery is Low Begin Shutdown when UPS Battery is at 40 * % Capacity or lower Shut down When remaining battery time is below System @ Shut down Windows Windows Windows Windows	
	Newliset Run Command File before Shutdown Browse Shutdown File Max Execution Time Run Mode Service Shutdown remote LinuxUnixNAS by SSH before Shutdown SSH Configure Shutdown Remote Agents Shutdown Conditions Agent is shutdown Add Modify Remove	LOA
Qfinder	 (a) (b) (b) (b) (b) (b) (c) (

 Click "ESXi Configure"->"Add", Enter the ESXi hosts IP, user name, password You can input multi-ESXi hosts.

ESXi Configure	×
172.18.139.140,root,shutdown 172.18.139.238,root,shutdown	Add
	Remove
	Test
	ОК
Shutdown all the VMs before host shutdown	
ESXi Shutdown Time out 2 min	

• If you have disabled the "Autostart" as below image:

Host Autostart configuration w	as successfully undated _ dismiss	n - Manage					
E Host Manage Monitor	System Hardware Advanced settings	Licensing Packages Servi	ces Security & us	iers			
▼ (i) Virtual Machines I ▼ (ii) Windows7 Swap Monitor Iii Swap Time & date Iiii Iiii Storage Iiiii Iiiii Storage Iiiiiii Iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Autostart Swap Time & date	utostart Enabled wap me & date Stop delay Stop action Wait for heartbeat		No 5s 15s Shut down No			
		Virtual machine	Shutdown beh v	Act C Refresh	Start delay	 Q Search Stop delay 	
		Windows7	Shut down	1	5 s	15 s	
		vMA6.5	Shut down	2	5 s	15 s	
		m vMA5.5	Shut down	3	5 s	15 s	
		centos6	Shut down	4	5 s	15 s	
		indows8	Shut down	5	5 s	15 s	
		PAVHA1.52	System default	6	5 s	15 s	
		Our fails fillings	-			e 11	

Please check the Software box "Shutdown all the VMs before host shutdown", Software will shut down all the no-critical VMs firstly, then shutdown the critical VMs and hosts.

ESXi Configure	
172.18.139.140,root,shutdown	Add
172.18.139.238,root,shutdown	
	Remove
	Test
	ОК
Shutdown all the VMs before host shutdown	
ESXi Shutdown Time out 2 min	

• If you have enable the "Autostart" as below image:

VMWare: ESXi							roc	t@172.18.139.238 👻	Help 🚽 🝳 Search
Navigator	localhost	.eaton.ad.etn.c	om - Manage						
▼ 🗒 Host	System	Hardware	Licensing	Packages	Services	Security & users			
Manage									
Monitor	Advance	d settings	/	Edit settings					
🕶 🔂 Virtual Machines 🛛 🚳	Autostar	t	E	nabled		Yes			
- 🖧 centos6	Swap Time & d	late	S	lart delay		5s			
More VMs			S	lop delay		15s			
Storage					Stop action		Shut down		
Networking		Wait for heartbeat No							
			Virt	ual machine v	Shutdow ~	Autostart order 🔺 🗸	Start delay ~	Stop delay ~	
			a.	Windows7	Shut down	1	5.5	15 s	
				vMA6.5	Shut down	2	5 s	15 s	^
			a	vMA5.5	Shut down	3	5 s	15 s	
			a	centos6	Shut down	4	5 s	15 s	
			a	windows8	Shut down	5	5 s	15 s	
			a >	PAVHA1.52	System de	6	5 s	15 s	×
			G	luick filters		T			6 items

Please don't check the box "Shutdown all the VMs before host shutdown", so Software only shut down the hosts. The VMs will be shut down before host shutdown by the "Autostart" function.

