

# **ITAS 233 Project 01**

## **Backup Exec**

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# Table of Contents

<b>INTRODUCTION .....</b>	<b>3</b>
<b>RESPONSIBILITY .....</b>	<b>3</b>
<b>PART 1: Backing up the server control.....</b>	<b>3</b>
Setting up the backup Exec ISO .....	3
Setting up the backup server.....	4
Installation of the backup veritas.....	5
Adding a storage in the backup Exec .....	6
Adding the name of the Servers in the DNS server .....	7
Adding the Server DC1 into the backup esxi server .....	8
Backing up the domain controller.....	9
Restoring the files into the Server DC1 .....	12
Restoring the active directory into the Server DC1.....	14
<b>PART 2: Serer Core Backup .....</b>	<b>16</b>
Installation of the server core .....	16
Connect to the ESXI server .....	17
Backing up the virtual-image in the ESXI server .....	18
Restoring the server core from the ESXI server .....	19
<b>PART 3: Simplified Disaster Recovery Disk.....</b>	<b>20</b>
<b>CONCLUSION .....</b>	<b>21</b>
<b>REFERENCE .....</b>	<b>22</b>

## **Introduction**

Veritas Backup Exec is a very popular backup system for the windows server. It is a simple backup software which can backup all your data for the virtual, physical and multi-cloud environment. This software can also backup the virtual machine in the ESXI server such as v-sphere and Hyper-V. This can also make simple disaster recovery disk for the serve in case of disaster situation.

## **Responsibility**

The Project is completed as an individual project. Basically, we install, configure and veritas backup server using a backup server. We install veritas backup exec on the backup server. Then we must restore the directory files and the active directory users back into the domain controller. We also make virtual based image backup of the server after connecting to the esxi server. We also make Simple Disaster Recovery Disk (SDR) for the server Domain controller.

## **PART 1: Backing up the Server Domain Controller**

In this part, we will be setting up the backup server as well as backing up the Server DC1 using the veritas Backup Server software. In order to complete this part, we not only have to recover the directory files that have been create but also the active directory that have been created. However, if you want to recover the active directory users, we needed to reboot the server that need to be restarted in the Directory Service Repair Mode.

### **Setting up the Veritas backup Exec iso**

You must download the veritas backup exec software and register from this link <https://www.veritas.com/form/trialware/backup-exec> .

Step 1: Download the backup exec software from veritas website is the host computer.

**Note:** This is free version and you have to make a account in the veritas website in order to download the software

Step 2: Extract the rar to make the iso file.

Step 3: Upload the iso file into the data storage001.

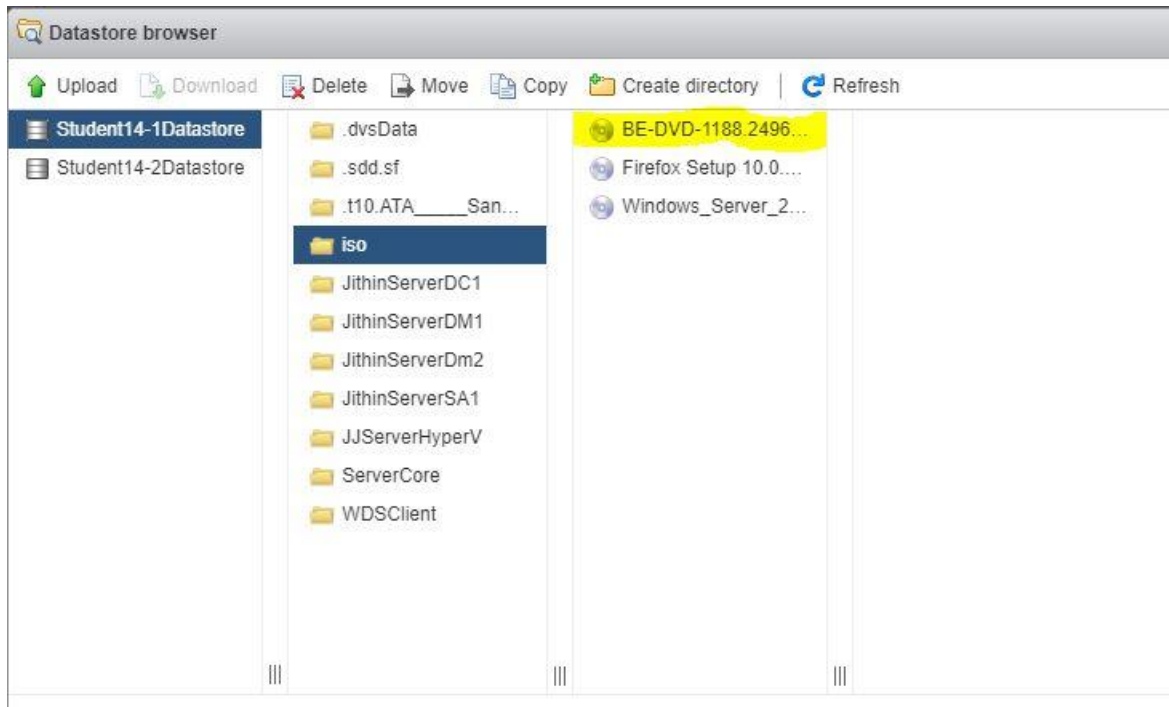


Figure 1: It represent the datastorage after uplloading the iso

## **Setting up the Backup Server**

Step 1: make a new virtual machine esxi with windows server 2016 installed.

**Note: The hard disk should be thin provisioned as well as new hard drive for the backup drive of 100gb**

### **Specification**

**Cpu :** 2 Core

**Memory :** 4 Gb

2 Hard disk with 100 gb(**Thin Provisioned**).

**Network Adapter 1: JJ Internal vm network**

**IP addr :** 192.168.0.7

**Subnet :**255.255.255.0

**DNS:** 192.168.0.1

**Network Adapter 2: JJ private vm network**

**IP addr :** 192.168.1.7

**Subnet :255.255.255.0**

**Network Adapter 3: Connect vm here.**

**IP addr : DHCP**

**Note :** Turn of the registriation of the dns from this nic in the dns **advanced settings of the Tcp/ipv4.**

**Drive 1:** Windows server 2016 iso

**Drive 2:** Veritas Backup Exec iso



*Figure 2: Backup server*

Step 2: Make sure that both the hard disk are thin provisioned.

Step 3: Add a new cd drive into the Backup server with iso of **Backup veritas iso.**

Step 4: Configuring the ip address of the dns server according to the above portfolio.

Step 5: Change the domain from the workgroup into the domain controlled by the **jithinjose.com**

### **Installation of the backup veritas**

Step 1: Load the setup from the CD drive.

Step 2: It is always good to make a pre-installation environment check before you install the software on the left tab as shown in the picture bellow.



Figure 3: The pre-installation check before

Step 3: On Installation tab, click Backup Exec option.

Step 4: Installation Type should be custom.

Step 5: Menu tab, choose the backup exec software

Step 6: On licence tab, just click on next

Step 7 : On configure, choose the default settings

Step 8: In Service Account, type the user name and password of the computer

Step 9: Choose express option sql server option.

Step 10: Make a review and finish the installation.

### **Adding a Storage pool in the Backup exec**

Step 1: Go the storage menu in the backup exec server.

Step 2: Click on the configure storage, Choose Disk – Based Storage.

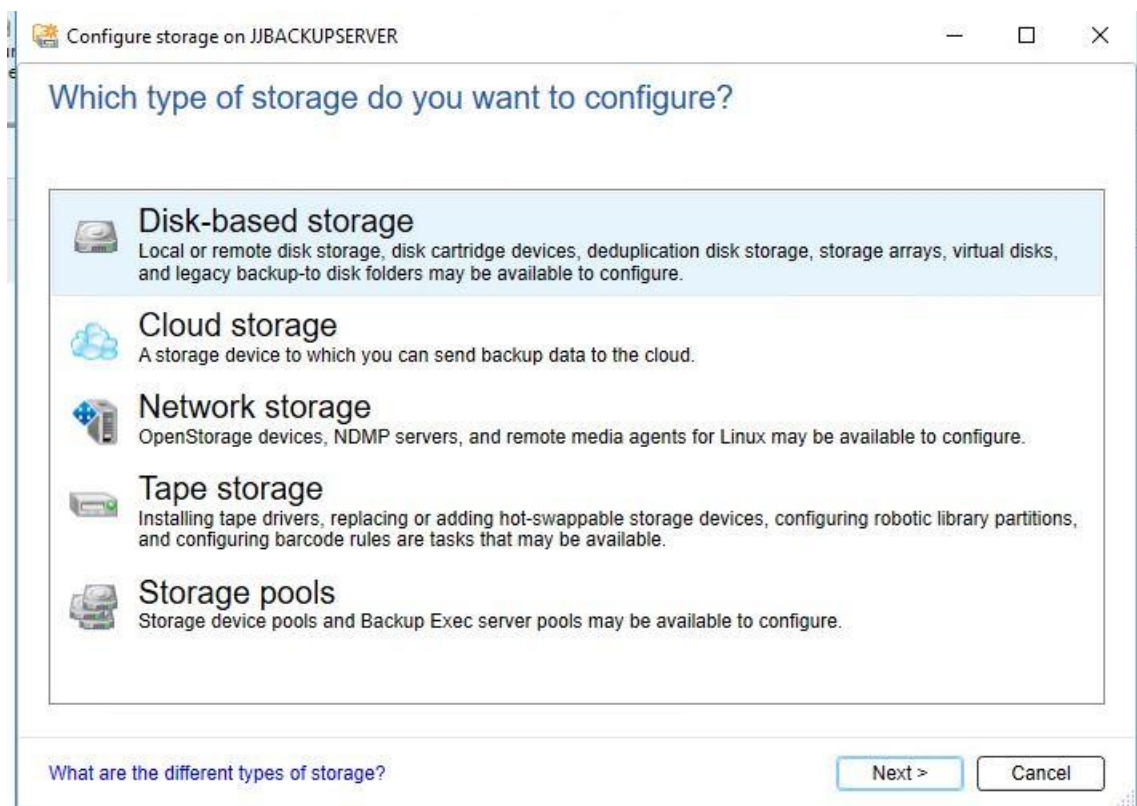


Figure 4: Creating a disk based storage on the backup exec

Step 3: Choose the Disk Storage and give a name for the storage in the next options.

Step 4: Choose the drive other than the c: drive in the next option.

Step 5: Make the default concurrent write operations default.

### **Adding the name of the servers in the DNS of the domain controller**

Step 1: Go the DNS mmc in the **Domain Controller**.

Step 2: Add a new pool for all the server with their server name and the IP address.

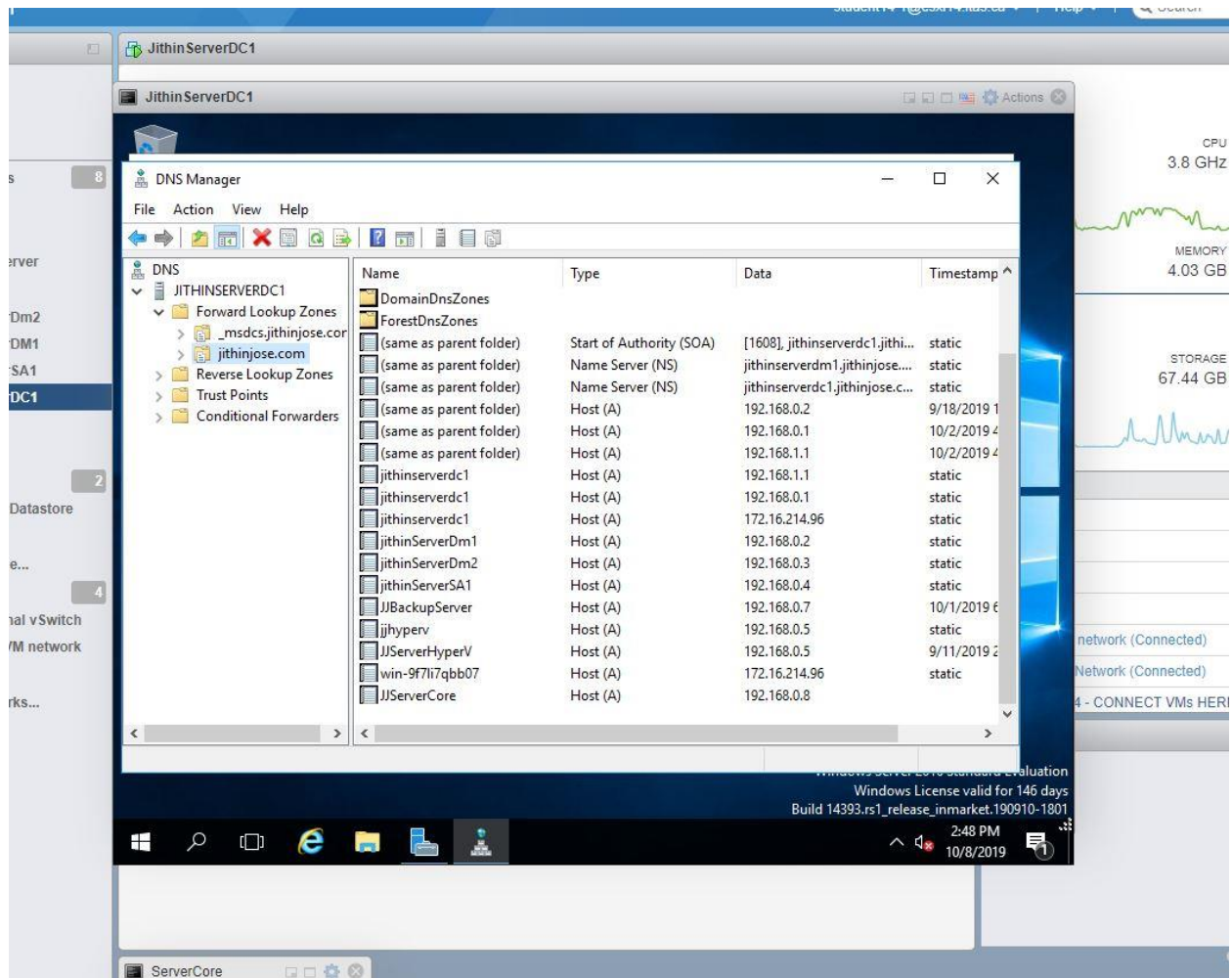


Figure 5 : Adding a dns name for all the servers in the dns

## Adding a Domain Controller in the backup exec sever

Step 1: In the server and virtual host , click on the add server options.

Step 2: Choose **Microsoft Windows Computers and servers**, click next.

Step 3: Establish a trust between the connection.

Step 4: Type the name of the server like the name given in the DNS.

Step 5: In the logon account information, make a credential for the administrator with the password of the domain controller, Click NEXT.

Step 6: Choose the upgrade option and click next to install backup exec on the server.

**Note:** It will only install the backup in the server only if the credentials are right.



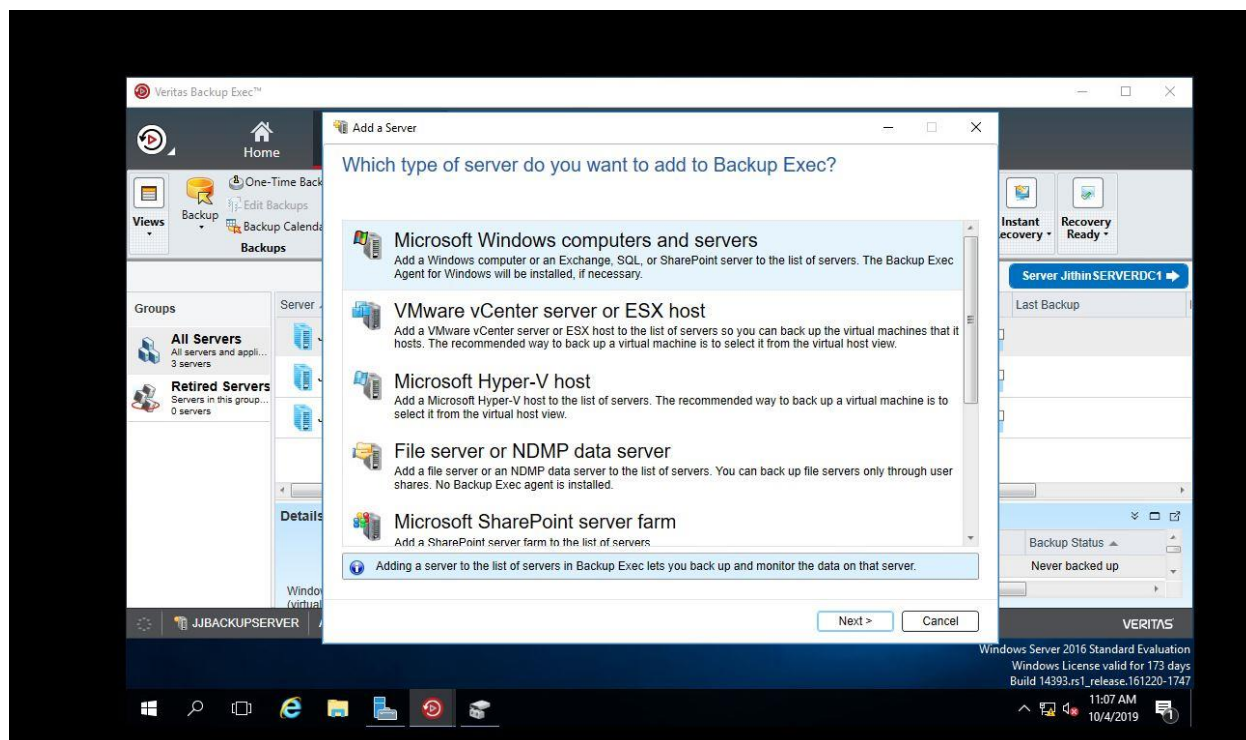


Figure 6: Adding a server into the backup exec .

## Backing up the Domain Controller.

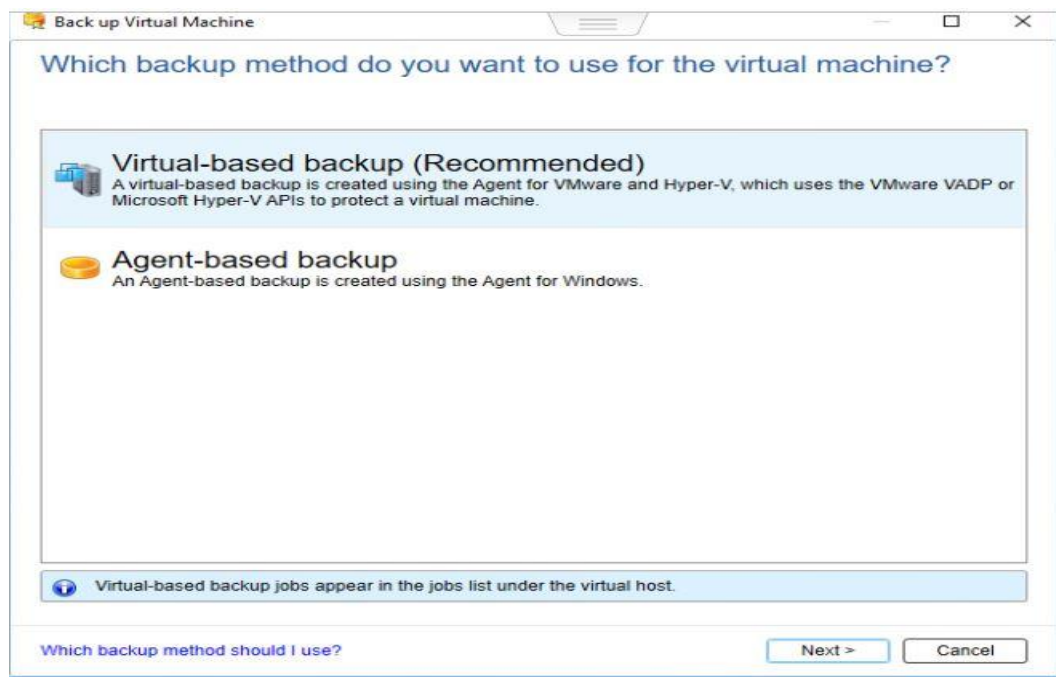


Figure 7: Agent BAsed Backup

Step 1: Always Establish a trust between the server before you backup the server.

Step 2: Choose backup option from the tool bar.

Step 3: From there, choose backup to the disk .

Step 4: Choose the agent-based backup option from the menu, Click Next.

Step 5: You will get a screen as shown bellow.

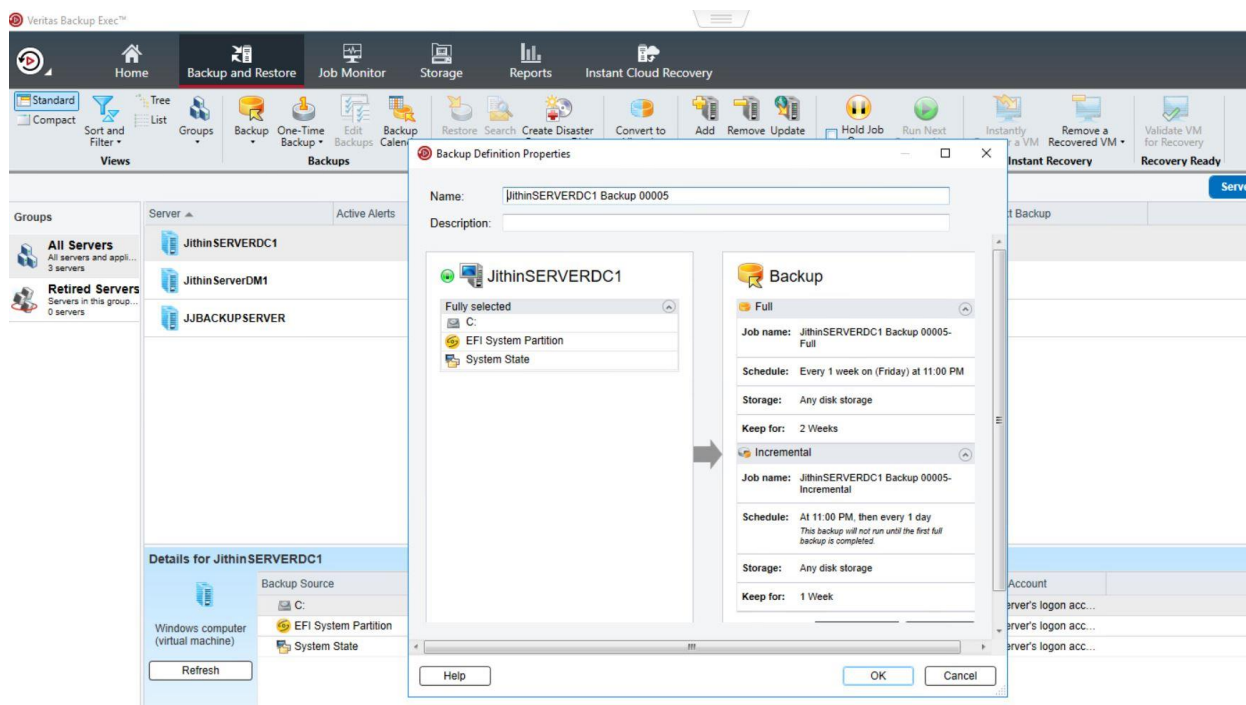


Figure 8: Backup schedule settings.

Step 6: Under the JithinServerDC1 menu, You could see the test/edit credentials button, make sure that all the credentials given are right. If the credentials are right you get a success screen as shown bellow:-

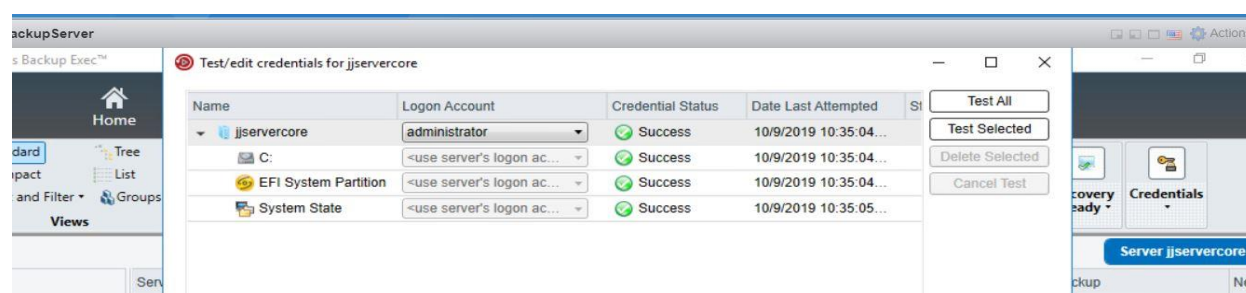


Figure 9: Testing the credentials of the backup server

Step 7: under the backup meny on the right-hand side, click the edit option to see the further details about the backup schedule and backup options.

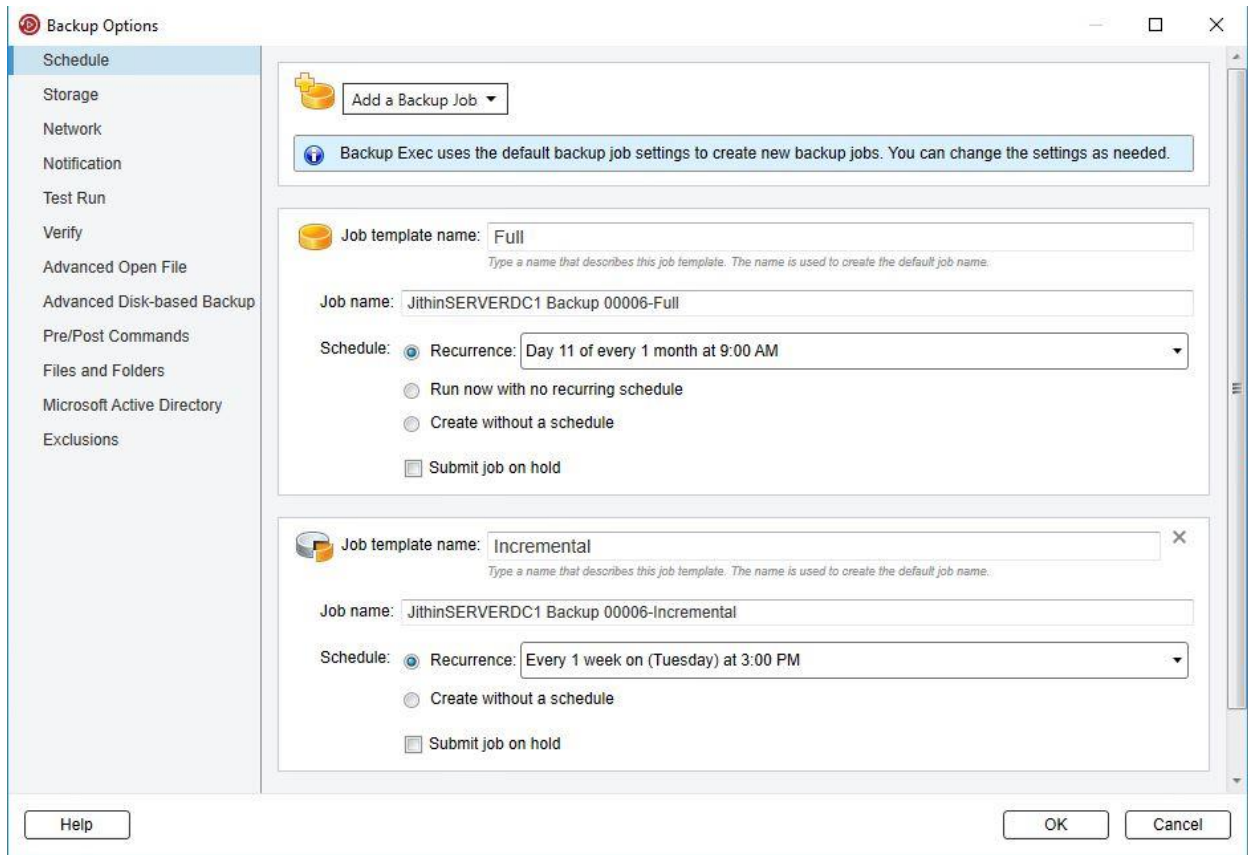


Figure 10: Backup option of the server

**Note:** From this option menu, you could change all the schedule of the full and incremental backup. As well as there is different options for the making a test run , verification as well can keep the restriction for the files which are not needed in the backup.

Step 8: My schedule are accordingly as shown bellow:-

- Full backup on every month
- Incremental backup on one of the days in the week.

Step 9: Run a full backup as well as incremental backup of the files by choosing run option when you **right-click** the server option in the backup server.

## Restoring the files into the Domain Controller.

Step 1: Make some files in the Domain Controller as shown bellow:-

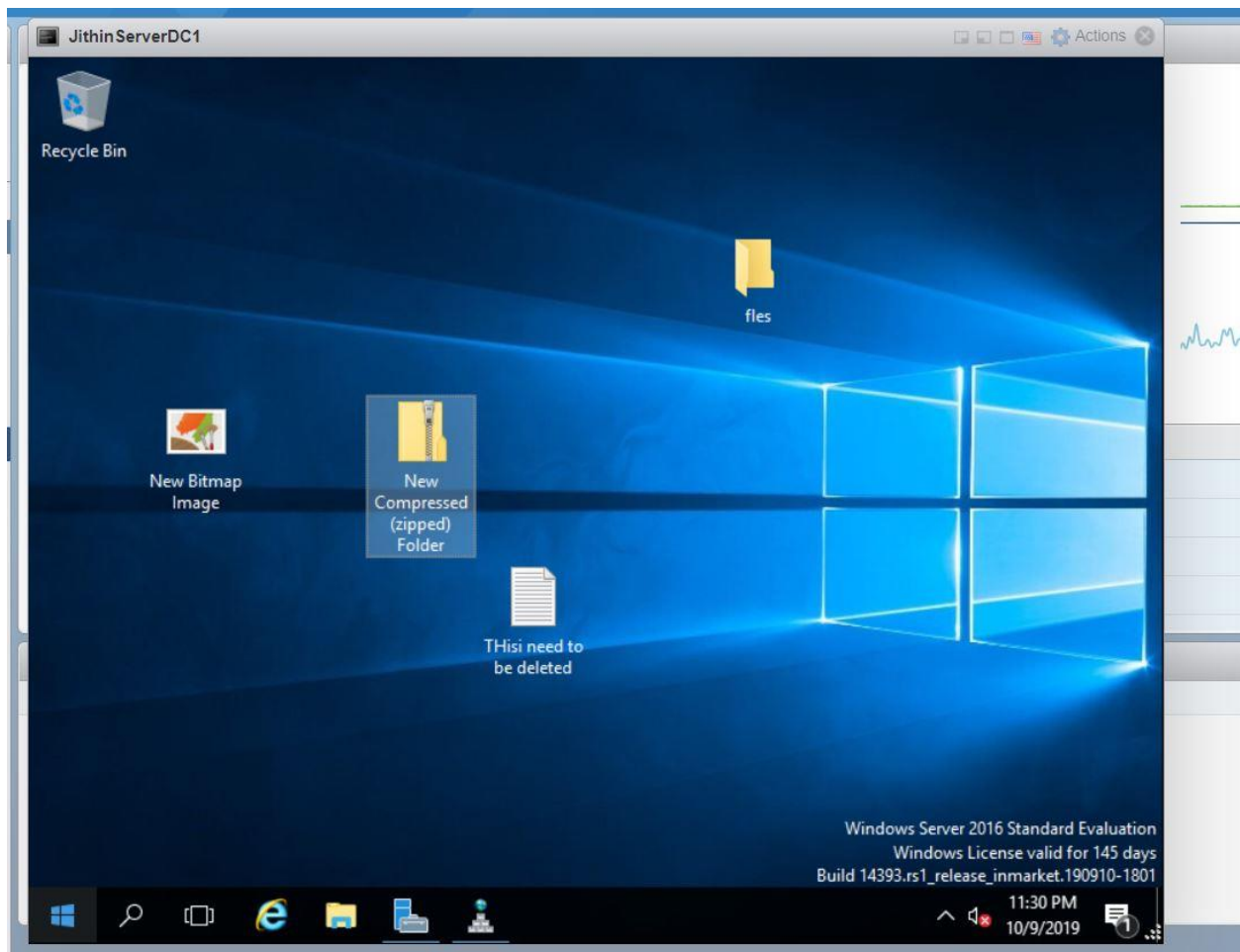


Figure 11: Making a new files in the Domain Controller.

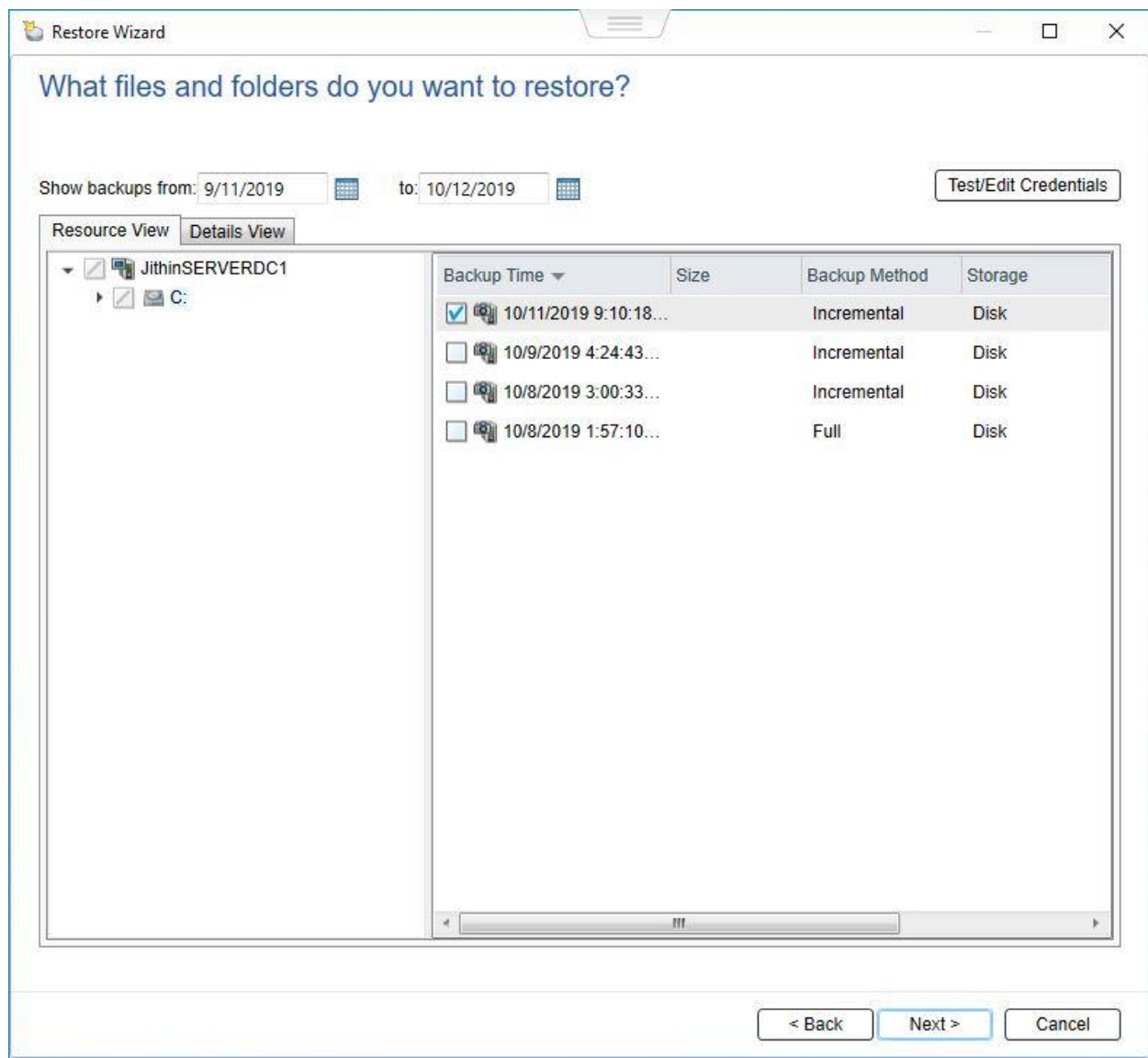
Step 2: Run an incremental backup after making a file inside the domain controller.

Step 3: Delete all the files that have created in the domain controller.

Step 4: Click on the restore option from the backup and restore option.

Step 5: Choose **files, folder and volumes** , click Next.

Step 6: Choose the File and folder from the backup set.



Step 7: To the original location

Step 8: Choose all the default options and click next

Step 9: Type the name for the restore that you wanted to create.

Step 10: You will get a confirmation screen at the end of the slide which is similar as shown bellow:-

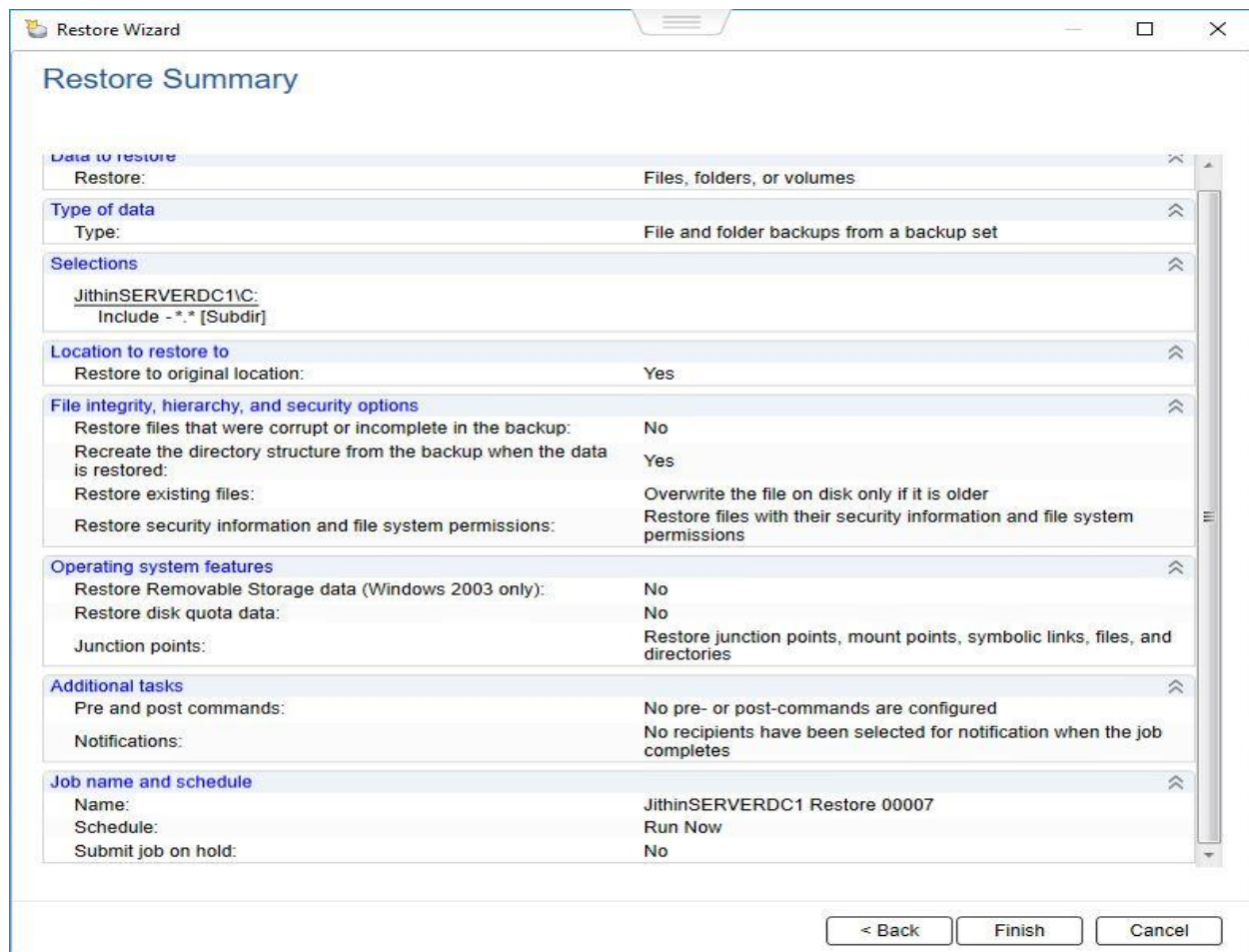


Figure 12: Restore Summary Page

Step 10: Click Finish, You will be able to see the restored files in the domain controller.

## **Restoring the Active Directory users into the Domain Controller.**

Step 1: Make a different user in the Domain Controller.

Step 2: Make an incremental backup on the veritas backup exec.

Step 3: Delete all the active directory users in the Server DD1.





Figure 13: Adding new users in the active directory.

Step 2: Make an incremental backup of the domain controller.

Step 3: Delete all the users that have been created in the active directory.

Step 5: Login the Server DC1 in the Directory Service Repair mode by restarting the computer by holding the **shift key** to restore the active directory.

Step 6: If you are not able to login into the server in the DSRM mode, in normal mode.

#### In command prompt:

Type : ntdsutil

Set dsrm password

Reset password on server (**server name**).

Note: To get the name of the server , type hostname in the **command prompt**.

Type the password and confirm the password.

Quit from the DSRM server.

Step 7: This connect to the server and connects to the server.

Step 8: Run the incremental backup restore.

Step 9: This restores the files inside the active directory and make the users back to the active directory.

## Part 2: Server Core Backup

### Installation of the server core

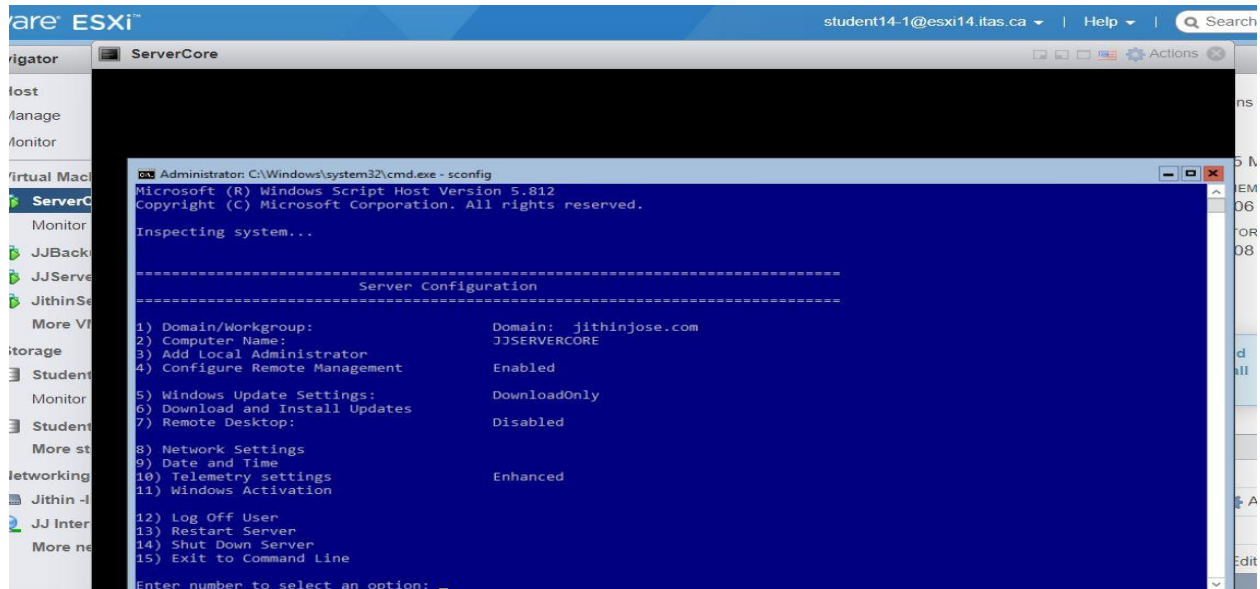


Figure 14: Server core after installation.

Step 1: After the installation of the server core.

Step 2: Set a password for the administrator and you will be move to the default screen of the command prompt.

Step 3: Type sconfig, type 8 for the network settings

Step 4: Configure the ip address for the internal and private network.

#### Internal IP address

IP Address: 192.168.0.8

Subnet: 255.255.255.0

Gateway: 192.168.0.250

DNS: 192.168.0.1

#### Private IP address

IP Address: 192.168.1.8

Subnet: 255.255.255.0

Step 5: Change the name of the computer using the **sconfig** option

Step 6: Join the domain controller using the number 1 option.

Step 7: Access the power shell in the command prompt using the **"powershell"** command.



## Adding a firewall rule in the server core to allow the backup exec server to run the backup

Set a firewall rule in the jjserver core

### Netsh firewall set service RemoteAdmin enable

**Note:** The above firewall command is required in order to add the server into the backup server.

## Connect to the Esxi Server

In order to connect to the server, make sure that nic is added to the to he backup server with the nic that named “**Students are not allowed here**”.

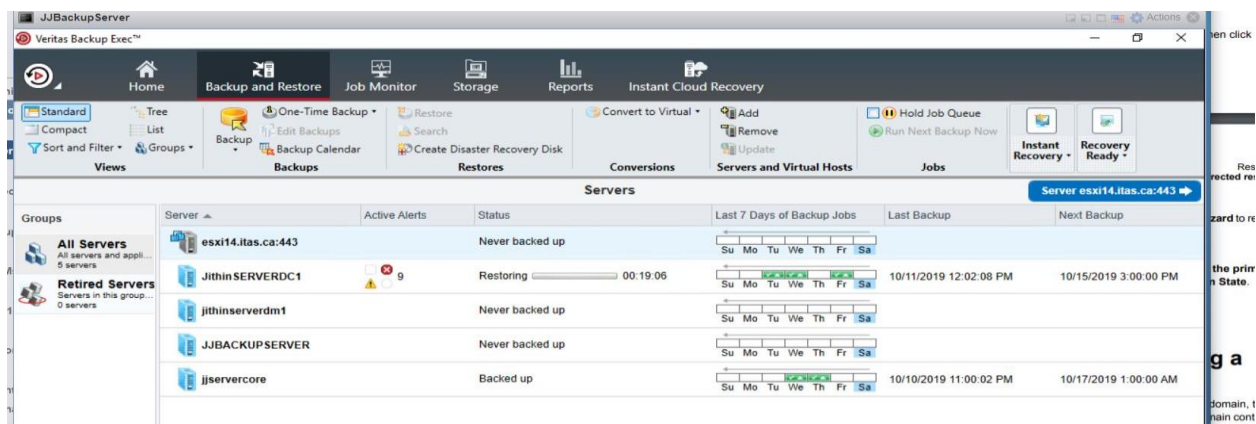


Figure 15: Adding a esxi server into the credentials

Step 1: Click on the add server option in the backup exec plan.

Step 2: Choose **VMware vCentre Server**.

Step 3: In the portion of the server name type the esxi domain name

For me:

Server name : **esxi14.itas.ca**

Step 4: Click next, add a new credentials with the username and the password.

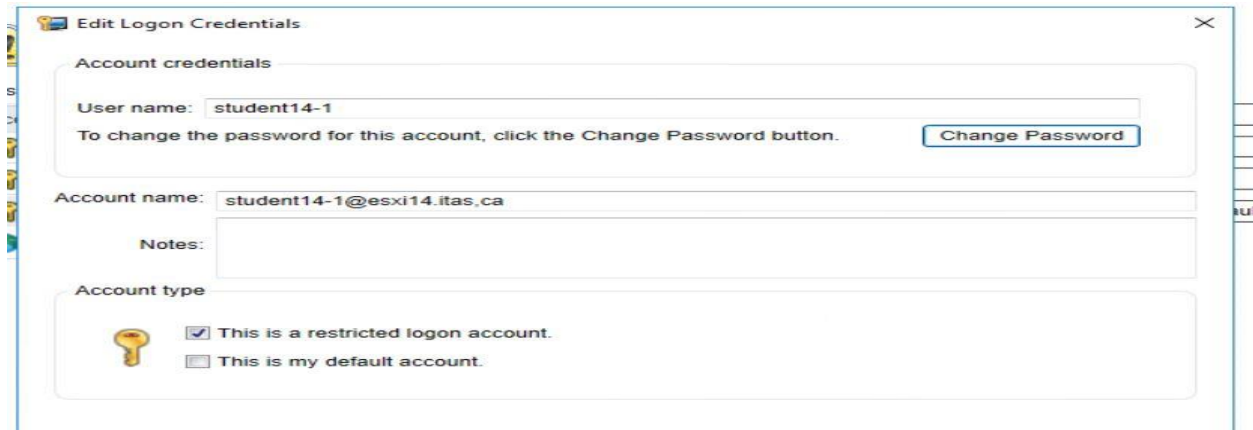


Figure 16: The account credentials of the server esxi server.

**Note:** type <username >@esxi14.itas.ca inorder to connect to the server

Step 6: This adds the server to the backup server.

Step 7: make a esxi container on the virtual machine.

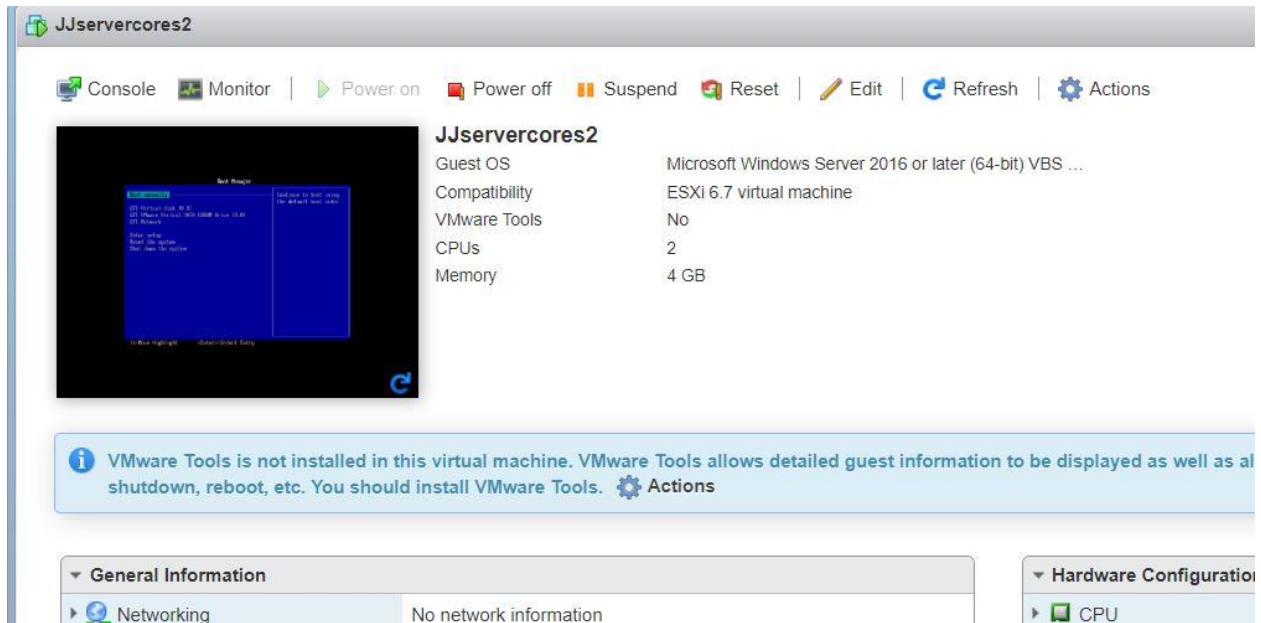


Figure 17: Making a backup server.

## **Backup the server core to the Esxi Server**

Step 1: Connect the JJ server core into backup exec.

Step 2: Select **Backup up to disk** .

Step 3: Select Virtual-Based backup, Select VM in which need to be stored.

Step 4: Under the exsi tab, select the vm that need to be backup up.

Step 5: Schedule a run.

Step 7: This runs an virtual image based backup.

## Restoring the server core from the Esxi Server

Step 1: Right-click on the esxi server that is connected, **Choose restore option** .

Step 2: Choose the **vmware-data**.

Step 3: Next choose the virtual machine that need to be backed up.

Step 4: After choosing the virtual machine, make sure that **Delete the virtual machine prior to backup** is selectd.

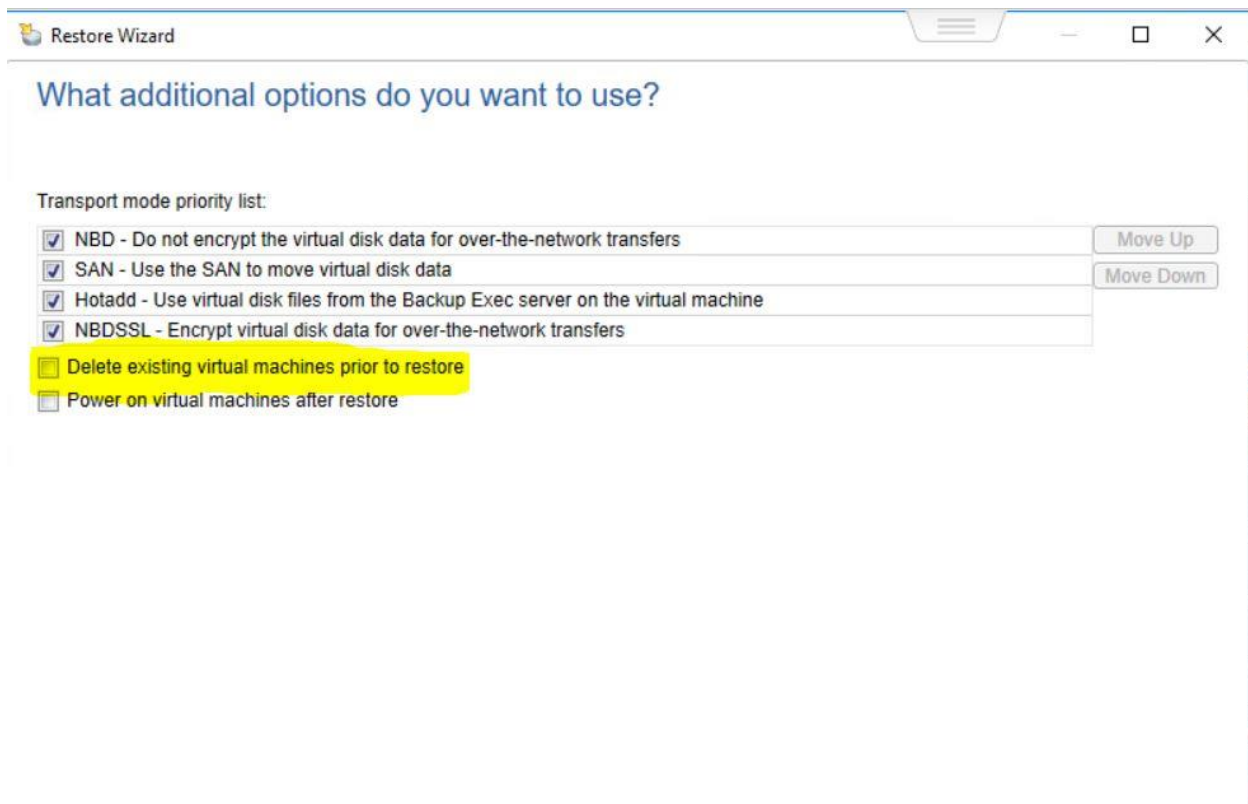


Figure 18: An option that need to be selected for the backup

Step 5 : You will see veritas backup server creating a new virtual machine in the esxi by deleting the old esxi.

Step 6 : Boot the virtual machine with the name of the server core.

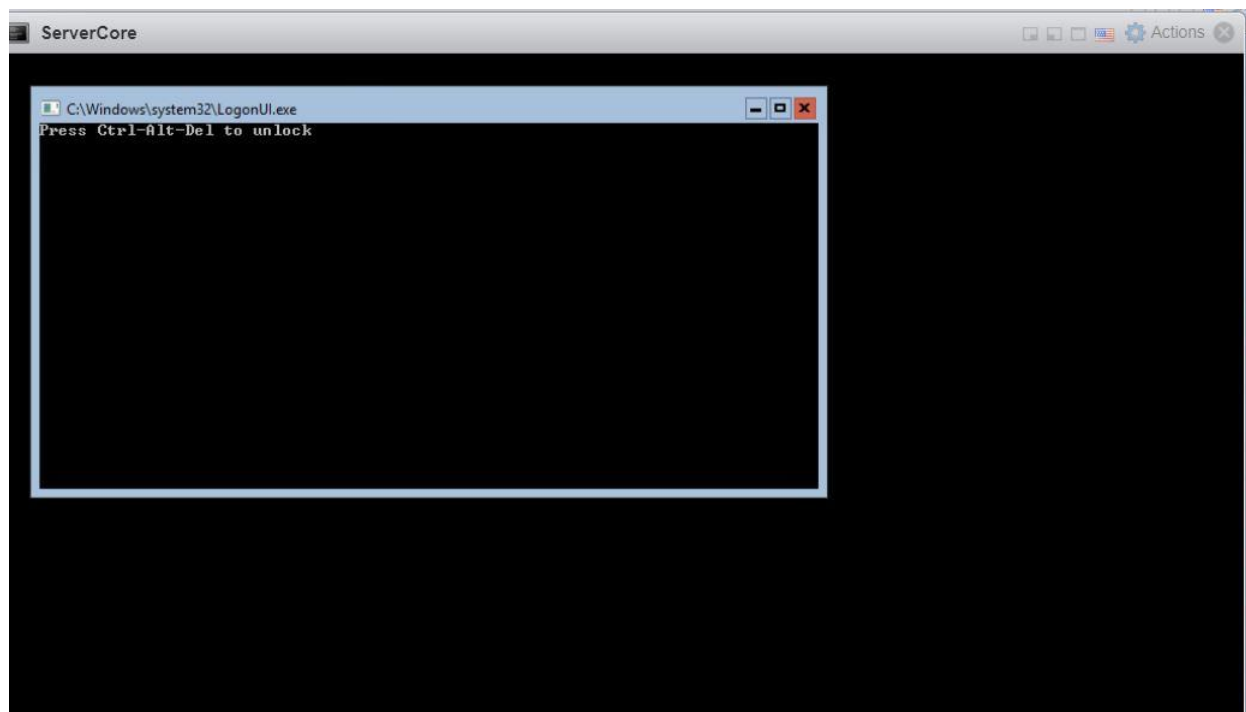


Figure 19 : boot the vm

## **Part 3 : Simplified Disaster Recovery Check**

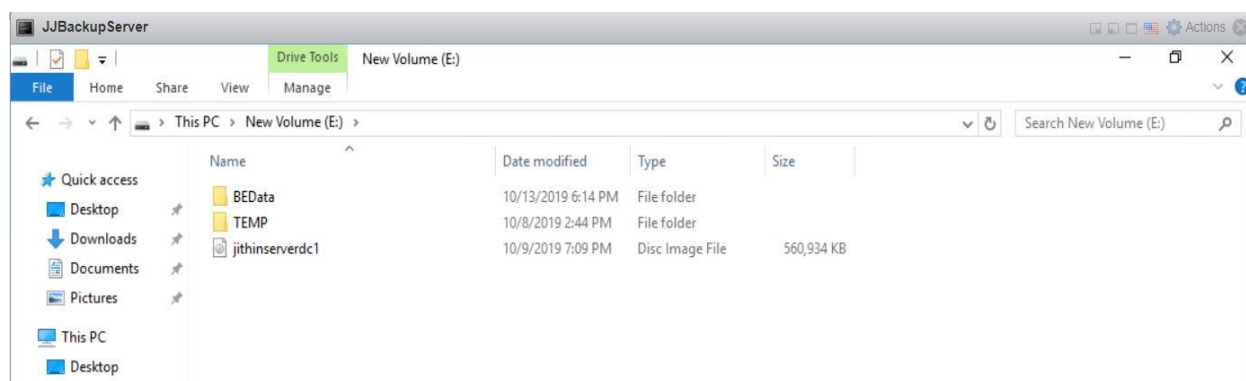


Figure 20: Disaster Recovery Iso file

Step 1: Click on the create Disaster Recovery Disk

Step 2: Choose the iso image file

Step 3: Check the ADK installation kit,

Step 4: Choose the default path for the ADK.

Step 5: Add the deployment tool as well as windows preinstallation deployment.

**Note :** you required internet in order to install the ADK kit

Step 6: close the ADK development kit and reopen the create Disaster Recovery disk wizard.

Step 7: Choose the 64 bit option and choose the correct time zone.

Step 8: Click Next, Choose the 64 bit computer that need to make the recovery disk.

Step 9: Name the iso with the name of the recovery disk.

Step 10: After that installation, you will get a recovery disk on the drive.

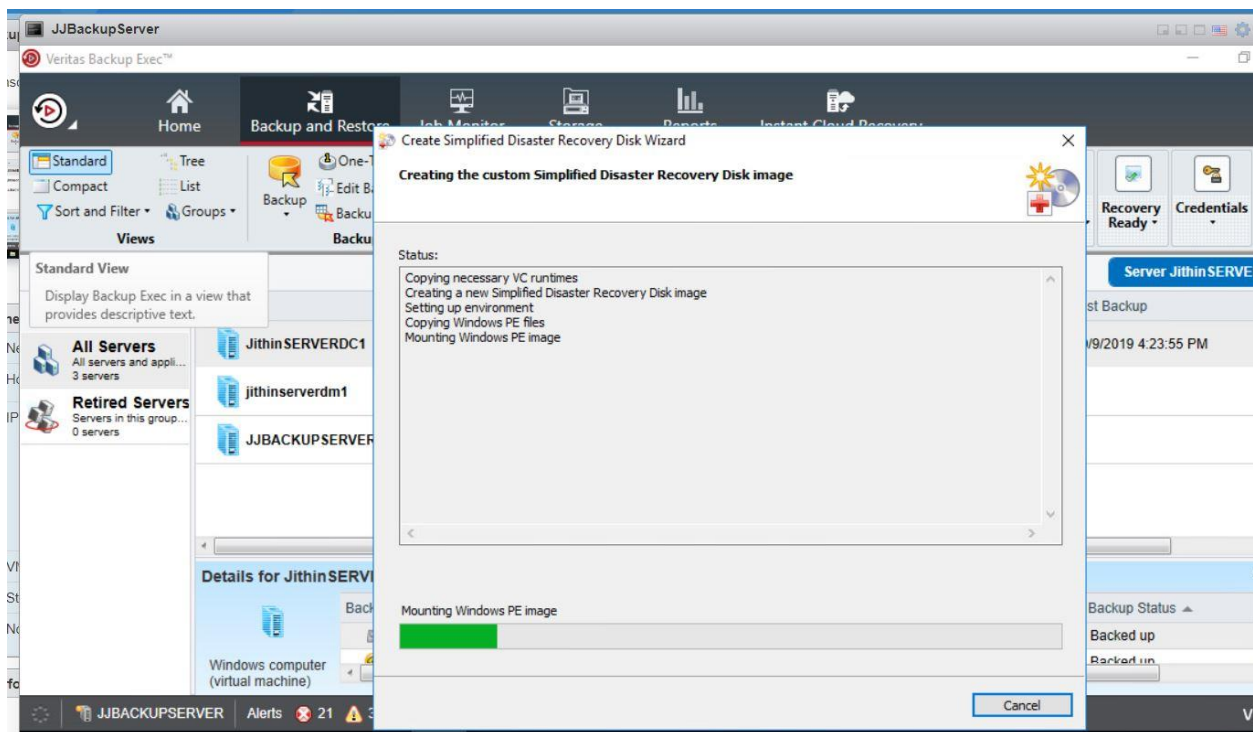


Figure 21: Setting up the Simple Disaster Recovery Disk

## Conclusion

The project was really a good aspect for learning a new software named Veritas Backup Exec. The different parts of the lab made this product so familiar which gives us confidence to do anything with the software in our future. In this project, we made backup for the Server Dc1 and the server core within the ESXI server. I learned how different companies do various types of backups. This project also taught us what the difference between the agent-based backup as well

as Virtual image-based backup within the server. This project also shows the things that are done on the target server in order to backup the files in the active directory.

All I enjoyed in the project was dealing with the several failures in the restore and backup options. It was so fun to go online and find the solution of the errors came during the restore and backup.

## **Reference**

**“How to install Veritas Backup Exec [Accessed 05 October 2019]**

<https://www.youtube.com/watch?v=8QuR3ATlcTU> “

**“Restore Files and Folders [Accessed 08 October 2019]**

[https://www.youtube.com/watch?v=tts4\\_4ALrUY](https://www.youtube.com/watch?v=tts4_4ALrUY)”

**“How to backup the server [Accessed 07 October 2019 ]**

<https://www.youtube.com/watch?v=zplg3C-lb3k/>”

**“Reset DSRM password [Accessed 12 October 2019]**

[https://www.youtube.com/watch?v=SghNgJox\\_6c](https://www.youtube.com/watch?v=SghNgJox_6c)”

**“Restore the active Directory [Accessed 12 October 2019]**

[https://www.youtube.com/watch?v=\\_5tkN2ouihA](https://www.youtube.com/watch?v=_5tkN2ouihA)”

**“Configure Active Directory[Accessed 11 October 2019]**

<https://tweaks.com/windows/40315/easily-configure-basic-settings-in-server-core/>”

**“Virtual Image-Based Backup[Accessed 12 October 2019]**

<https://www.youtube.com/watch?v=R-2f6aoQwsA>”

**“Create a simple Disaster Recovery Disk[Accessed 10 October 2019]**

<https://www.youtube.com/watch?v=6JyUHT6vzp4> “