Restoring the Server to Bare Metal

Figure 19 below shows a virtual machine named Bare Metal System. As you can see, when we try to boot the system the boot fails because there is no operating system installed on the machine:



Figure 19: This bare metal system has no operating system installed

To launch the recovery process, we need to boot our bare metal system using Windows media. Since our system is a virtual machine, we simply attach an .iso image of Windows Server 2008 R2 installation media in the settings for the virtual machine and then restart the virtual machine. In a few seconds the Install Windows dialog comes up:

S 1	nstall Windows	_	_			
			2	13		
		Win	dows Server 2	008		
					10.0	
	Lang	uag <u>e</u> to install. Eng	lish		2	
	Time and co	irrency format: Eng	lish (United States)			
	Eryboard or	input method: US				
		your language and	other preferences an			
						Next
_			_		_	

Figure 20: Step 1 of restoring to bare metal

After clicking Next in the previous screen, we now select the Repair Your Computer option at the bottom left as shown here:



Figure 21: Step 2 of restoring to bare metal

In the System Recovery Options dialog, we select the "Restore your computer using a system image that you created earlier" option:



Figure 22: Step 3 of restoring to bare metal

When the Re-image Your Computer dialog appears, we click Cancel:



Figure 23: Step 4 of restoring to bare metal

Note:#

If the backup you were restoring from resided on a hard drive attached to the system (for example an external USB drive) this Re-image Your Computer dialog won't be displayed. Instead, you'll be taken directly to the next screen below where you will select the first option "Use the latest available system image (recommended)" and proceed with the restore process.

On the Select A System Image Backup page, make sure Select A System Image is selected and click Next as shown here:

	● <u>歳</u> う		
6	Re image your com	Select a system image backup This computer will be restored using the system image. Everything on this computer will be replaced with the information in the system image.	
		C Upe the latest available system image(recommended) Locabon: Date and time: Computer:	
		G gelect a system image	

Figure 24: Step 5 of restoring to bare metal

The next page should not show any backups available. The reason is because we've backed up our server to the network (to a file share on our host machine) and not to a local drive on the system or attached USB drive. If you had backed up to a local or attached drive instead of the network, you would continue the restore process starting at Figure 30 below.

On the page shown below, click Advanced:

File Action Media Ci	board Vew Help
	Re-image your computer Select the location of the backup for the computer you want to restore If the system image is on an external device, attach the device to this computer, and then dick Refresh.
	If the system image is on a DVD, insert the last DVD from the system image backup. Click Advanced to add a network location or install a driver for a backup device if it does not show up in the list below. Current time zone: GMT-8:00 Location Most recent system image Computer
	Advanced
	< gadt Next > Cancel
atus: Running	□ /\ &

Figure 25: Step 6 of restoring to bare metal

In the dialog that appears, select the "Search for a system image on the network" option as shown here:

Bare Metal Syste	em on localhost - Virtual Machine Connection
	Re-image your computer
	Select the location of the backup for the computer you want to restore If the system image is on an external device, attach the device to this computer, and then click Refresh.
	Re-image Your Computer
	Search for a system image on the network Connect to the network to find a system image that you want to restore.
	Install a driver Locate and install a driver for a device that is attached to the computer but is not in the list of available system images.
	Cancel
	Cancel
100000 000 0000	

Figure 26: Step 7 of restoring to bare metal

Note:

The test environment for this walkthrough has a DHCP server and this is how the Windows Recovery Environment is able to connect to the network share where the backup set is located.

In the Are You Sure dialog that appears next, click Yes:



Figure 27: Step 8 of restoring to bare metal

Note:

As the dialog above indicates, restoring a system from a backup stored on the network is not as secure as restoring the system from a local or attached drive, so take this into consideration when planning your disaster recover infrastructure for your servers!

Type the UNC path to where the backup is stored on the network:

** 0 0 0 0	
	Re-image your computer
	Select the location of the backup for the computer you want to restore If the system image is on an external device, attach the device to this computer, and then cick Refresh. If the system image is on a DND: insert the last DND from the system image hards on Chrk Re-image Your Computer The system image is on a DND: insert the last DND from the system image hards on Chrk Re-image Your Computer The system image is on a DND: insert the last DND from the system image hards on Chrk
8	Specify the location of the system image.
	Example: \\perver\share OK Cancel
Status: Running	⊐ ∩ 4

Figure 28: Step 9 of restoring to bare metal

Specify credentials needed to access the network share:



Figure 29: Step 10 of restoring to bare metal

Once the Windows Recovery Environment has connected to the network share you should see a list of available backup locations on the share. Select the one you want and click Next as shown here:

* • • • •	III II
	Re-image your computer Select the location of the backup for the computer you want to restore If the system image is on an external device, attach the device to this computer, and then click Refresh. If the system image is on a DVD, insert the last DVD from the system image backup. Click Advanced to add a network location or instal a driver for a backup device if it does not show up in the list below.
	Current time zone: GMT-8:00 Location Most recent system image Computer \\MV-1\Backups\ 1/25/2012 11:40:49 AM SEA-#S1
	< Back Next > Cancel
Status: Running	= na

Figure 30: Step 11 of restoring to bare metal

Now select the backup set you want to restore from:

💭 Re-image your computer	X	
Select the date and time of If more than one system ima restore, choose the most rec	system image to restore spe is available and you're not sure which one to cent one.	
Backups available for SEA-FS1 Current time zone: GMT-8:00	on (MV-1)Backups/	
Date and time	Drives in badup	
×		
	< Back Bext> Cancel	

Figure 31: Step 12 of restoring to bare metal

Clicking Next brings up the Choose Additional Restore Options page:



Figure 32: Step 13 of restoring to bare metal

If you click Advanced, you can see that the system will automatically restart once the restore process is finished and will also check the disk for errors. We'll leave both of these options selected:



Figure 33: Step 14 of restoring to bare metal

Clicking Next asks us to confirm our selections:



Figure 34: Step 15 of restoring to bare metal

Click Yes to confirm that YES I DEFINITELY WANT TO RESTORE FROM BACKUP:



Figure 35: Step 16 of restoring to bare metal

NOTE: Make sure the hard drive of the bare metal system you are restoring to is equal to or larger in size than the hard drive of the system that failed. If this is not so you will get an error message here saying that the restore failed.



Figure 36:

Once the restore to bare metal finishes and the machine reboots, we log on and verify that our recovered server has the same name as our original server (compare the figure below with Figure 1 at the beginning of this article):

Perform the following tasks to configure this server			Mindows Server	
		De la companya	Enterprise	
Provide Computer Information	1	Specifying computer	- Mamution	
Activate Windows	Product ID:			
E Set tree gave	Time Zone:	(UTC-08.05) Pacific Time (US & Canada)		
Carilgue petvolking	Local Area Connection 2			
Provide computer name and domain	Full Computer Name: Domain:	3EAF31 contous can contous can		
Opdate This Server		🚺 Updating your Wind	tive server	
Republic substance updating and feedback	Updates: Feedback	Initial updates automatically using Windows Update Windows Emr. Reporting off Not participating in Culturies Experience Reportement Program		
Countries and ristal updates	Checked for Updates: Installed Updates:	Never - Never		
O Customize This Server		Gutogiáng your se	tver -	
to bet roles	Roles:	Pile Services		
Add (natures	Features	Wirdows Server Backup Features		
Genetice Remote Designation	Remote Desktop	Dusbed		
Configure Windows Frewall	Firewalk	Domain: On		
Do not show the window at logen			One	

Figure 37 : The restore is finished.