IM L05 Hands-on Lab:

Backup Exec 2012 Simplified Disaster Recovery

Lab Description:	Backup Exec 2012 Simplified Disaster Recovery Hands-on Lab This hands-on lab will introduce you to the integrated bare metal and dissimilar hardware recovery features of Backup Exec 2012. No prerequisites are required to successfully complete the lab exercises below.

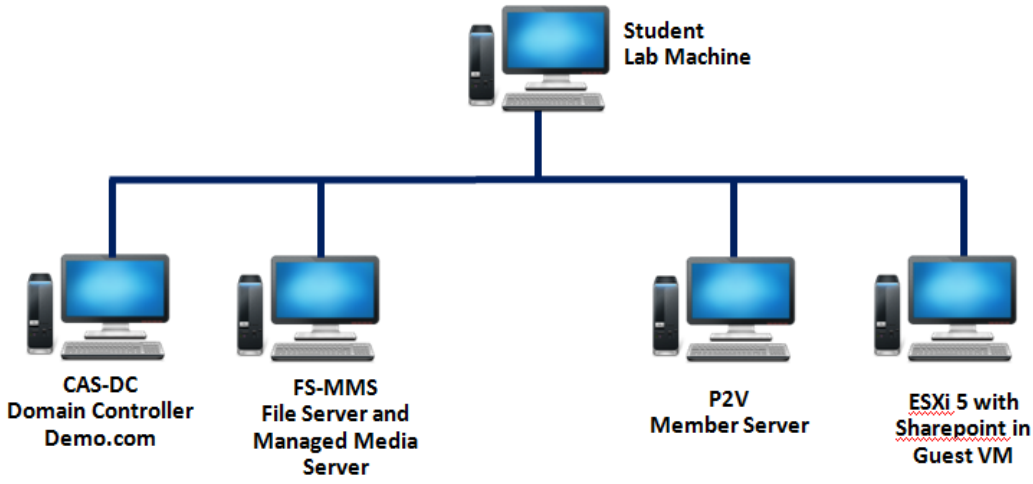
This lab will help you:	▪ Describe the new bare metal and dissimilar hardware recovery features included in Backup Exec 2012 ▪ Understand the basic bare metal recovery process and the steps involved ▪ Perform a bare metal recovery of a server using the Backup Exec 2012 recovery disk

Lab Notes:	▪ A brief presentation will introduce this lab session and discuss key concepts. ▪ Feel free to perform this lab at your own pace. ▪ Be sure to ask your instructor(s) any questions you may have. ▪ Thank you for coming to our lab session.

Lab Configuration

Virtual Machine Configuration

The virtual environment that we will use for the Backup Exec 2012 Simplified Disaster Recovery hands-on lab consists of five virtual machines as shown in the diagram below:



Note: The virtual machines that make up our lab environment are made available to lab attendees strictly for the purposes of the Backup Exec 2012 Simplified Disaster Recovery hands-on lab session and may not be copied or transferred to any other location or portable device.

For reference, infrastructure information for each of the virtual machines in our lab, such as host name and IP address, can be found in the chart below. Feel free to refer to this chart at any time while moving through the lab exercises outlined in this document.

Virtual Machine Name	Guest Host Name	•Purpose	IP Address
1	CAS-DC	•Domain Controller •Backup Exec Central Administration Server	192.168.1.11
2	FS-MMS	•File Server •Backup Exec Managed Server	192.168.1.12
3	P2V	•File Server •Backup Exec Agent for Windows	192.168.1.13
4	ESXi 5	•VMware ESXi version 5.0	192.168.1.14
5	Sharepoint	•Sharepoint Server •Backup Exec Agent for Windows	192168.1.15

Virtual Machine Account Information

For reference, username and password information for each of the virtual machines in our lab can be found in the chart below. Feel free to refer to this chart at any time while moving through the lab exercises outlined in this document.

Backup Exec CAS Server

Name	Username	Password
CAS-DC.DEMO.COM FS-MMS.DEMO.COM P2V.DEMO.COM SHAREPOINT.DEMO.COM	administrator	symc4now

VMware ESX

Name	Username	Password
ESXv5.DEMO.COM	Root	symc4now

Overview: Simplified Disaster Recovery

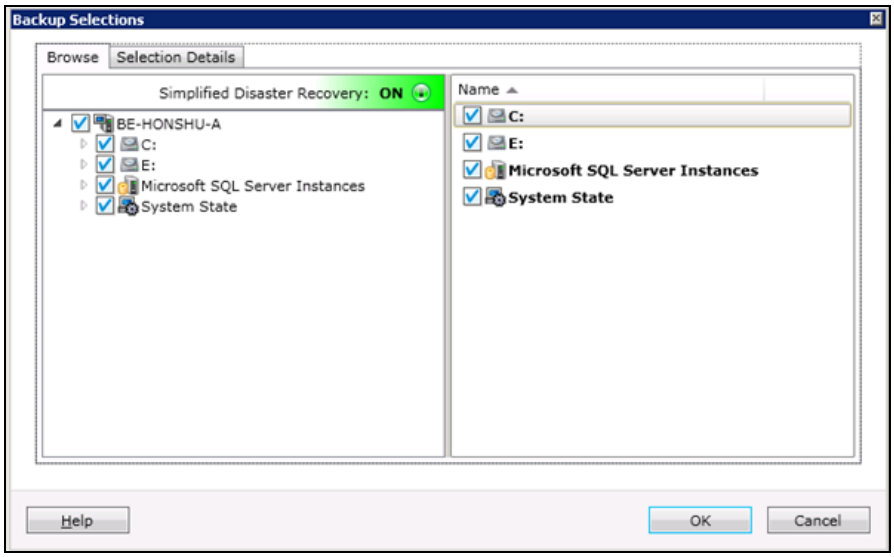
Simplified Disaster Recovery

Simplified Disaster Recovery (SDR) is the technology used by the new Backup Exec 2012 product to enable advanced recovery capabilities for physical servers. These capabilities include the following:

Recovery Features Enabled by Simplified Disaster Recovery	
Bare Metal Recovery	✓
Dissimilar Hardware Recovery	✓
On-line Server Recovery	✓
Physical to Virtual Conversions (P2V)	✓
Backup to Virtual (B2V)	✓
Point in Time (Ad Hoc) Conversion	✓

Enabling Simplified Disaster Recovery

Within Backup Exec 2012, a backup workflow can be identified as SDR-enabled by the presence of the following ribbon, located at the top of the 'Browse' tab in the 'Backup Selections' section when creating a backup workflow, as in the screenshot below:



Elements Captured by Simplified Disaster Recovery

SDR technology captures critical system elements required for performing bare metal and dissimilar hardware recovery operations, as well as virtual conversion operations. Some of these critical elements include the following:

- System volume
- Boot volume
- Services volumes

- System state components

By default, every new backup job for a protected physical server is SDR-enabled. If desired, SDR protection can be disabled by unselecting the SDR feature directly or by unselecting critical system components from a backup workflow that are required for SDR operations.

The Backup Exec 2012 Recovery Disk

The Backup Exec 2012 recovery disk is the tool used by administrators to perform bare metal and dissimilar hardware recovery operations. The Backup Exec 2012 recovery disk is based on the powerful Microsoft WinPE operating system, and includes a robust driver database leveraged for both runtime tasks and dissimilar hardware recovery operations.

Recovery Disk Versions

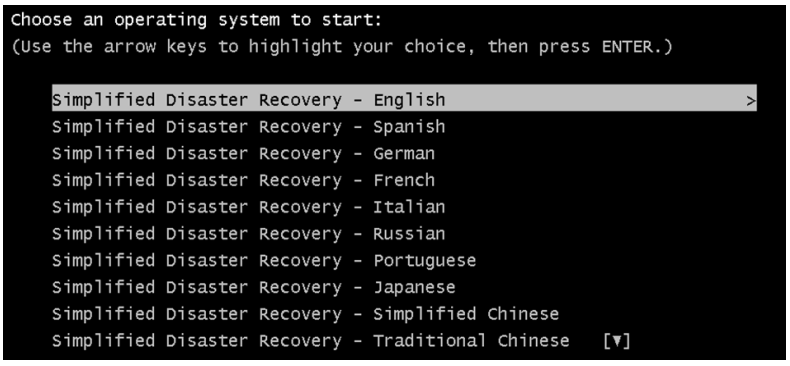
Two basic versions of the Backup Exec 2012 recovery disk are available. They are:

- 32-bit
- 64-bit

These two versions of the recovery disk are included, on separate DVDs, with Backup Exec 2012. Depending on the platform being restored, the correct version of the recovery disk should be used. Each recovery disk boots and operates in an identical manner. When creating a custom version of the recovery disk, the corresponding source version of the default recovery disk must be used.

Recovery Disk Language Support

The recovery disk supports all languages supported by Backup Exec 2012. During the recovery disk boot process, a language selection screen is displayed from which the administrator can select a language version to use:



After a language has been selected, the recovery disk boot process continues and the corresponding language-version of the recovery environment is loaded.

Recovery Environment Interface

After entering the recovery environment, the administrator can navigate between three tabs:

- **Recovery** – "Home" screen of the recovery environment, used to launch recovery wizard and perform bare metal and dissimilar hardware recovery operations

- **Network** – Used to manage the server's network configuration while in the recovery environment, such as IP address settings

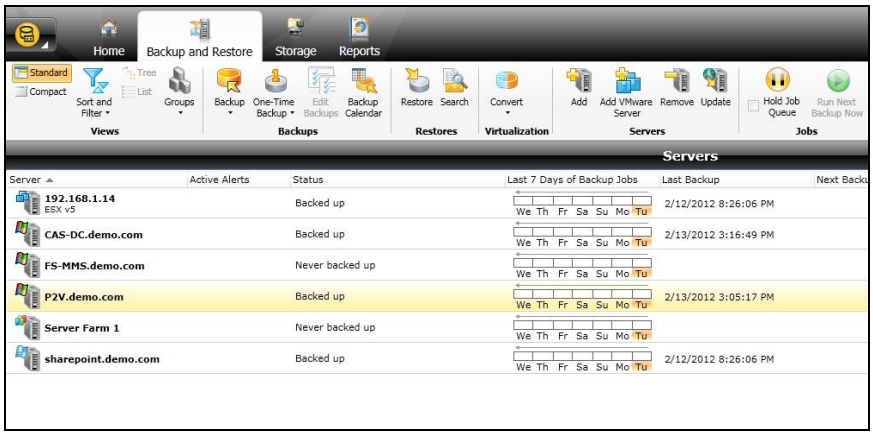
- **Utilities** – Used for additional recovery environment operations, such as execution of the support tool, dynamic loading of drivers, and accessing a command prompt


Simplified Disaster Recovery Disk
Simplified Disaster Recovery 2012
Symantec.
Recovery
Network
Utilities
Support Utilities
Gather Log Files for Symantec Technical Support
View Log File
Start Command Prompt
Edit the Windows boot.ini file
Load a Driver
Select Keyboard
(UTC-08:00) Pacific Time (US & Canada)
Help
Exit

Lab Exercise 1: Create an SDR-enabled Backup of Server "P2V"

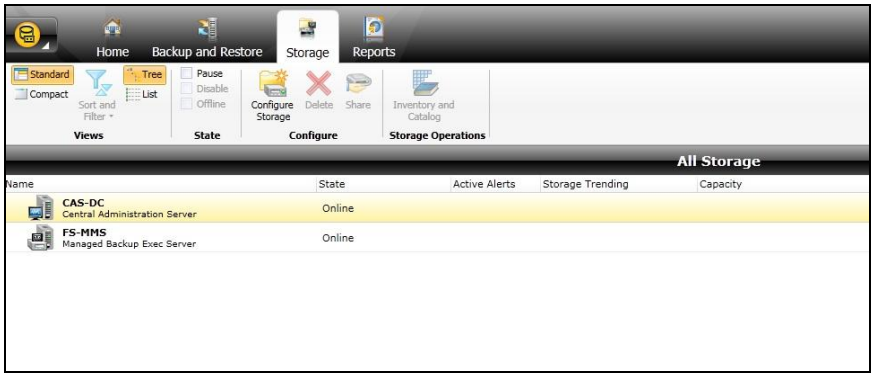
Step 1: Locate Server P2V in the Server List

- In VMware Workstation, navigate to the CAS-DC virtual machine console.
- If necessary, log onto the CAS-DC server (username: administrator, password: symc4now).
- On the CAS-DC virtual machine, launch the Backup Exec Central Administration Server console.
- Notice the system "P2V" in the server list; this is the server that is the focus of today's lab.



Step 2: Create a Disk Storage Device on the Backup Exec Central Administration Server

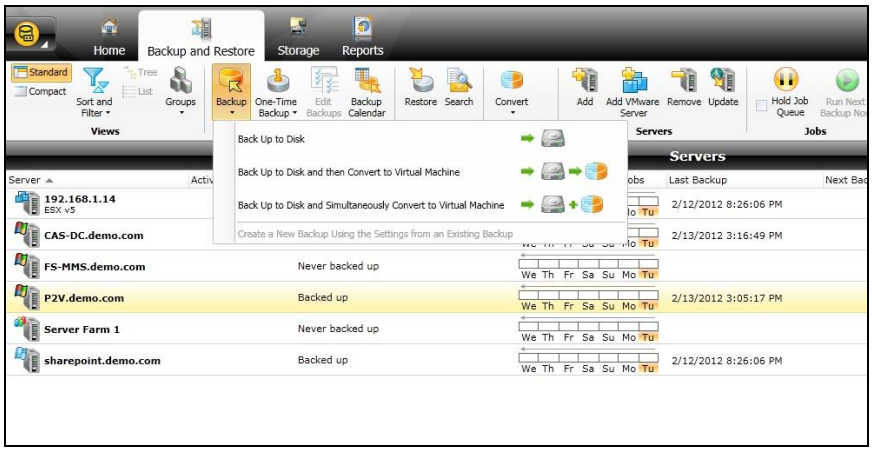
- Select the 'Storage' tab in the Backup Exec 2012 console.



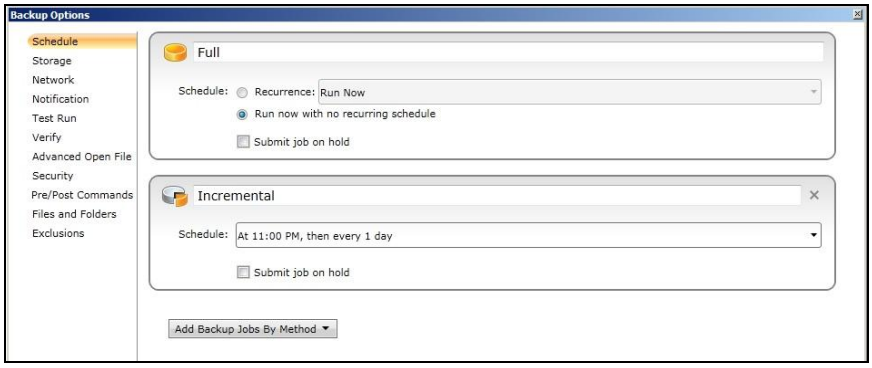
- In the tob ribbon, select the option to ‘Configure Storage’.
- When prompted, select to create a storage device on the ‘CAS-DC’ server (this server).
- Select ‘Disk-based Storage’.
- Select Disk Storage.
- Enter a name and description for your disk storage device.
- Select a local path for the disk storage device on volume E:\ (should be the default).
- Select Finish.

Step 3: Create a Full Backup of Server “P2V”

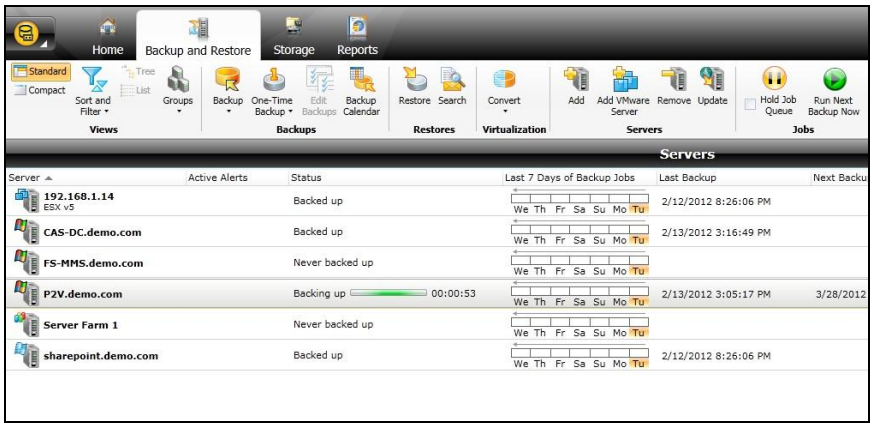
- Navigate back to the ‘Backup and Restore’ tab.
- In the top ribbon, select the option for ‘Backup’ and then ‘Backup to Disk’.



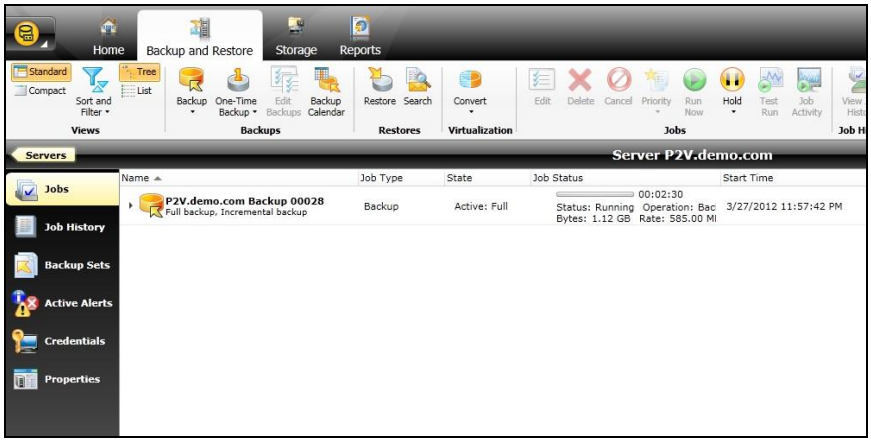
- In the lower right-hand corner, select the ‘Edit’ button.
- Select the option to ‘Run now with no recurring schedule’.



- The status of the “P2V” server should change to ‘Backing up’ in the ‘Backup and Restore’ tab.



- You can view additional details on backup progresss by right-clicking the “P2V” server and selecting ‘Details’.



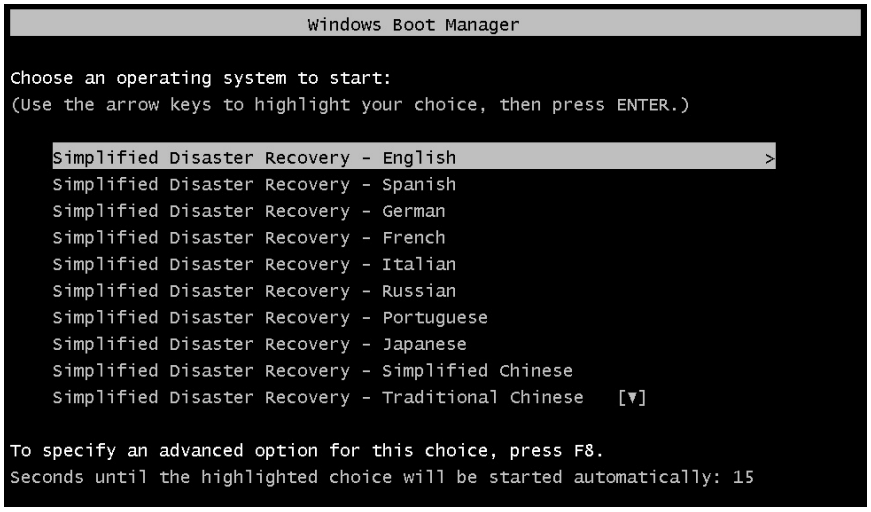
- The backup operation should take approximately 5 minutes to complete.

Lab Exercise 2: Prepare for Recovery

Step 1: Boot the P2V Virtual Machine with the Backup Exec 2012 Recovery Disk

- In VMware Workstation, navigate to the console of the P2V virtual machine.
- Restart the P2V virtual machine using the standard restart method within Windows.
- As the virtual machine reboots, press the 'ESC' key to access the system boot menu.
- Select the option to boot from the CD-ROM device.

  Note: An ISO file of the 32-bit recovery disk should already be mounted to the virtual CD-ROM device for the virtual machine.
- When the message "Press any key to boom from CD…" appears, quickly press a keyboard key – such as the spacebar – to continue the CD-ROM boot process.
- A language menu appears. Select your desired language from the list.



- Aaccept the license agreement to continue.
- You should now see the Simplified Disaster Recovery main menu.

Step 2: Configure Recovery Environment IP Address

- Select the 'Network' tab on the left side of the screen.

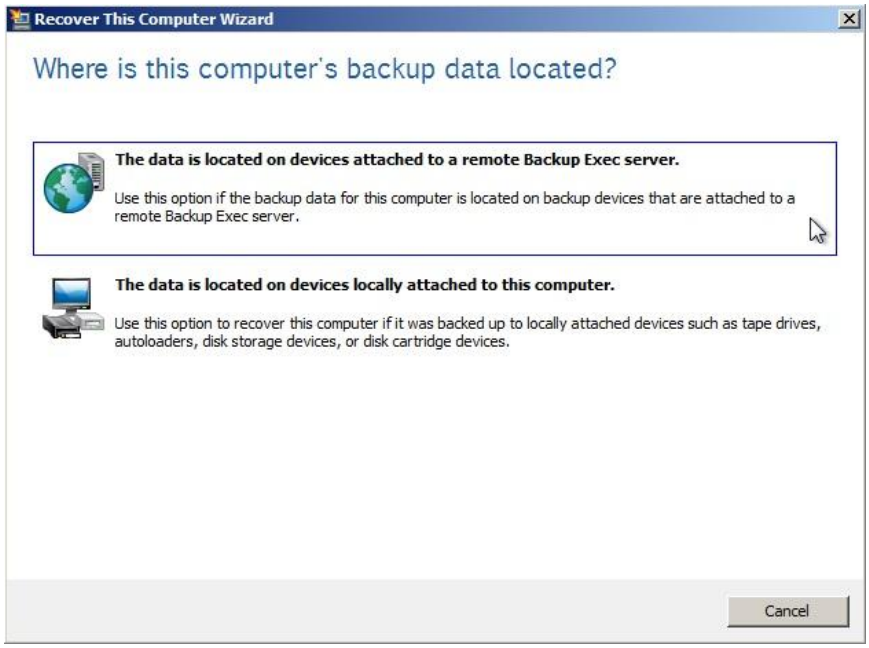
- Select the option to 'Configure Network Connection Settings'.
- Configure the network adapter settings to use the IP address 192.168.1.13, to use the subnet mask 255.255.255.0, and the default gateway of 192.168.1.11. If you receive an error after entering these values, it can be ignored.


Network Adapter Configuration
Network Adapters:
Intel(R) PRO/1000 MT Network Connection
IP Address
Obtain an IP address automatically
Use the following IP address:
IP Address:
192 . 168 . 1 . 13
Subnet Mask:
255 . 255 . 255 . 0
Default Gateway:
0 . 0 . 0 . 0
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred:
Alternate:
Configure IPv6 >>
OK
Cancel

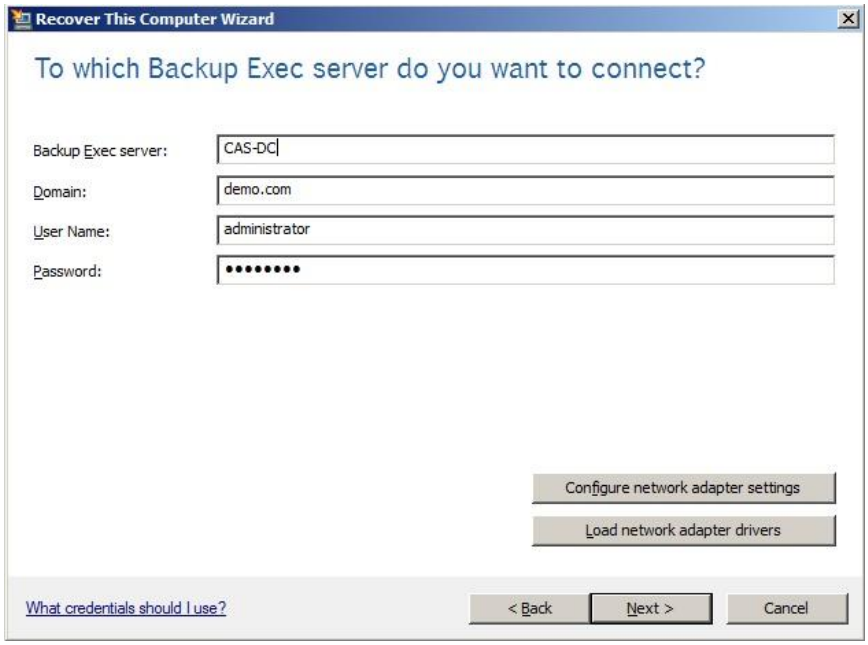
Lab Exercise 3: Perform a Bare Metal Recovery of Server “P2V”

Step 1: Complete the ‘Recover This Computer’ Wizard

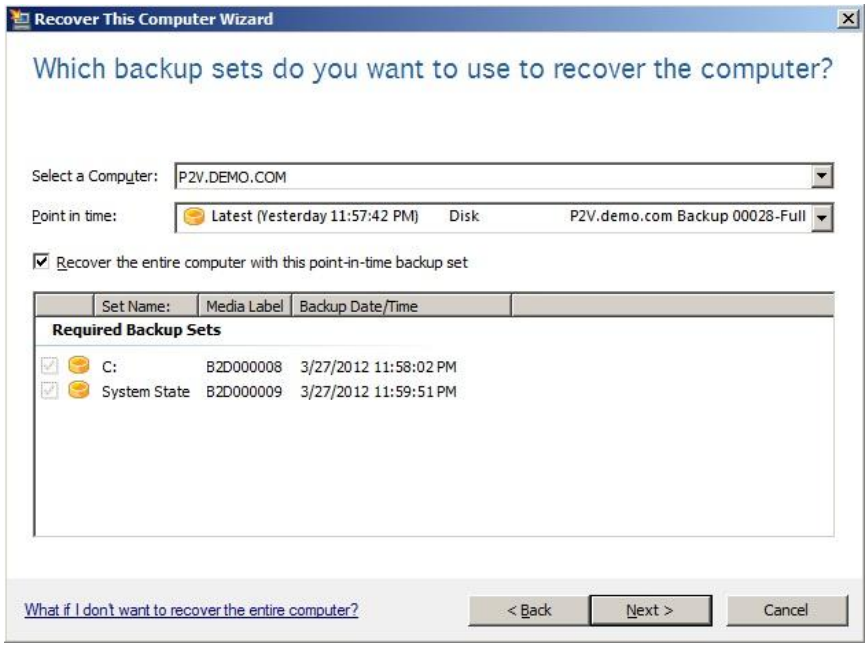
- Navigate back to the Simplified Disaster Recovery main screen by selecting the ‘Recovery’ tab on the left.
- Select the option to ‘Recover This Computer’.
- Select the option ‘The data is located on devices attached to a remote Backup Exec server.’



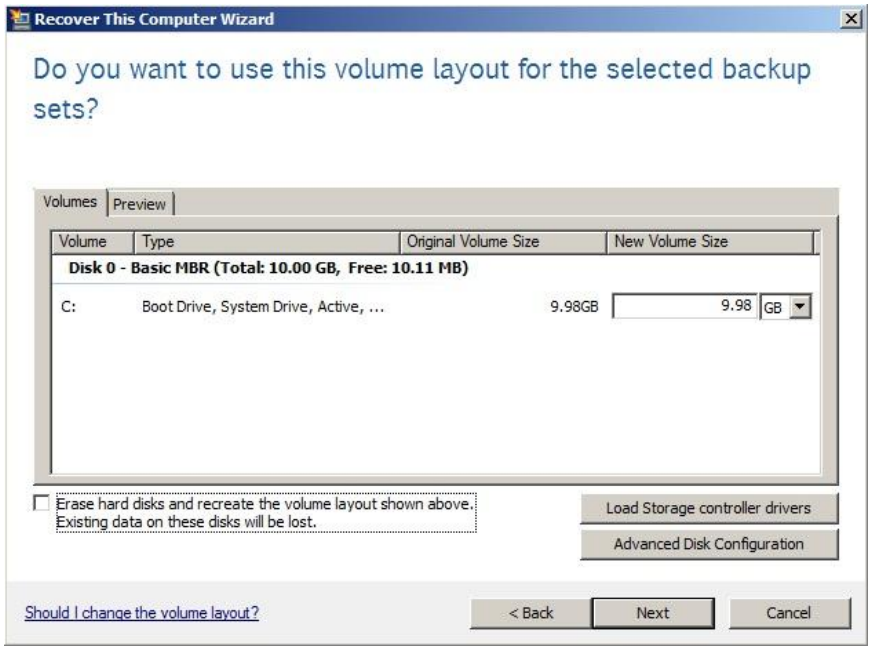
- The Backup Exec server we need to connect to is “CAS-DC”. The domain is “demo.com”. The user name is “administrator”. The password is “symc4now”.



- Select the latest backup set available for server “P2V” (should be the default selection).



- You may change the target volume layout, or select the available defaults.



- Select the option to 'Recover'.
- The recovery process should take approximatel 10 minutes.

Step 2: Monitor the Boot Progress of the "P2V" Server After Recovery

- After the recovery process has completed, the "P2V" server can be rebooted.
- During the reboot, allow the server to boot normally into Windows.
- A few automated driver installation processes will run to ensure additional drivers are loaded for the system, such as for the mouse, keyboard, etc.
- During the boot process, you may be prompted to rejoin the domain DEMO.COM. Use the username "administrator" and the password "symc4now" to add the server back to the domain.
- Recovery of server "P2V" is now complete.

Congratulations! You have successfully completed the Backup Exec 2012 Simplified Disaster Recovery hands-on lab. If you have finished early, feel free to take advantage of the extra time by trying other features and capabilities of Backup Exec 2012 in the lab environment.

Please feel free to take this lab guide with you as you leave the lab area, if you desire.