Using SANDeploy iSCSI SAN for VMware ESX / ESXi Server

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www.sandeploy.com

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Overview

SANDeploy Storage virtualization solution will bring low cost and more convenient in data protection, data replication, data backup and failover than the real-hardware.



Figure 1, SANDeploy Offers shared-storage array for VMware ESX / ESXi Server

This document gives users detailed step-by-step instructions on configuring SANDeploy iSCSI SAN for VMware ESX Server or VMware ESXi server. Virtual Servers may need two or more computers use a few external storages such as iSCSI disks. With SANDeploy, you can quickly create a series of shared disks for virtualization servers.

Preparing SANDeploy Storage

Create Virtual Volume

Click All Programs->SANDeploy->SANDeploy Boot Server (or SANDeploy Server) to launch SANDeploy

Management Console.

SANDeploy			
<u>File Action View H</u> elp			
🗢 🤿 📰 🛱 🔒 🛛 🖬 🕨 📕			
SANDeploy iSCSI SAN	SANDeploy iSCSI S	AN	
🐣 Users	Name	Description	
Virtual Volumes	🐣 Users	Display and manage CHAP users	
📕 iSCSI Targets	Groups	Display and manage CHAP groups	
BootServer	Virtual Volumes	Display and manage virtual volumes	
	BootServer	Display and manage listless boot and workstations	
	1		

Right click on the **Virtual Volumes** on the left tree of the main interface. Select **Create Virtual Volume...** from the pop-up menu. The **Create Virtual Volume Wizard** appears.

Select iSCSI media type



Select Standard Image file.

Press the **Next** button to continue.

Specify image file

Create Virtual Volume Wizard			x
Select Image File Please choose a regular dis	sk image file		
🔘 Use existing image file	Oreate a new image file		
R:\esx.img		<u>B</u> rowse	
Enter Device size (MB): 3000			
	< <u>B</u> ack Next	> C	ancel

User can either select to open an existed image file or choose to create a new image file. To create new image file, please select the location of the file where user wants to create the file, specify the capacity of the image file.

Press the **Next** button to continue.

Cache Settings

High Speed Cache Setting Choose enable or disable high speed cache.
Cache Parameters
Cache size in MBs 512
Cache block expiry period time in ms: 5000
< <u>B</u> ack <u>N</u> ext > Cancel

User can choose whether use the cache by clicking the Enable high speed cache on this volume option button.

Specify Cache size.

Specify Cache block expiry period time.

Please note is that if you enable the cache, you will get more risk when power lost.

Press the **Next** button to continue.

Write-Back cache settings

Create Virtual Volume Wizard
Write-Back Cache Setting Select a folder for saving the temporaly data of each clients
Enable write-back cache for this volume Write-Back Cache Parameters Select a folder to stora temporary client data: C:\Temp\
Quota for each client in MBs
< <u>B</u> ack Next > Cancel

There is no sense for this type of solutions, so do not check **Enable write-back cache for this volume**.

Press the **Next** button to continue.

Finish Virtual Volume Creating

Create Virtual Volume Wizard	×
Finish Congratulations, the target is being createdyou have completed all the configurations	
Description	
ign. 2008-08. com. sandeploy. volume: esx	
	-
< <u>B</u> ack Finish Ca	ancel

Type the volume description, the description will be used for helping user to remember.

Press the Finish button to complete the volume creation.

Create iSCSI Target

Right click on the **iSCSI Targets** node on the left tree of the main interface. Select **Create Target...** from the pop-up menu. The Create iSCSI Target Wizard appears.

Select Virtual Volumes.

Create iSCSI Target Wizard	X
Select LUN Please choose at least one LUN in the f	ollowing list
Available Volumes:	Selected Volumes:
iqn. 2008-08. com. sandeploy. volume: esx	
	< Back Next > Cancel

Here user can select one or more volumes by clicking the > button to add it to the **Selected Volumes** panel.

Create iSCSI Target Wizard	X
Select LUN Please choose at least one LUN in the fol	llowing list
Available Volumes:	Selected Volumes:
	jgn. 2008-08. com. sandeploy. volume: esx
	<
	>>>
	<<
	< <u>B</u> ack <u>N</u> ext > Cancel

Press the **Next** button to continue.

Authorization Settings

eate iSCSI Target Wizard	×
Set iSCSI Target Authorization Please at least one CHAP group	
Available Groups:	Selected Administrator's Groups:
Anonymous	
	<
	>>>
	< <u>B</u> ack Next > Cancel

User can choose the CHAP group from the Available Groups, Anonymous represent no CHAP authorization needed.

Press the > button to add one or more groups to the **Selected Administrator's Groups.**

Create iSCSI Target Wizard	×
Finish Enter target name to finish iSCSI target creating	*
TargetName:	
iqn.2008-08.com.sandepioy:sandepioy.esx	
	< Back Finish Cancel

Input the target name or left the default.

Press the **Finish** button to exit.

Preparing VMware ESX / ESXi Server

Logon to ESX Server

Run VMware Infrastructure Client, VMware Infrastructure Client Log on dialog appears.

🛃 VMware vSphere Client	×
vmware [.] VMware vSphere Client	
To directly manage a single To manage multiple hosts, a vCenter Server.	host, enter the IP address or host name. enter the IP address or name of a
IP address / <u>N</u> ame:	192.168.0.109
<u>U</u> ser name:	root
Password:	****
	Use <u>W</u> indows session credentials

Type IP address / Name with which running ESX Server.

Type user name and password.

Press the login button to continue.

Configure ESX Server Networking Settings

Click Networking link in the Hardware group, the built-in Virtual Switch appears.



As we need using iSCSI, we need create a new Network, click **Add Networking** link, an **Add Network Wizard** appears.

Note: We need not to create a new network if the networking is still exist, but if there is not one, you must add it as follows.

🕗 Add Network Wizard		
Connection Type Networking hardware can	be partitioned to accommodate each service that requires connectivity.	
Connection Type Network Access Connection Settings Summary	Connection Types Virtual Machine Add a labeled network to handle virtual machine network traffic. VMkernel The VMkernel TCP/IP stack handles traffic for the following ESX services: VMware VMotion, iSCSI, and NFS. Service Console Add support for host management traffic.	
Help	<u>≤</u> Back Next ≥	Cancel

On the first page of this wizard, select VmKernel which allows your virtual machines can use the iSCSI.

Press the **Next** button to continue.

Select which virtual switch will handle the network traffic.

Add Network Wizard				
The VMkernel reaches n	ess networks through uplink adapters attac	ched to virtual s	witches.	
Connection Type	Select which virtual switch will have using the unclaimed network adapt	dle the network ters listed belov	traffic for this connection. You may also create a	new virtual switch
Connection Settings Summary	Create a virtual switch	Speed	Networks	
Samnary	⊙ Use vSwitch0	Speed	Networks	
	Vmnic0	1000 Full	192.168.0.1-192.168.0.254	
	Preview:			
	Preview: -VMkernel Port -VMkernel 2		hysical Adapters	<u> </u>
	Preview: -VMkernel Port -VMkernel 2 -Virtual Machine Port Group VM Network	<u>9</u>	hysical Adapters • vmnic0	<u> </u>
	Preview: -VMkernel Port VMkernel 2 -Virtual Machine Port Group VM Network -Service Console Port	<u>Q</u>	hysical Adapters -• 📷 vmnic0	<u> </u>
	Preview: VMkernel Port VMkernel 2 Virtual Machine Port Group VM Network Service Console Port Service Console	<u>Q</u> Q	hysical Adapters The transformation of the second se	<u> </u>
	Preview: VMkernel Port VMkernel 2 Virtual Machine Port Group VM Network -Service Console Port Service Console vswif0 : 192.168.0.109	<u>Q</u>	hysical Adapters The two second seco	
	Preview: VMkernel Port VMkernel 2 -Virtual Machine Port Group VM Network -Service Console Port Service Console vswif0 : 192.168.0.109 -VMkernel Port VMkernel		hysical Adapters The two set of the two set of two set of the two set of	<u> </u>
	Preview: VMkernel Port VMkernel 2 Virtual Machine Port Group VM Network Service Console Port Service Console vswif0 : 192.168.0.109 VMkernel vmk0 : 192.168.0.102	<u>@</u>	hysical Adapters -• 🌇 vmnic0	
	Preview: -VMkernel Port -VMkernel 2 -Virtual Machine Port Group -VM Network -Service Console Port Service Console vswif0 : 192.168.0.109 -VMkernel vmk0 : 192.168.0.102		hysical Adapters • • • • • • • • • • • • • •	

Select User vSwitch0 option.

Press the **Next** button to continue.

Type the identification of the network adapters.

Add Network Wizard YMkernel - Connection Se Use network labels to ide	ttings ntify VMkernel connections while man	aging your hosts and datacenters.	<u>_</u> D×
Connection Type Network Access Connection Settings IP Settings Summary	Port Group Properties Network Label: VLAN ID (Optional):	VMkernel 2 Use this port group for VMotion Use this port group for Fault Tolerance logging	
	Preview: VMkernel Port Virtual Machine Port Group VM Network Service Console Port Service Console vswif0 : 192.168.0.109 VMkernel Port VMkernel vmk0 : 192.168.0.102	Physical Adapters Physical Adapters Physical Adapters Physical Adapters Physical Adapters Physical Adapters Physical Adapters	
Help		≤Back Next ≥	Cancel

Give the name of the new network.

Press the **Next** button to continue.

IP Settings

🚱 Add Network Wizard				
YMkernel - IP Connection Specify VMkernel IP setti	Settings ngs			
Connection Type Network Access Connection Settings IP Settings Summary	Obtain IP settings automatically Obtain IP settings IP settings: IP Address: Subnet Mask: VMkernel Default Gateway:	192 , 168 , 0 , 103 255 , 255 , 255 , 0 192 , 168 , 0 , 1	Edit	
	VMkernel Port VMkernel 2 192.168.0.103 Virtual Machine Port Group VM Network Service Console Port Service Console vswif0 : 192.168.0.109 VMkernel Port VMkernel vmk0 : 192.168.0.102	Physical Adapters		
Help		<u>≤</u> Back	Next ≥ Cance	

Input IP Address and Subnet mask, we take 192.168.0.103 and 255.255.255.0 as an example.

Press the **Next** button to continue.

Complete add networking

🚱 Add Network Wizard				
YMkernel - IP Connection Specify VMkernel IP setti	Settings ngs			
Connection Type Network Access Connection Settings IP Settings Summary	Obtain IP settings automatically Obtain IP settings IP settings: IP Address: Subnet Mask: VMkernel Default Gateway:	192 , 168 , 0 , 103 255 , 255 , 255 , 0 192 , 168 , 0 , 1	Edit	
	VMkernel Port VMkernel 2 192.168.0.103 Virtual Machine Port Group VM Network Service Console Port Service Console vswif0 : 192.168.0.109 VMkernel Port VMkernel vmk0 : 192.168.0.102	Physical Adapters		
Help		<u>≤</u> Back	Next ≥ Cance	

Check the parameters are correct and press the **Back** button if any changes are required.

Press the $\ensuremath{\textit{Finish}}$ button to complete creating adds networking.



Configure iSCSI Storage

Click Storage Adapters link in the Hardware group.

Click Properties link.

The iSCSI Initiator (vmmhba34) Properties Dialog appears.

🛃 iSCSI Initiator (vmhba34) Pr	operties	
General Dynamic Discovery St.	atic Discovery	
-iSCSI Properties	· 1	
Name:	ign.1998-01.com.vmware:localhost-5e100	:d34
Alias:		
Target discovery methods:	Send Targets, Static Target	
Software Initiator Properties –		
Status:	Enabled	
CHAP Advanced		Configure
	_	
	Close	

Change to Dynamic Discovery page to add target

🛃 iSCSI I	nitiator (vmhba34)	Properties		
General	Dynamic Discovery	Static Discovery		
Send	largets			
Discove	er iSCSI targets dynan	ically from the following IP addresse:	s:	
iSCSI :	Server Address			
		<u>A</u> dd	<u>R</u> emove <u>S</u> et	tings
			Close	Help

Add Send Targ	et Server	2
iSCSI Server:	192.168.0.177	
Port:	3260	
Inheritance:	I	
Authentic be establ	ation may need to be configured before a session can ished with any discovered targets.	
	<u>C</u> HAP	
	OK Cancel <u>H</u> elp	

Press the Add button, the Add Send Targets Server dialog appears

Input iSCSI Server address and port with which is running the SANDeploy Server.

Press the **OK** button to proceed.

Specify CHAP authentication information.

🛃 iSCSI Initiator (vmhba34) Pr	roperties	IN
General Dynamic Discovery St.	atic Discovery	
-iSCSI Properties		
Name:	ign.1998-01.com.vmware:localhost-5e10cd34	
Alias:		
Target discovery methods:	Send Targets, Static Target	
Software Initiator Properties -		
Status:	Enabled	
CHAP Advanced	Configure	
		11
	Close Help	

If you choose CHAP user authorization mode in target of SANDeploy Server, this step cannot be by past. Press the **CHAP** button, the **CHAP Credentials** dialog appears.

CHAI CICCCII	lials	
All iSCSI targets	are authenticated using these credentials unless	
I The CHAR	ee in the target's CHAP seconds.	
	secret and Mutual CHAP secret must be different.	
-CHAP (target a	authenticates host)	1
Select option:	Do not use CHAP	
	Use initiator name	
Name:		
Secret:	***************************************	
Secret:	****	
Secret: - Mutual CHAP (I	host authenticates target)	
Secret: -Mutual CHAP (I Select option:	host authenticates target)	
Secret: -Mutual CHAP (I Select option:	host authenticates target) Do not use CHAP Use initiator name	
Secret: Mutual CHAP (I Select option: Name:	host authenticates target) Do not use CHAP Use initiator name	
Secret: Mutual CHAP (I Select option: Name: Secret:	host authenticates target) Do not use CHAP Use initiator name	
Secret: Mutual CHAP (I Select option: Name: Secret:	host authenticates target) Do not use CHAP Use initiator name	
Secret: -Mutual CHAP (I Select option: Name: Secret:	host authenticates target) Do not use CHAP Use initiator name ************************************	
Secret: Mutual CHAP (I Select option: Name: Secret:	<pre>************************************</pre>	

Type CHAP user name and secret in the CHAP (target authenticates host) group. If you do not choose CHAP authentication, you should select **Do not Use CHAP**. Press the **OK** button in this dialog.

Press the **Close** button in the iSCSI Initiator (vmmhba34) Properties dialog to finish iSCSI Target configuration. A prompt dialog is shown.



Press the Yes button to continue.

Please wait for a while, you will found an iSCSI device appears in the following interface.

🕜 192.168.0.109 - vSphere Client		<u></u>	L			
Eile Edit View Iqventory Administration Plug-ins Help						
A Home b 29 Inventory b 19 Inventory						
6 6						
- 192.168.0.109	localhost VMware ESX, 4.0.0, 208167 E	valuation (58 days remaining)				
Unknown (inaccessible)	Getting Started Summary Virtual Machin	nes Resource Allocation Performance Configuration Users & Groups Events Permissions				
	Health Status	Device Type WWN				
	Processors	iSCSI Software Adapter	1_1			
	Memory	Svmhba34 iSCSI iqn.1998-01.com.vmware:localhost-5e10cd34:				
	Storage	82801H (ICH8 Family) 2 port SATA IDE Controller				
	Networking	vmhba1 Block SCS1				
	Storage Adapters	VIIII0433 DOUK SCSI				
	Network Adapters					
	Advanced Settings	Details				
	C - Durana	umbha24 Desception	-			
	Sutware	Model: iSCSI Software Adapter				
	Licensed Features	iSCSI Name: iqn.1998-01.com.vmware:localhost-5e10cd34				
	Time Configuration	iSCSI Alias:				
	DNS and Routing	Connected Targets: 1 Devices: 1 Paths: 1				
	Virtual Machine Startup/Shutdown	View: Devices Paths				
	Virtual Machine Swaprile Location	Name Duntime Name IIIM Type Transport Capacity				
	System Resource Allocation	SANDeplo iSCSI Disk (eui.01cb48a7ec1d vmhba34:C0:T1:L0 0 disk iSCSI 29.30 GB	-1			
			<u> </u>			
Recent Tasks	[=		×			
Name Target	Status Details	Initiated by Requested Start Ti Start Time Completed Time				
Add Internet SCSI cond	92.168.0.109 Scompleted	root 2010-8-30 3:03:20 2010-8-30 3:03:20 2010-8-30 3:03:22				
Remove Internet SCSL	92 168 0 109 Completed	root 2010-8-30 3:02:10 2010-8-30 3:02:17 2010-8-30 3:02:17				
	Completed					
Tasks		Evaluation Mode: 58 days remaining ro	ot //			

Now, the iSCSI configuration is completed.

Configure Storage Device

Click Storage link in the Hardware group. Click Add Storage link, the Add Storage Wizard appears.



Select Disk/LUN.

🚱 Add Storage					_ 🗆 ×
Select Disk/LUN					
Select a LUN to create a data	istore or expand the current one				
					_
Select Disk/LUN	Name, Identifier, Path ID, LUN, Capacity	, Expandable or VMFS	Label c	-	Clear
Current Disk Layout	Name	Path ID	LUN	Capacity VMFS Labe	
Formatting	SANDeplo iSCSI Disk (eui.01cb48a7	iqn.2008-08.com	0	29.30 GB	
Ready to Complete					
	1		15		
<u>H</u> elp			Back	Next > Car	ncel

Select SANDeplo iSCSI Disk device with the Identifier of iqn.2008-08.com.....

Press the **Next** button to continue.

Partition and format the entire device.

🛃 Add Storage				
Current Disk Layout You can partition and formal	: the entire device, all free space, or a single block of f	ree space.		
Disk/LUN	Review the current disk layout:			
Select Disk/LUN Current Disk Layout Properties Formatting Ready to Complete	Device SANDeplo iSCSI Disk (eui.01cb48a7ec1d4 Location /vmfs/devices/disks/eui.01cb48a7ec1d42b0 The hard disk There is only one layout configuration available. Use pages.	Capacity 29.30 GB k is blank. e the Next button t	Available 29.29 GB to proceed with the	LUN O
	A partition will be created and used			
Help		<u>≤</u> Back	Next >	Cancel

Just use the default.

🛃 Add Storage		
Properties		
Specify the properties for th	ne datatore	
	1	
E <u>Disk/LUN</u> Select Disk/LUN	Enter a datastore name	
Current Disk Layout	SANdata	
Properties Formatting		
Ready to Complete		
1		
Help		≤Back Next ≥ Cancel

Type the data store name.

🛃 Add Storage	
Disk/LUN - Formatting Specify the maximum file siz	and capacity of the datastore
Disk/LUN Select Disk/LUN Current Disk Layout Properties Formatting Ready to Complete	Maximum file size Large files require large block size. The minimum disk space used by any file is equal to the file system block size. 256 GB , Block size: 1 MB Capacity Maximize capacity 29.29 GB
Help	<u>≤ Back</u> Next ≥ Cancel

Leave the default recommend settings.

🛃 Add Storage				
Ready to Complete Review the disk layout and	click Finish to add storage			
<u>Disk/LUN</u>	Disk layout:			
Ready to Complete	Device SANDeplo iSCSI Disk (eui.01cb48a7ec1d4 Location /vmfs/devices/disks/eui.01cb48a7ec1d42b0	Capacity 29.30 GB	Available 29.29 GB	LUN O
	Primary Partitions VMFS (SANDeplo iSCSI Disk (eui.01cb48a7ec	Capacity 29.29 GB		
	File system:			_
	Datastore name: SANdata			
	File system: VMFS-3 Block size: 1 MB Maximum file size: 256 GB			
Help		<u>≤</u> Back	Einish	Cancel

Now, the storage is going to be created, press the **Finish** button to finish the wizard.

Press the Yes button in the following prompt dialog, so that the ESX Server can format the storage.

After this, you can see the storage device in the following interface.

🛃 192.168.0.109 - ¥5phere Client							_ 🗆 🗙
Eile Edit Vie <u>w</u> I <u>n</u> ventory <u>A</u> dministr	ration <u>P</u> lug-ins <u>H</u> elp						
💽 💽 🏠 Home 🕨 🛃 In	ventory 🕨 🛐 Inventory						
□ □ 192.168.0.109	localhost ¥Mware ESX, 4.0.0, 208167 E	valuation (58 days remain	ing)				
Unknown 1 (inaccessible)	Getting Started Summary Virtual Machin	es Resource Allocation	Performance Config	uration Users &	Groups Events P	ermissions	
	Hardware	View: Datastores Dev	ices				-
	Health Status	Datastores				Refresh Delete	Add Storage
	Processors	Identification	Device	Capacity	Free Type	Last Update	
	Memory	👔 Storage1	Local ATA Disk (t	147.75 GB	139.78 GB vmfs3	2010-8-30 3:12:32	
	Storage	🗊 SANdata	SANDeplo iSCSI D	29.25 GB	28.83 GB vmfs3	2010-8-30 3:12:32	
	Networking						
	Network Adapters						
	Advanced Settings						
	Software	Datastore Details					Properties
	Licensed Features						
	Time Configuration						
	Virtual Machine Startup/Shutdown						
	Virtual Machine Swapfile Location						
1	Security Drofile						<u> </u>
Recent Tasks							×
Name Target	Status Details	Initiated by Reques	ted Start Ti 🔽 Sta	art Time	Completed Time	2	
Create VMES datastore	92.168.0.109 💟 Completed	root 2010-6-	30 3:11:56 201	10-8-30 3:11:56	2010-8-30 3:12:3	2	
Rescan HBA	92.168.0.109 🔮 Completed	root 2010-8-	30 3:03:20 201	10-8-30 3:03:20	2010-8-30 3:03:2	2	
🚰 Tasks						Evaluation Mode: 58 day	s remaining 🛛 root 🎢

Now, we have the storage to store virtual machines.

Create Virtual Machine

In the Virtual Machine tab page of VMware Infrastructure Client, right click on the black page, and then select New Virtual Machine..., the New Virtual Machine Wizard appears.

Select the appropriate configuration.

🕑 Create New Virtual Machine	
Configuration Select the configuration fo	r the virtual machine Version: 7
Configuration Name and Location Datastore Guest Operating System Create a Disk Ready to Complete	Configuration • Typical Create a new virtual machine with the most common devices and configuration options. • Custom Create a virtual machine with additional devices or specific configuration options.
Help	≤Back Next ≥ Cancel

Select the Typical option.

Name and Location Virtual Machine	e Versior
Configuration Name:	
Name and Location win 7	
Guest Operating System Greate a Dick Virtual machine (VM) names may contain up to 80 characters and they must be unique within each vCenter Server VM folder.	
Create a Disk Ready to Complete VM folders are not viewable when connected directly to a host. To view VM folders and specify a lo for this VM, connect to the vCenter Server.	ocation
Help ≤ Back Next ≥	Iancel

Type in the virtual machine name, we take the default.

🗿 Create New ¥irtual Machin	e					
Datastore Select a datastore in whic	h to store the virtual	machine files			Virtual Machin	e Version: 7
Configuration Name and Location	Select a datastor	e in which to store th	e virtual machii	ne files:		
Datastore	Name	Capacity	Provisioned	Free Type	Thin Provisioning	Acces
Guest Operating System	[Storage1]	147.75 GB	7.97 GB	139.78 GB VMFS	Supported	Single
Create a Disk Readulta Concluta	[SANdata]	29.25 GB	435.00 MB	28.83 GB VMFS	Supported	Single
	Compatibility: Validation not ap	plicable this time.				
Help				<u><</u> Back	Next ≥	Cancel

Choose a data store for storing files of the virtual machine.

🛃 Create New Virtual Machine	•	
Guest Operating System Specify the guest operatin	g system to use with this virtual machine	Virtual Machine Version: 7
Configuration Name and Location Datastore Guest Operating System Create a Disk Ready to Complete	Guest Operating System: Microsoft Windows Linux Novell NetWare Solaris Other Version: Microsoft Windows 7 (32-bit) Identifying the guest operating system here allows the wizard to provi the operating system installation.	de the appropriate defaults for
Help	≤Back	Next ≥ Cancel

Select operation system, we select Microsoft Windows 7(32-bit) as an example.

🛃 Create New Virtual Machine	2		
Create a Disk Specify the virtual disk size	and provisioning policy		Virtual Machine Version: 7
Configuration Name and Location Datastore Guest Operating System Create a Disk Ready to Complete	Datastore: Available space (GB): Virtual disk size: Allocate and commit sp The virtual disk file star Support clustering feat Selecting this option wi	SANdata 28.8 24 GB ace on demand (Thin Provisioning) rts small and grows as more virtual tures such as Fault Tolerance Il increase the time it takes to crea	disk space is used. te the virtual machine.
Help		I	≤Back Next ≥ Cancel

Specify the size of virtual disk that will be used by the guest machine.

🕝 Create New Virtual Machine			
Ready to Complete Click Finish to start a task	nat will create the new virtual machine		Virtual Machine Versior
Configuration Name and Location	Settings for the new virtual machine:		
<u>Datastore</u> <u>Guest Operating System</u> <u>Create a Disk</u> Ready to Complete	Name: Win / Host/Cluster: localhost Datastore: SANdata Guest OS: Microsoft Windows 7 Virtual Disk Size: 24 GB	' (32-bit)	
	Edit the virtual machine settings be	ore completion	
	Creation of the virtual machine (W system. Install a guest OS on the '	 does not include automatic installat /M after creating the VM. 	tion of the guest operating
Help		≤Back	Finish Cancel

Check the parameters are correct and press the **Back** button if any changes are required.

Install Operation System

Run the virtual machine and set up the operating system.

The process is just like that on real machine.



Press Install now to install system



Check I accept the license terms and press Next to continue.



Choose the storage we create and press Next button to continue.

🛃 192.168.0.109 - vSphere Clie	ent								_ _ _ ×
Eile Edit View Inventory Adn	ninistration <u>P</u> lug-ins	Help							
💽 💽 🏠 Home 🕨 🙀	Inventory 🕨 🇊	Inventory							
	2 17 FB	L (2)							
□ 192.168.0.109	win 7								
	Getting Star	ed Summary	Resource Alloca	tion V Performa	nce Events Console	e Permissions		X	
		📄 🌍 🖉	Install Windows						
			/here do you Name	allocated Space	tall Windows?	Total Size 24.0 GB	Free Space 24.0 GB	Туре	
		4) @	▶ <u>R</u> efresh) <u>L</u> oad Driver				Drive option:	s (<u>a</u> dvanced)	
								Next	
Recent Tasks									×
Name	arget	Status	Details	Initiated by	Requested Start Ti	. 🗢 🛛 Start Time	e	Completed Time	
🖉 Power On virtual mach 🚦	🛍 win 7	Completed		root	2010-8-30 3:15:53	2010-8-3	0 3:15:53	2010-8-30 3:15:59	
🛛 🖄 Reconfigure virtual ma 👌	win 7	📀 Completed		root	2010-8-30 3:15:50	2010-8-3	0 3:15:50	2010-8-30 3:15:52	
🛛 🖄 Reconfigure virtual ma 🧯	win 7	Completed		root	2010-8-30 3:15:44	2010-8-3	0 3:15:44	2010-8-30 3:15:46	
Y Create virtual machine	192.168.0.109	Completed		root	2010-8-30 3:15:00	2010-8-3	0 3:15:00	2010-8-30 3:15:18	<u> </u>
💆 Tasks								Evaluation Mode: 5	B days remaining root //

After copying files, the system is completely installed on the VM.



Likewise, you may install Windows Server 2003, Windows XP, Vista and Windows Server 2008, or even any version of Linux as you wish.

Contact

Support:	<pre>support@sandeploy.com</pre>
Sales:	sales@sandeploy.com
Home Page:	http://www.sandeploy.com/
Product Page:	http://www.sandeploy.com/products.html

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