DVS Technologies

Dvs Technologies Azure adminstration

Compiled and Scrutinized by
Mr. Shaan Shaik
(Senior DevOps Lead)

Words To The Students

Though we have taken utmost efforts to present you this book error free, but still it may contain some errors or mistakes. Students are encouraged to bring, if there are any mistakes or errors in this document to our notice. So that it may be rectified in the next edition of this document.

"Suppressing your doubts is Hindering your growth".

We urge you to work hard and make use of the facilities we are providing to you, because there is no substitute for hard work. We wish you all the best for your future.

"The grass isn't greener on the other side; the grass is greener where you water it."

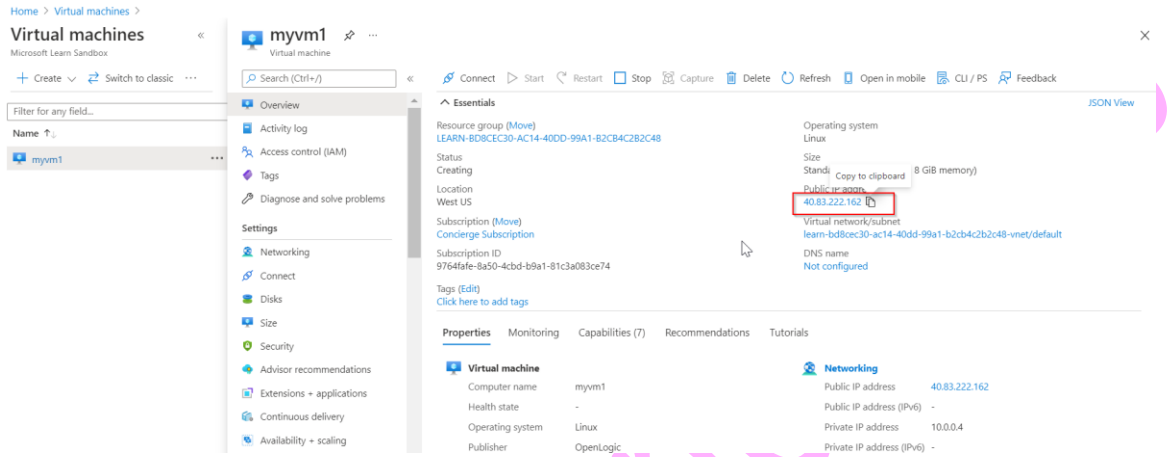
You and your suggestions are valuable to us; Help us to serve you better. In case of any suggestions, grievance, or complaints, please feel free to write us your suggestions, grievance and feedback on the following

Dvs.training@gmail.com

DVS Technologies

1 AZ backup for VM's

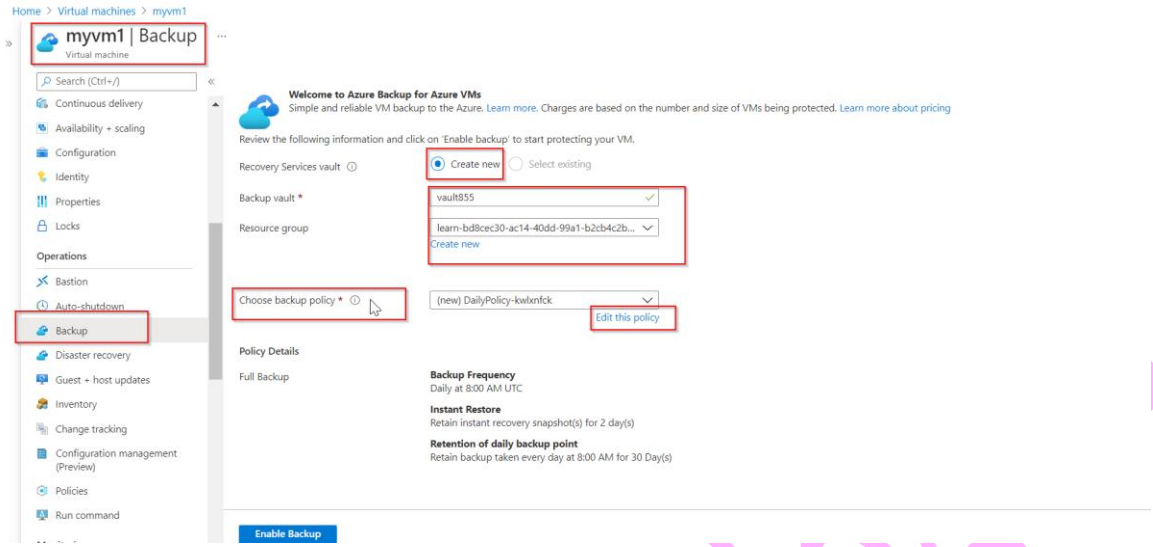
Let's configure the VM

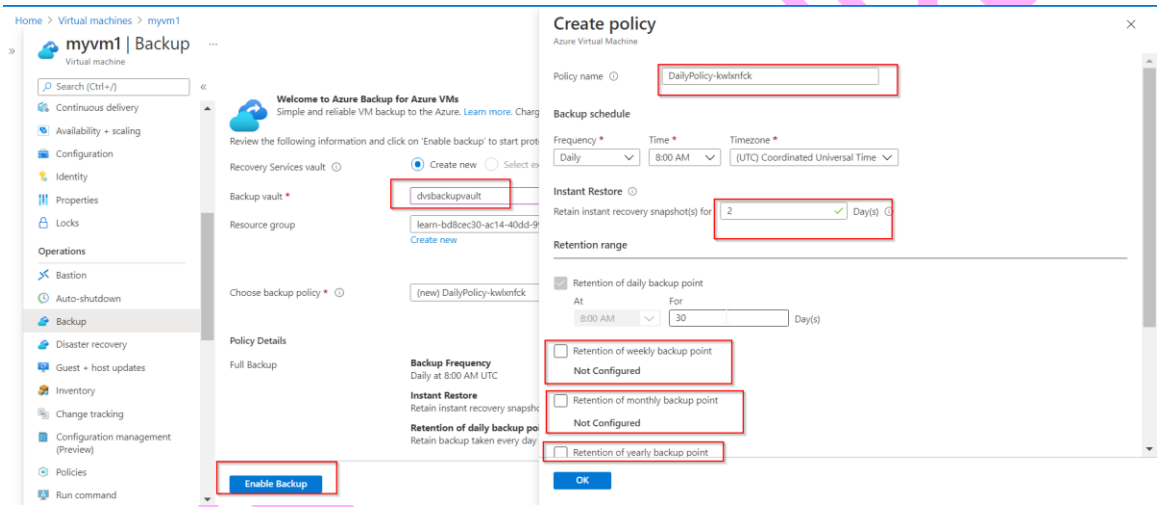



```
[dvsadmin@myvm1 ~]$ sudo su -
[root@myvm1 ~]#
[root@myvm1 ~]#
[root@myvm1 ~]#
[root@myvm1 ~]# ls -l /tmp/mydata.txt
ls: cannot access /tmp/mydata.txt: No such file or directory
[root@myvm1 ~]# echo "Hi Team welcome to Dvs Technologies" > /tmp/mydata.txt
[root@myvm1 ~]# cat /tmp/mydata.txt
Hi Team welcome to Dvs Technologies
[root@myvm1 ~]#
```

Once VM is up we are just creating the text file.

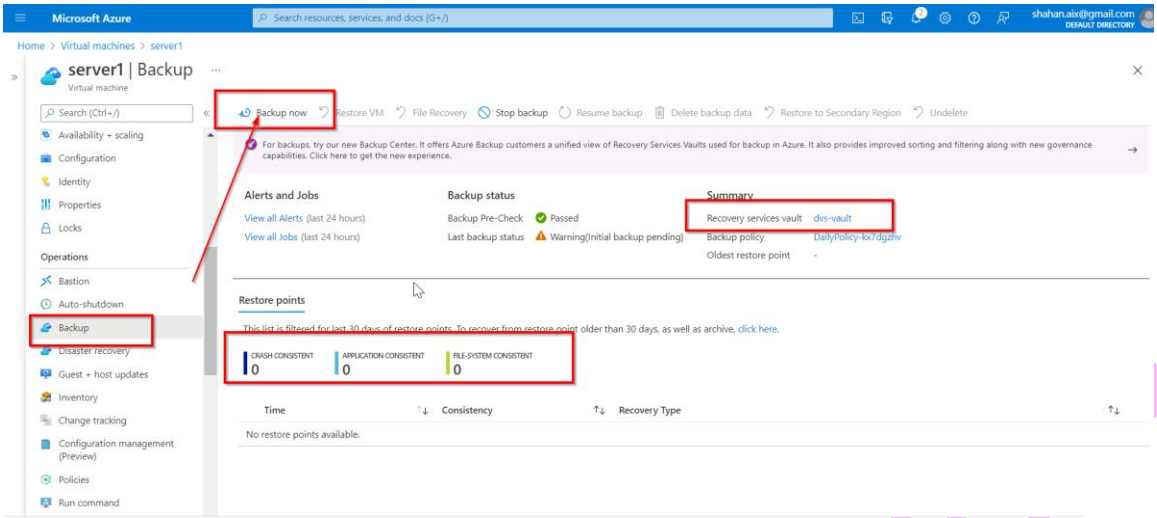
Let's configure the backup for this VM, in order to configure backup we need to have a vault storage account let's create it.





Once you are done with the above you see the vault is created for the backup and vm backup will start.

Now we have configured the backup for the VM. Let's take the backup manually.

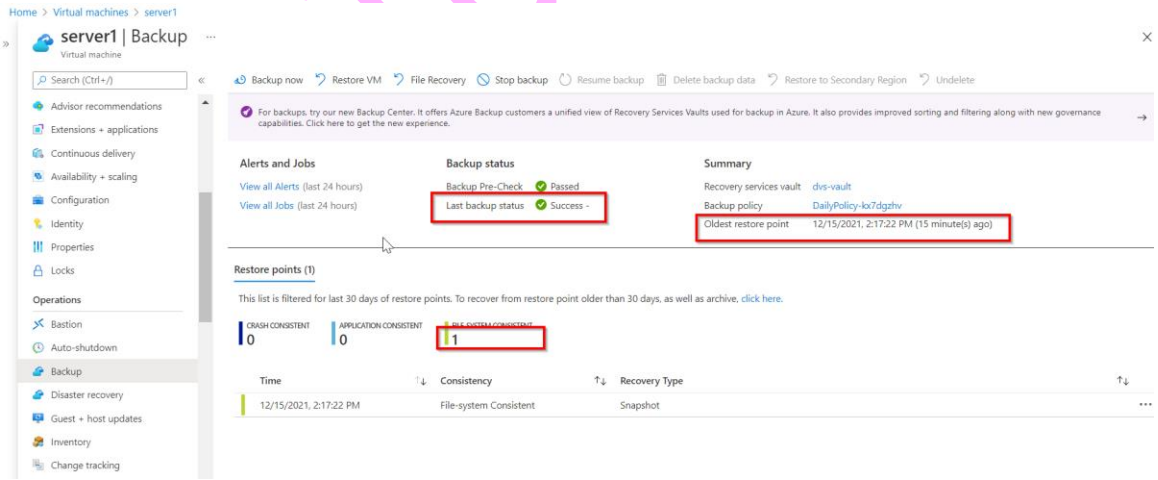


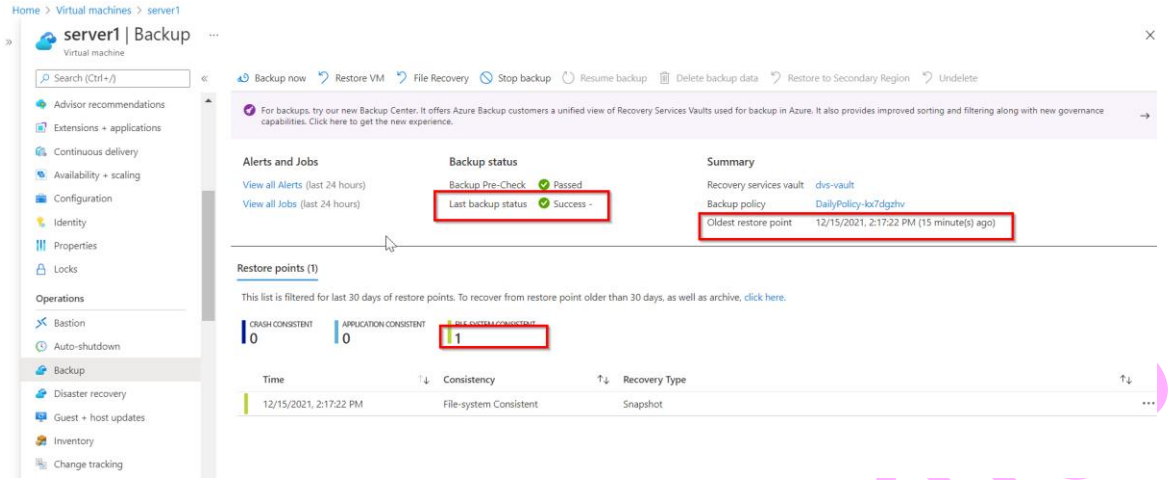
Here we are taking the server backup in that backup we are going to see our file /tmp/mydata.txt file.

2 Restore a file from disk

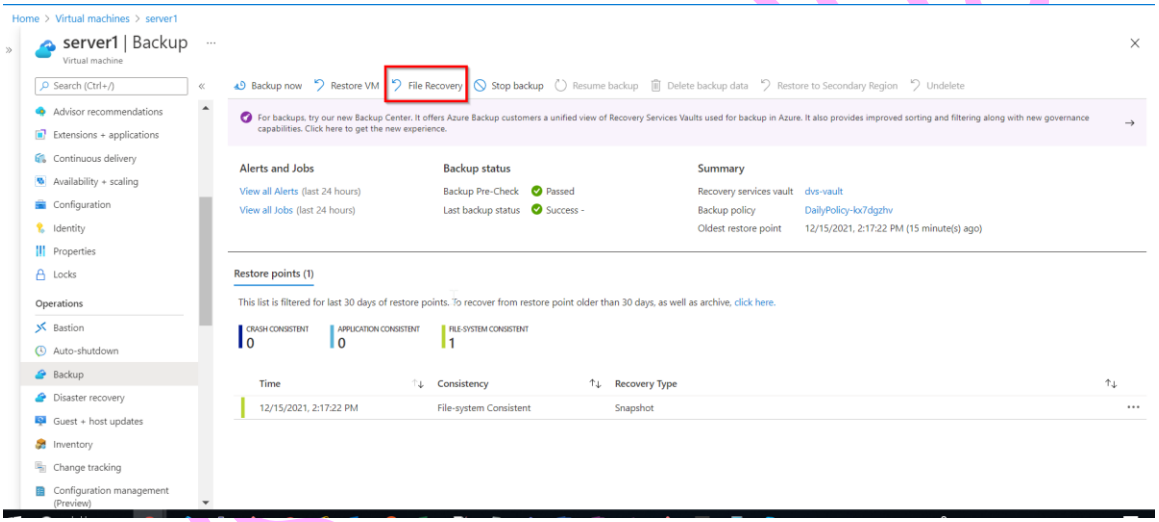
Imagine a situation that the file /tmp/mydata.txt got deleted and we need to restore the file from the latest backup what we have took.

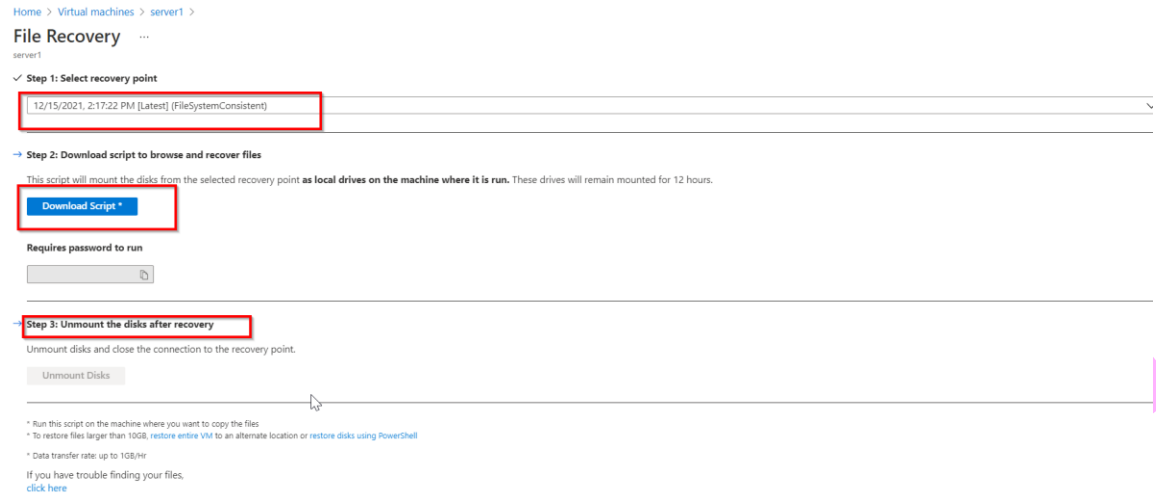
We can see that we have one last backup let's try to recover data from that backup.



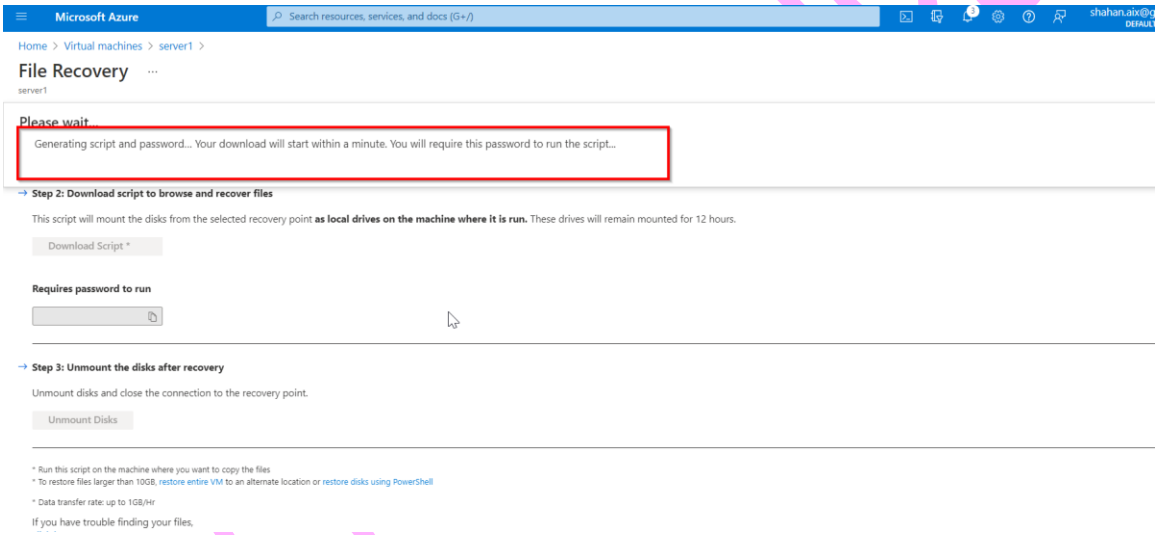


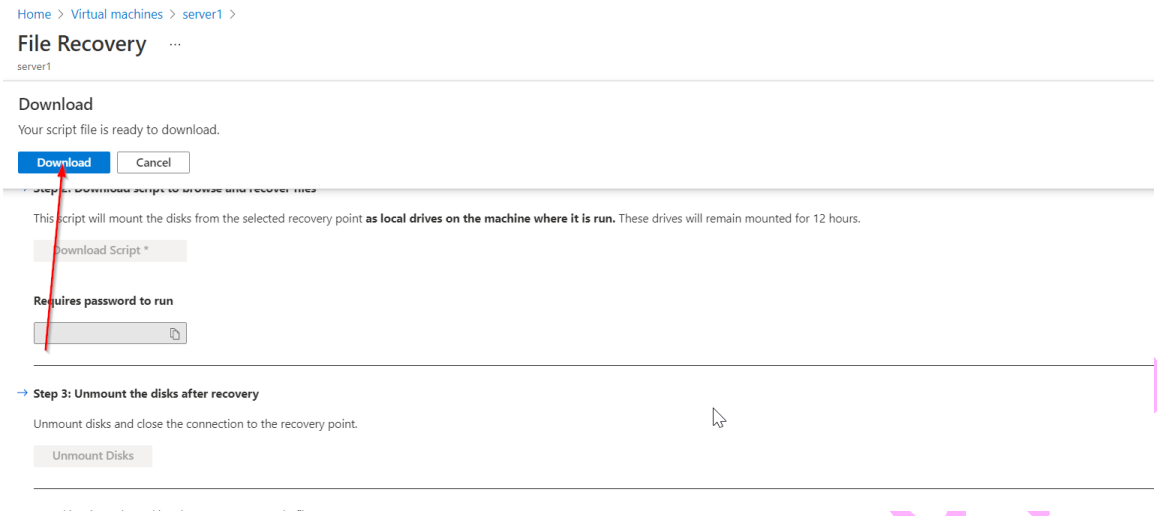
Recovering file from backup:



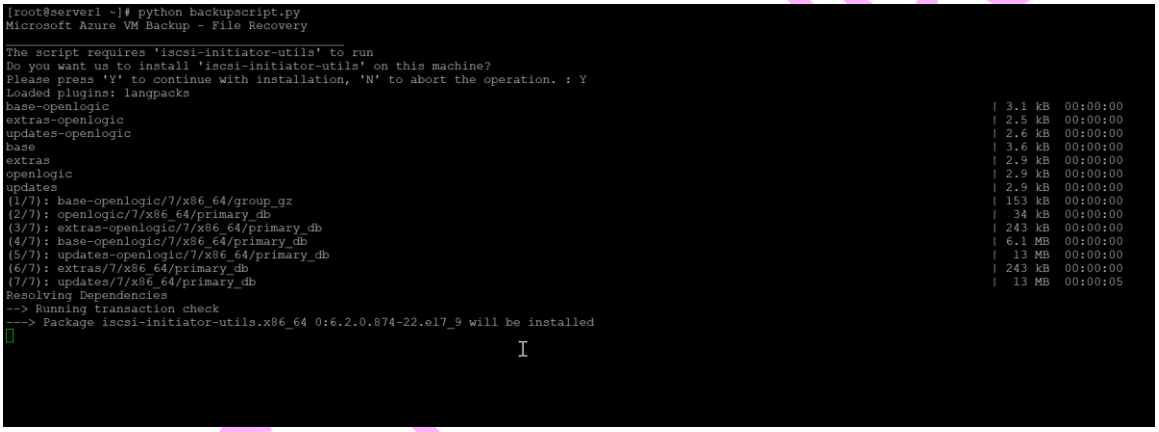


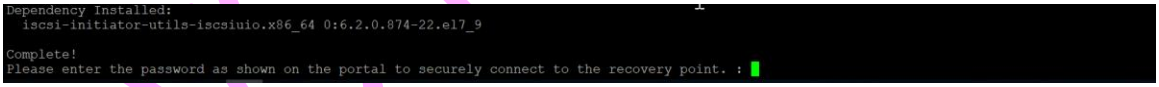
Let's download the script & run it on the server



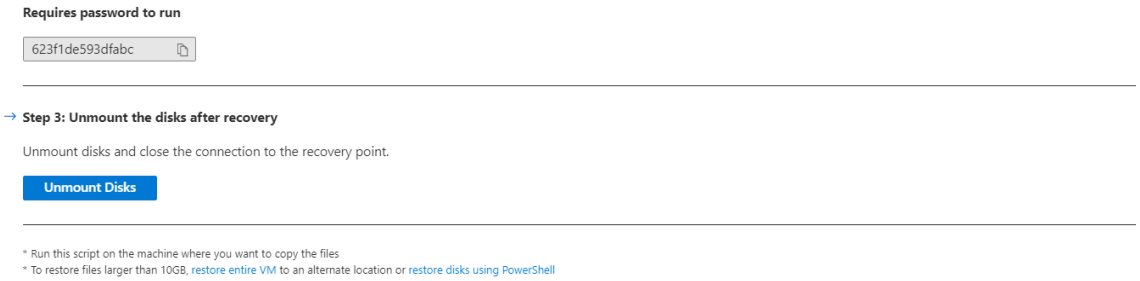


Copy the script to the system and try to mount the backup to the server.





Get the password from the azure console & give it here



```
Complete!
Please enter the password as shown on the portal to securely connect to the recovery point. : 623f1de593dfabc

Connecting to recovery point using ISCSI service...

Connection succeeded!

Please wait while we attach volumes of the recovery point to this machine...

************ Volumes of the recovery point and their mount paths on this machine ************

Sr.No.  |  Disk  |  Volume  |  MountPath

1)  | /dev/sdc  |  /dev/sdc1  |  /root/server1-20211215103852/Volume1

2)  | /dev/sdc  |  /dev/sdc2  |  /root/server1-20211215103852/Volume2

3)  | /dev/sdc  |  /dev/sdc15  |  /root/server1-20211215103852/Volume4

The following partitions failed to mount since the OS couldn't identify the filesystem.

************ Volumes from unknown filesystem ************

Sr.No.  |  Disk  |  Volume  |  Partition Type

1)  | /dev/sdc  |  /dev/sdc14  |  BIOS Boot partition

Please refer to '/root/server1-20211215103852/Scripts/MicrosoftAzureBackupILRLogFile.log' for more details.

************ Open File Explorer to browse for files. ************

After recovery, remove the disks and close the connection to the recovery point by clicking the 'Unmount Disks' button from the portal or by using the re
nt unmount command in case of powershell or CLI.

After unmounting disks, run the script with the parameter 'clean' to remove the mount paths of the recovery point from this machine.

Please enter 'q/Q' to exit...q
[root@server1 ~]#
```

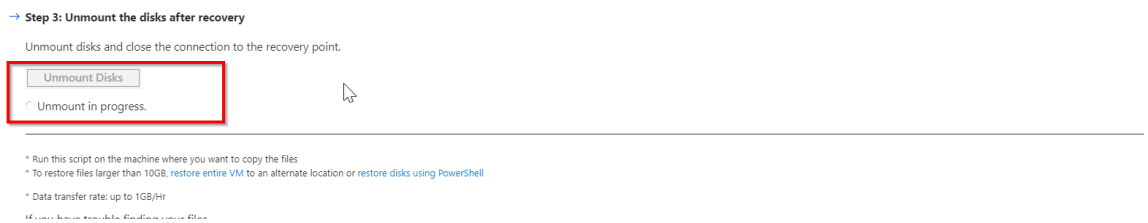
```
[root@server1 ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
devtmpfs       devtmpfs  452M     0  452M   0% /dev
tmpfs          tmpfs     464M     0  464M   0% /dev/shm
tmpfs          tmpfs     464M  6.8M  457M   2% /run
tmpfs          tmpfs     464M     0  464M   0% /sys/fs/cgroup
/dev/sda2      xfs        31G  1.8G   29G   6% /
/dev/sda1      xfs       494M   65M  430M  13% /boot
/dev/sda15     vfat      495M   12M  484M   3% /boot/efi
/dev/sdb1      ext4      3.9G   16M  3.7G   1% /mnt/resource
tmpfs          tmpfs      93M     0   93M   0% /run/user/1000
/dev/sdc1      xfs       494M   65M  430M  13% /root/server1-20211215103852/Volume1
/dev/sdc2      xfs        31G  1.6G   29G   6% /root/server1-20211215103852/Volume2
/dev/sdc15     vfat      495M   12M  484M   3% /root/server1-20211215103852/Volume4
[root@server1 ~]# ls -l /root/server1-20211215103852/Volume2/tmp/
total 32
-rwx------. 1 root root 14151 Feb  4  2021 ks-script-pwZHdj
-rwx------. 1 root root   836 Feb  4  2021 ks-script-SLrNcP
-rw-r--r--. 1 root root    36 Dec 15 10:09 mydata.txt
drwx------. 3 root root    17 Dec 15 10:04 systemd-private-a2a75aaa73eb4ffaa59b634993fe534d-chronyd.service-whAw6e
-rw-------. 1 root root  1664 Dec 15 10:17 tmpEMD3rV
-rw-------. 1 root root  1664 Dec 15 10:17 tmpisN3Zk
-rw-------. 1 root root     0 Feb  4  2021 yum.log
[root@server1 ~]#
```

If you observe above we have our data under volume2. Now simply copy the file to our local

```
[root@server1 ~]# cp /root/server1-20211215103852/Volume2/tmp/mydata.txt /root/recovery.txt
[root@server1 ~]# cat /root/recovery.txt
Hi Team welcome to Dvs Technologies
[root@server1 ~]#
```

So finally we recovered our file from the previous backup.

Now unmount:



Simply click on unmount disks button

✓ **Step 3: Unmount the disks after recovery**

Unmount disks and close the connection to the recovery point.

Unmount Disks

Unmount successful.

* Run this script on the machine where you want to copy the files
* To restore files larger than 10GB, restore entire VM to an alternate location or restore disks using PowerShell

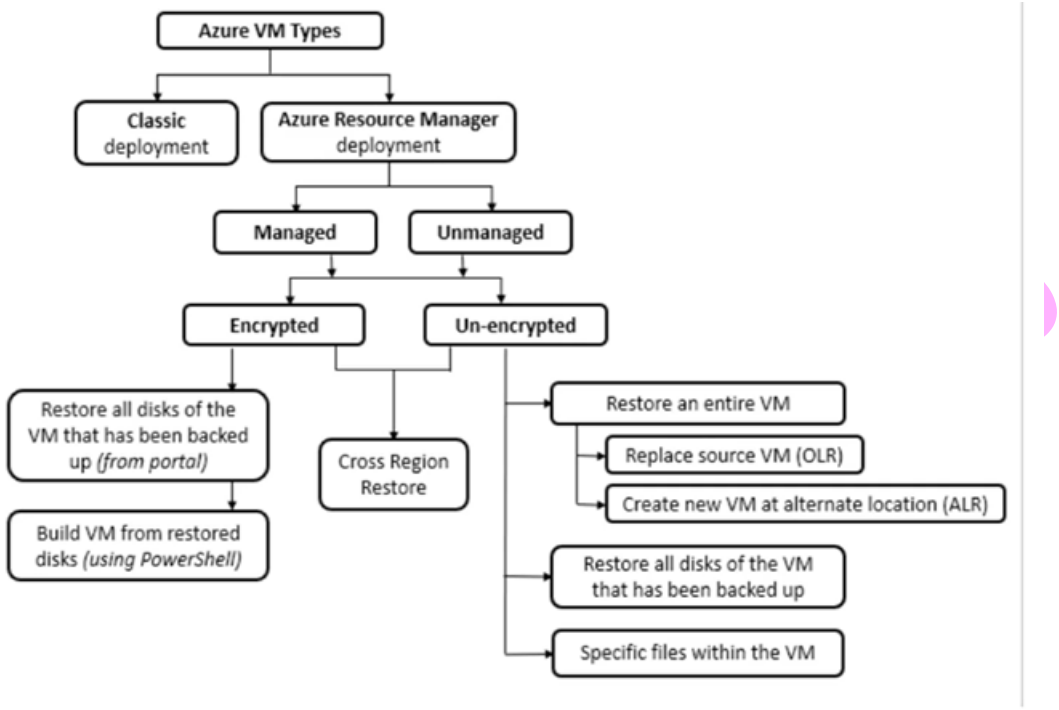
* Data transfer rate: up to 1GB/Hr

If you have trouble finding your files,
click here

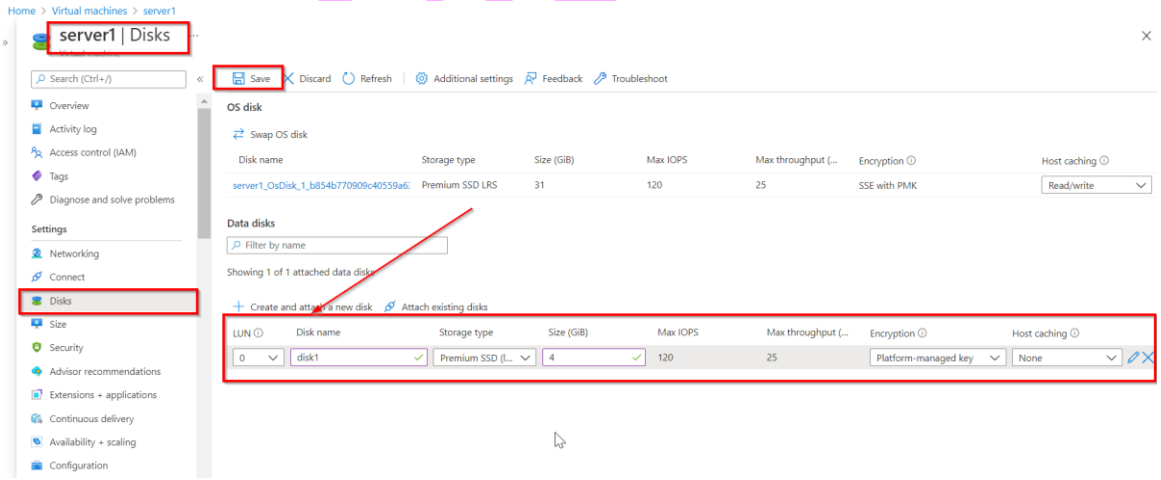
```
[root@server1 ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
devtmpfs       devtmpfs  452M     0  452M   0% /dev
tmpfs          tmpfs     464M     0  464M   0% /dev/shm
tmpfs          tmpfs     464M  6.8M  457M   2% /run
tmpfs          tmpfs     464M     0  464M   0% /sys/fs/cgroup
/dev/sda2      xfs        31G  1.8G   29G   6% /
/dev/sda1      xfs       494M   65M  430M  13% /boot
/dev/sda15     vfat      495M   12M  484M   3% /boot/efi
/dev/sdb1      ext4      3.9G   16M  3.7G   1% /mnt/resource
tmpfs          tmpfs      93M     0   93M   0% /run/user/1000
/dev/sdc1      xfs       494M   65M  430M  13% /root/server1-20211215103852/Volume1
/dev/sdc2      xfs        31G  1.6G   29G   6% /root/server1-20211215103852/Volume2
/dev/sdc15     vfat      495M   12M  484M   3% /root/server1-20211215103852/Volume4
[root@server1 ~]# python backupscript.py clean
Microsoft Azure VM Backup - File Recovery
------------------------------------------

Removing the local mount paths of the currently connected recovery point...

The local mount paths have been removed.

Please make sure to click the 'Unmount disks' from the portal to remove the connection to the recovery point.

Please enter 'q/Q' to exit...q
[root@server1 ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
devtmpfs       devtmpfs  452M     0  452M   0% /dev
tmpfs          tmpfs     464M     0  464M   0% /dev/shm
tmpfs          tmpfs     464M  6.8M  457M   2% /run
tmpfs          tmpfs     464M     0  464M   0% /sys/fs/cgroup
/dev/sda2      xfs        31G  1.8G   29G   6% /
/dev/sda1      xfs       494M   65M  430M  13% /boot
/dev/sda15     vfat      495M   12M  484M   3% /boot/efi
/dev/sdb1      ext4      3.9G   16M  3.7G   1% /mnt/resource
tmpfs          tmpfs      93M     0   93M   0% /run/user/1000
[root@server1 ~]#
```

Once you are done with unmount from azure console then simply run the same script with parameter clean so that it will unmount the disks from the system as shown above

3 Restore a vm from the backup

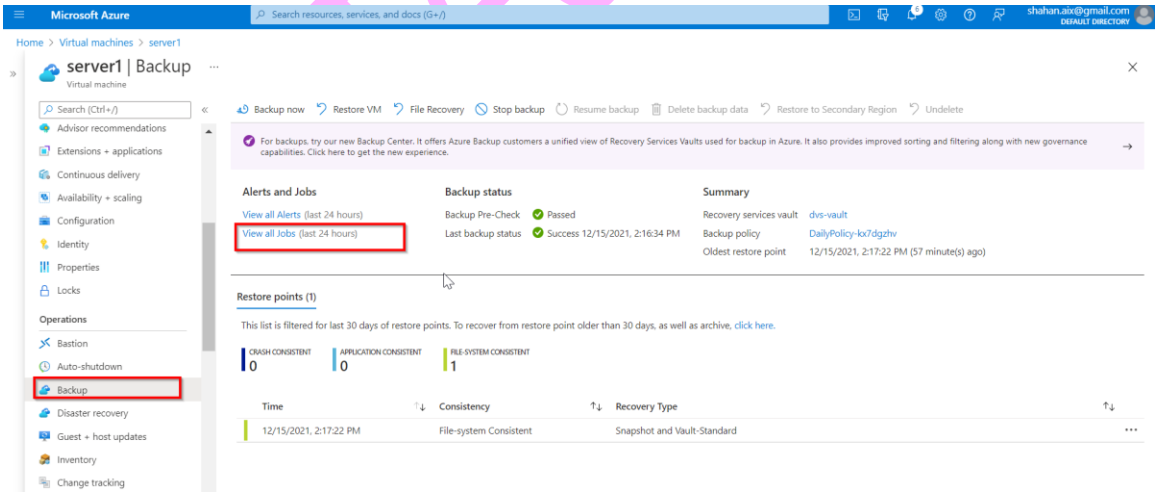


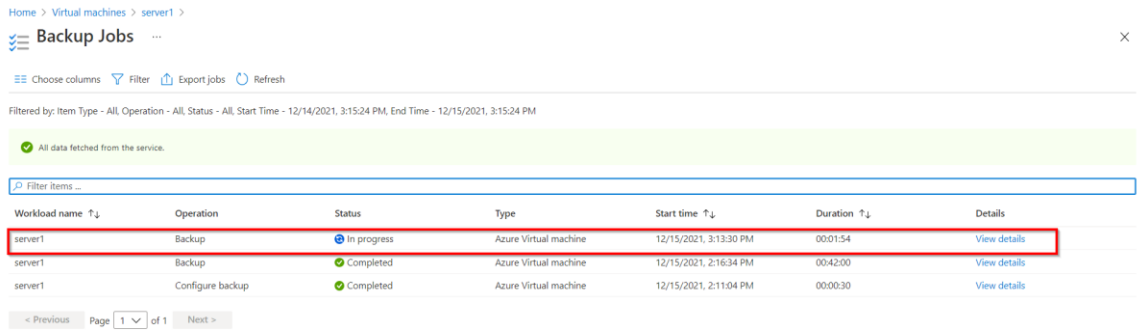
Let's add one disk to the VM and try to write some data to that disk & then take the backup for the server. Will try to recover the system by re-creating it from the backup.

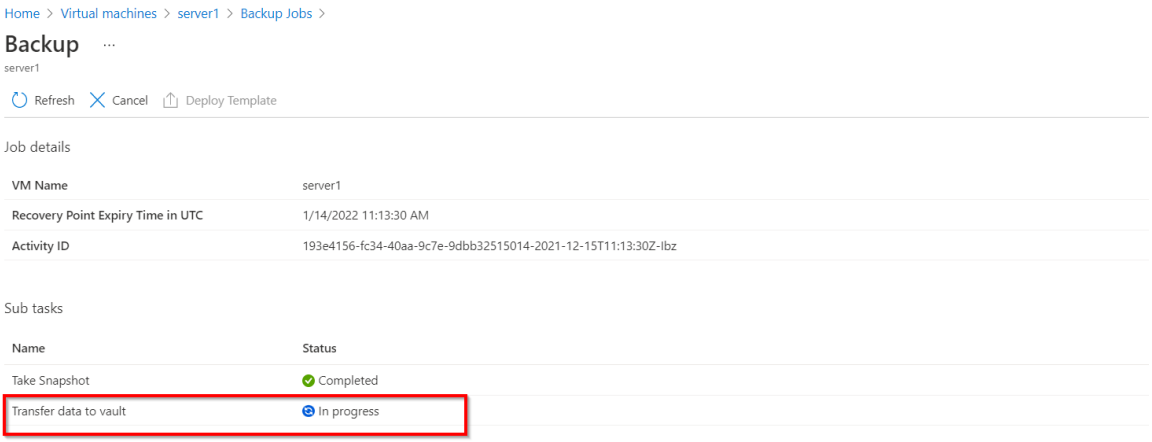


```
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0    4G  0 disk
└─sdb1    8:17   0    4G  0 part /mnt/resource
sdc       8:32   0    4G  0 disk
[root@server1 ~]# mkfs.ext4 /dev/sdc
mke2fs 1.42.9 (28-Dec-2013)
/dev/sdc is entire device, not just one partition!
Proceed anyway? (y,n) y
Discarding device blocks: done
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
262144 inodes, 1048576 blocks
52428 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1073741824
32 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

[root@server1 ~]# mkdir /mydata
[root@server1 ~]# mount -t ext4 /dev/sdc /mydata/
[root@server1 ~]# df -hT /mydata/
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sdc       ext4  3.9G   16M  3.6G   1% /mydata
[root@server1 ~]# ls -l /mydata/
total 16
drwx------. 2 root root 16384 Dec 15 11:09 lost+found
[root@server1 ~]# vi /mydata/vol1.txt
[root@server1 ~]#
[root@server1 ~]#
[root@server1 ~]# cat /mydata/vol1.txt
Hi I am inside my volume & I am inside mydata folder
[root@server1 ~]#
```

Here we have our file vol1.txt inside our disk. Let's try to take the backup & restore the disk.

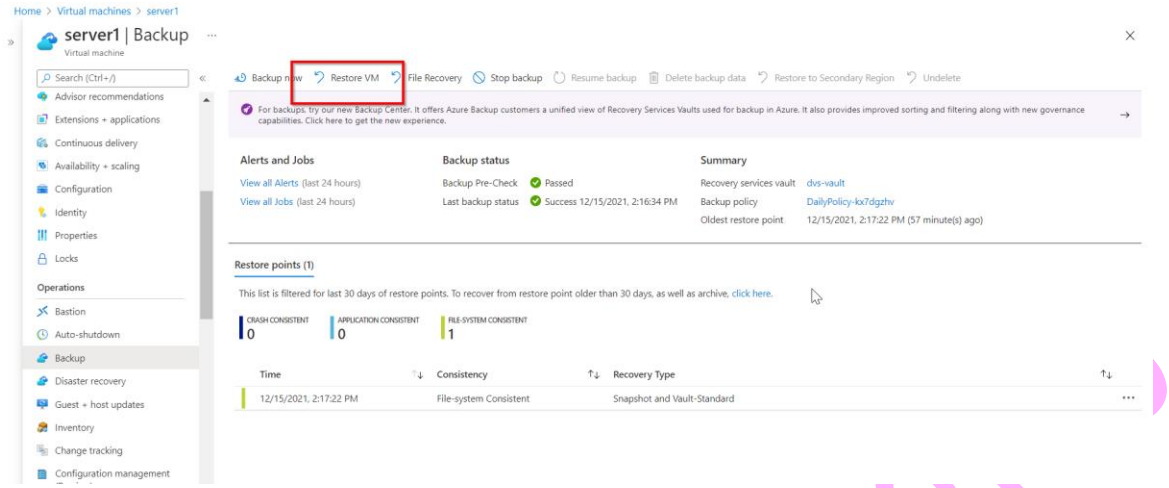


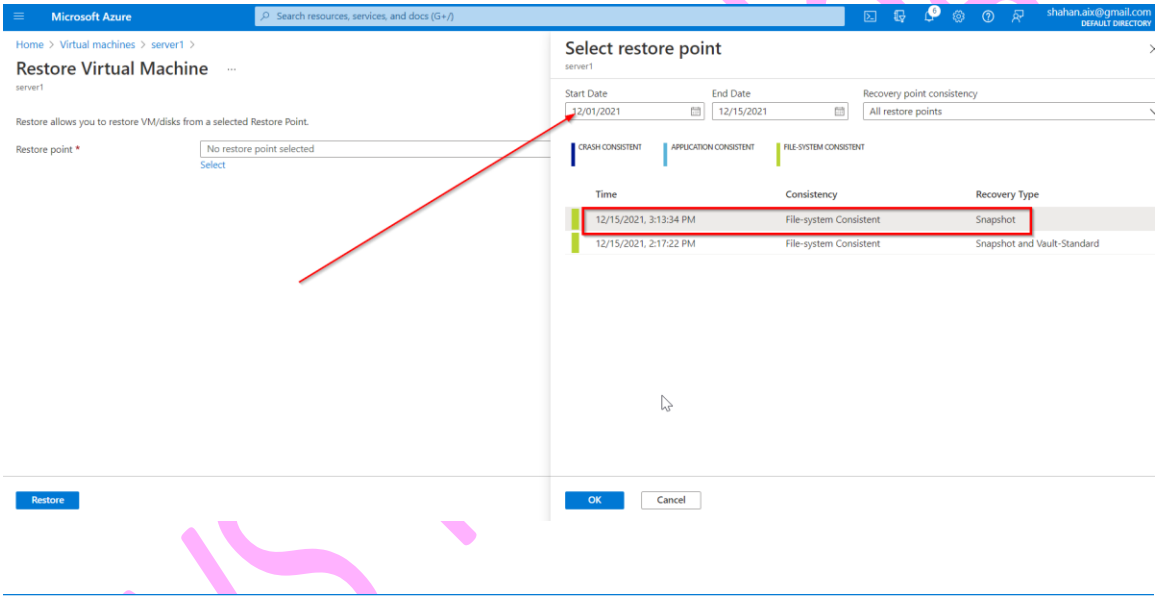


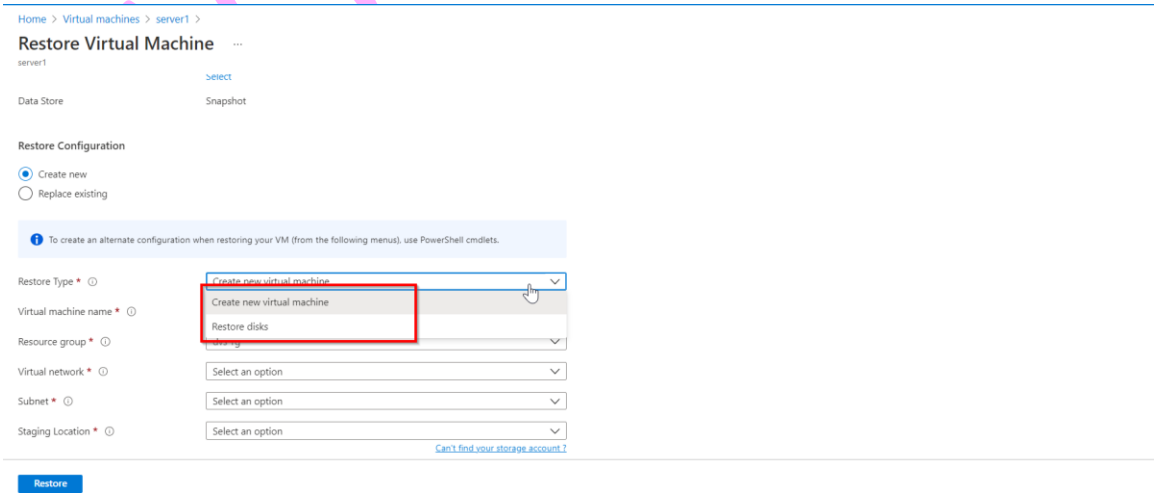


Here what it means is when you take the backup first it will create the copy in your local server later it will copy it to the vault. Now data copy to vault is taking place.

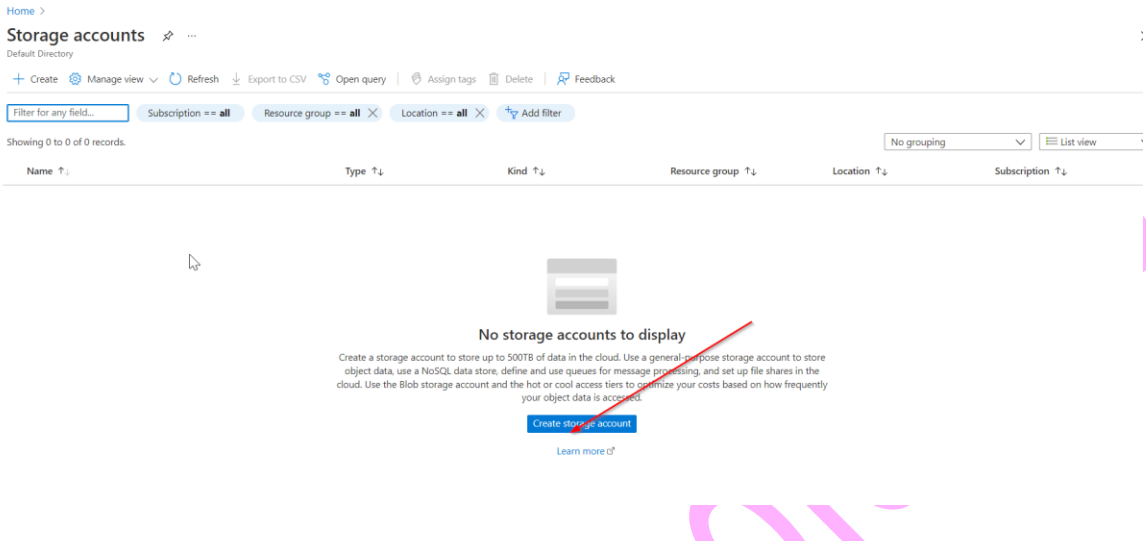
Let's try to restore the VM.

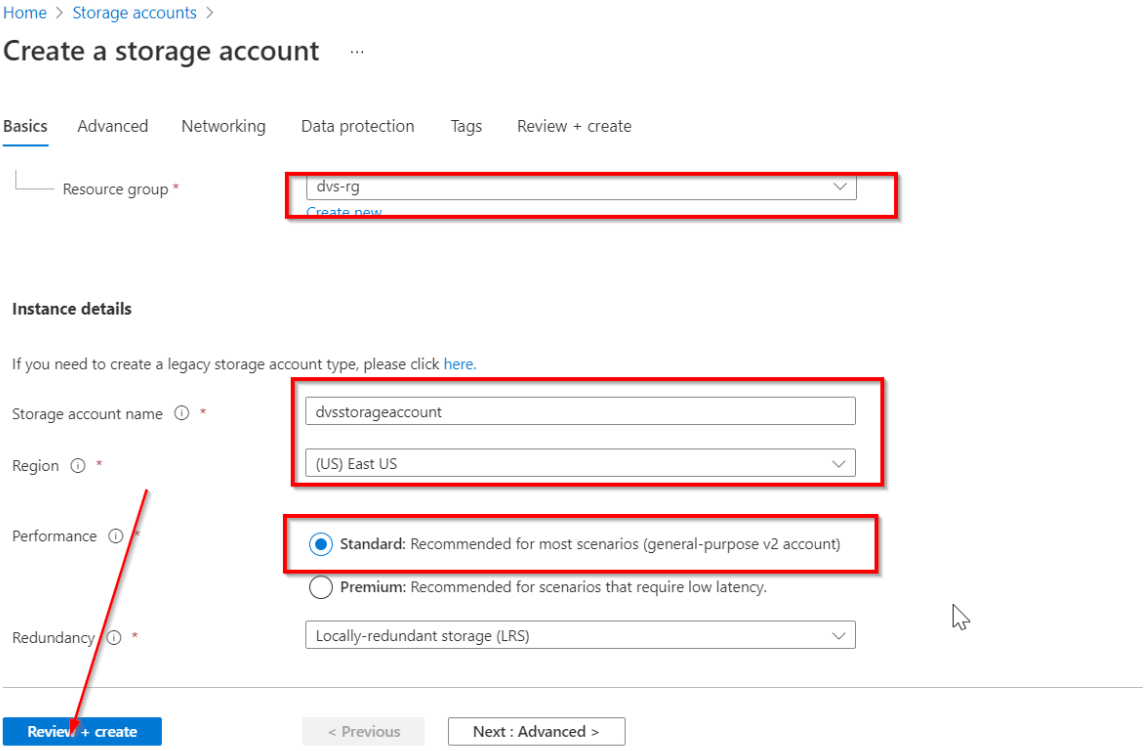

Home > Virtual machines > server1
server1 | Backup
Virtual machine
Backup now
Restore VM
File Recovery
Stop backup
Resume backup
Delete backup data
Restore to Secondary Region
Undelete
Alerts and Jobs
View all Alerts (last 24 hours)
View all Jobs (last 24 hours)
Backup status
Backup Pre-Check
Passed
Last backup status
Success 12/15/2021, 2:16:34 PM
Summary
Recovery services vault
dvs-vault
Backup policy
DailyPolicy-kx7dgzhv
Oldest restore point
12/15/2021, 2:17:22 PM (57 minute(s) ago)
Restore points (1)
This list is filtered for last 30 days of restore points. To recover from restore point older than 30 days, as well as archive, click here.
CRASH CONSISTENT
0
APPLICATION CONSISTENT
0
FILE-SYSTEM CONSISTENT
1
Time
Consistency
Recovery Type
12/15/2021, 2:17:22 PM
File-system Consistent
Snapshot and Vault-Standard

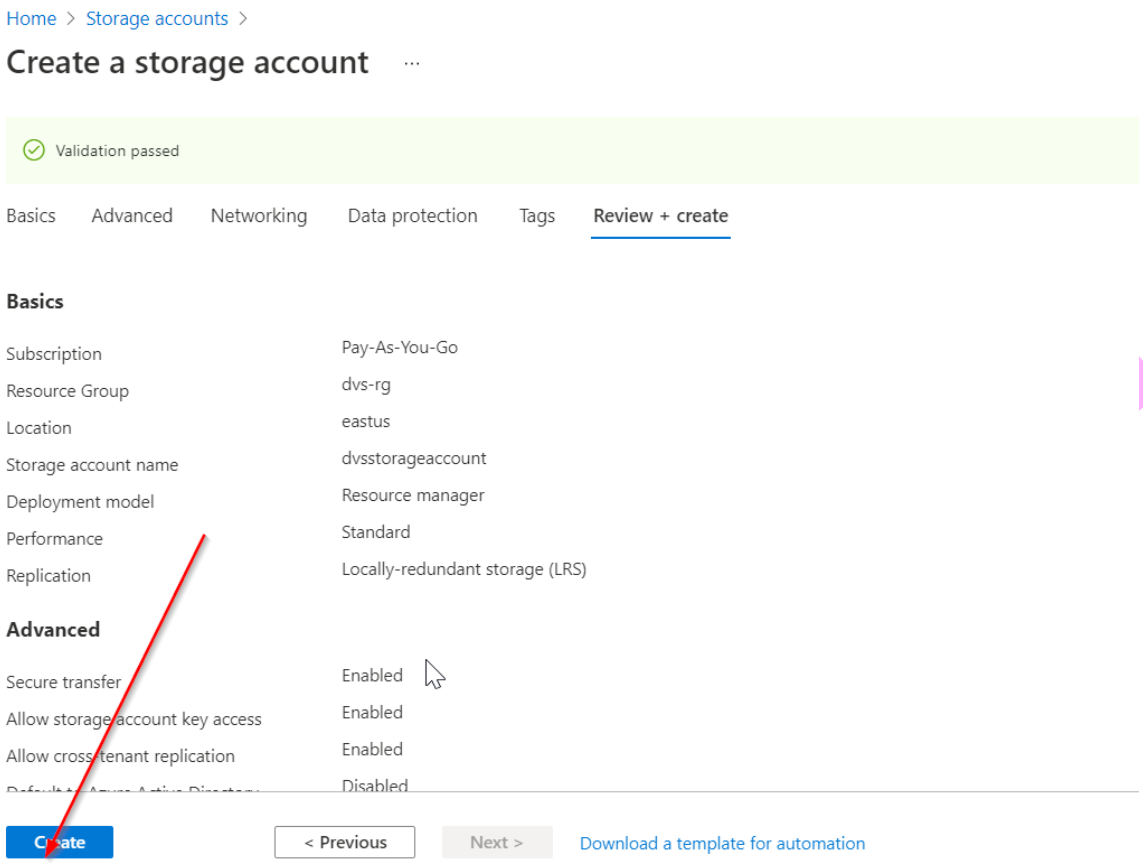

Microsoft Azure
Home > Virtual machines > server1 >
Restore Virtual Machine
server1
Restore allows you to restore VM/disks from a selected Restore Point.
Restore point *
No restore point selected
Select
Restore
Select restore point
server1
Start Date
12/01/2021
End Date
12/15/2021
Recovery point consistency
All restore points
CRASH CONSISTENT
APPLICATION CONSISTENT
FILE-SYSTEM CONSISTENT
Time
Consistency
Recovery Type
12/15/2021, 3:13:34 PM
File-system Consistent
Snapshot
12/15/2021, 2:17:22 PM
File-system Consistent
Snapshot and Vault-Standard
OK
Cancel


Home > Virtual machines > server1 >
Restore Virtual Machine
server1
Select
Data Store
Snapshot
Restore Configuration
Create new
Replace existing
To create an alternate configuration when restoring your VM (from the following menus), use PowerShell cmdlets.
Restore Type *
Create new virtual machine
Create new virtual machine
Restore disks
Virtual machine name *
Resource group *
Virtual network *
Select an option
Subnet *
Select an option
Staging Location *
Select an option
Can't find your storage account ?
Restore

In order to full fill this requirement we should have the storage account let's create it.

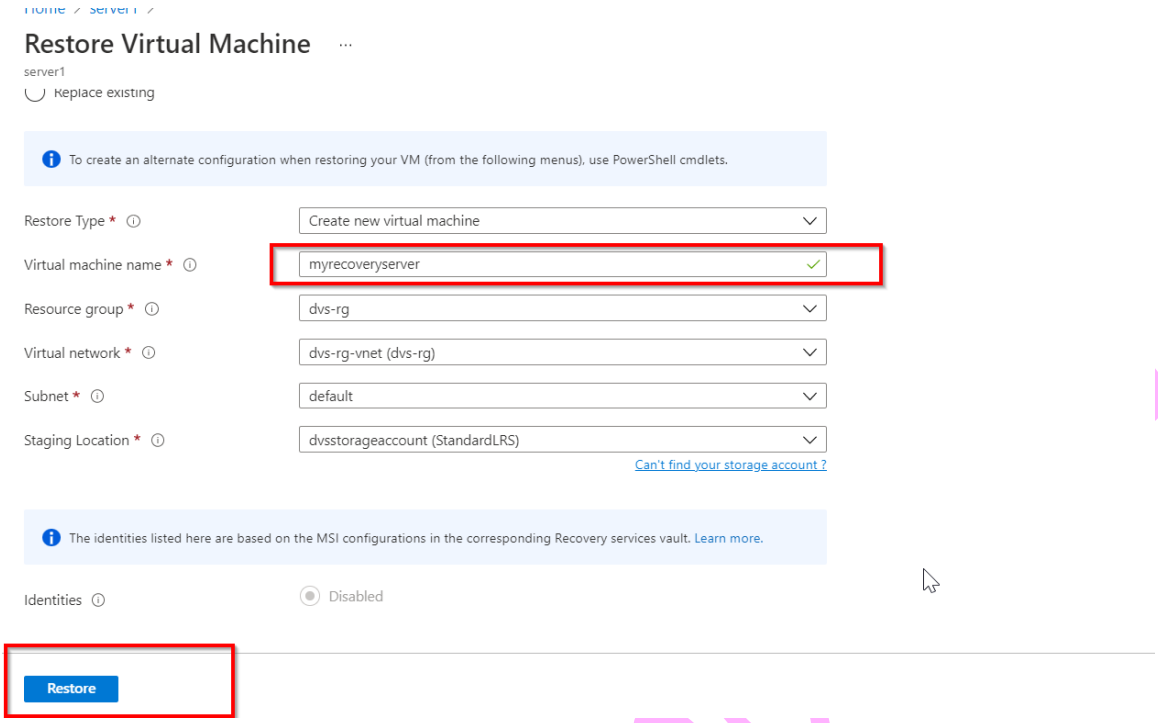


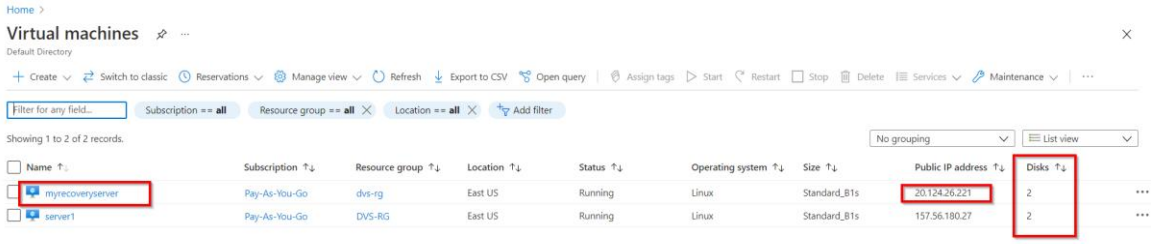




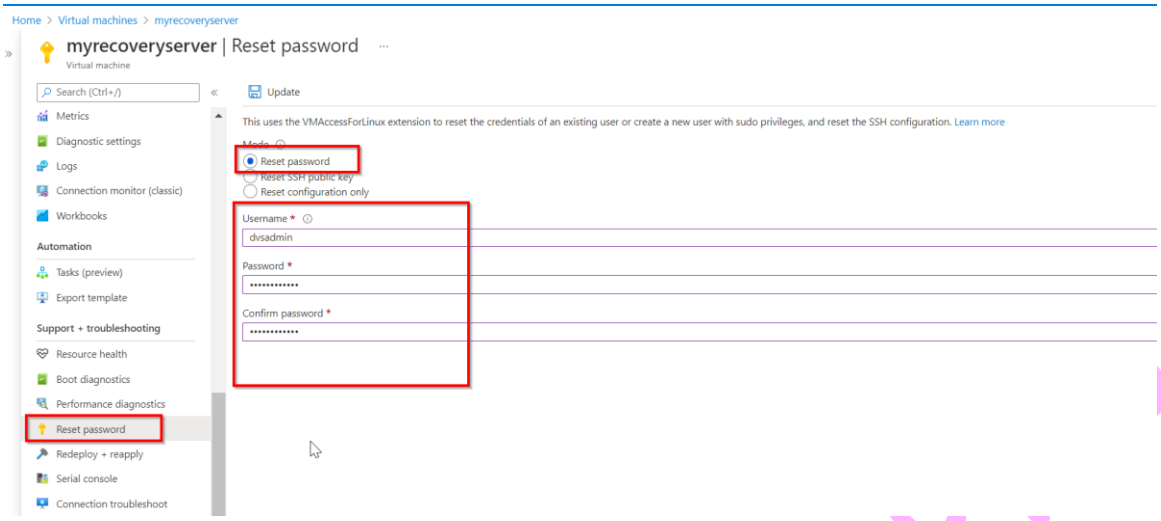
Let's resume our work

DVS Tec





Now let's try to login to new server.



Note: if in case password is not working then use the above

```
[root@server1 ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   31G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   30G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0    4G  0 disk
└─sdb1    8:17   0    4G  0 part /mnt/resource
sdc       8:32   0    4G  0 disk
[root@server1 ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
devtmpfs       devtmpfs  452M     0  452M   0% /dev
tmpfs          tmpfs     464M     0  464M   0% /dev/shm
tmpfs          tmpfs     464M  6.9M  457M   2% /run
tmpfs          tmpfs     464M     0  464M   0% /sys/fs/cgroup
/dev/sda2      xfs        31G  1.8G   29G   6% /
/dev/sda1      xfs       494M   65M  430M  13% /boot
/dev/sda15     vfat      495M   12M  484M   3% /boot/efi
/dev/sdb1      ext4      3.9G   16M  3.7G   1% /mnt/resource
tmpfs          tmpfs      93M     0   93M   0% /run/user/1000
(reverse-i-search)`': ^C
[root@server1 ~]# mount -t 3xt4 /dev/sdc /mydata/
mount: unknown filesystem type '3xt4'
[root@server1 ~]# mount -t ext4 /dev/sdc /mydata/
[root@server1 ~]# ls -l /mydata/
total 20
drwx------. 2 root root 16384 Dec 15 11:09 lost+found
-rw-r--r--. 1 root root    53 Dec 15 11:10 vol1.txt
[root@server1 ~]# cat /mydata/vol1.txt
Hi I am inside my volume & I am inside mydata folder
[root@server1 ~]#
```

So finally from the backup we can easily restore the server

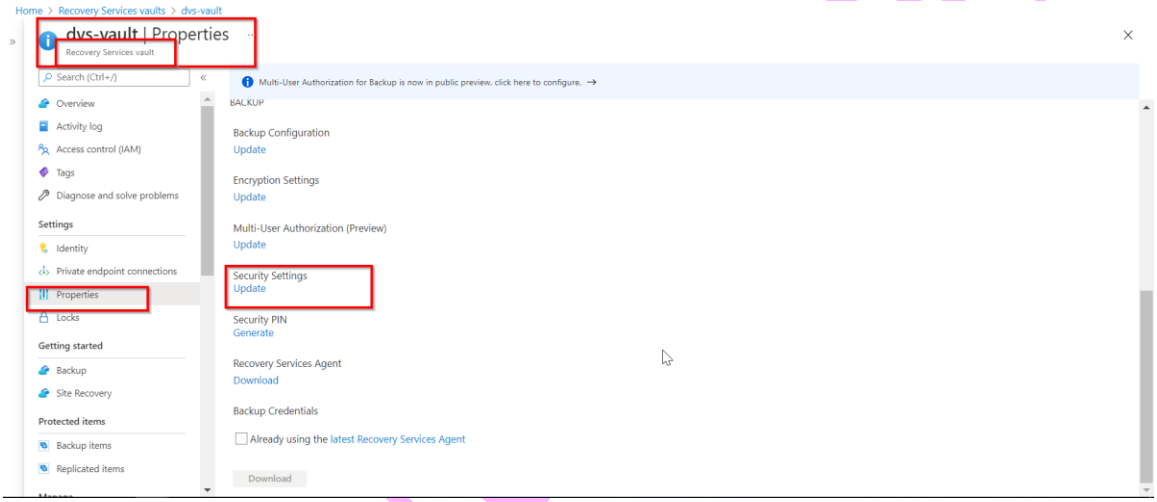
4 Soft delete option

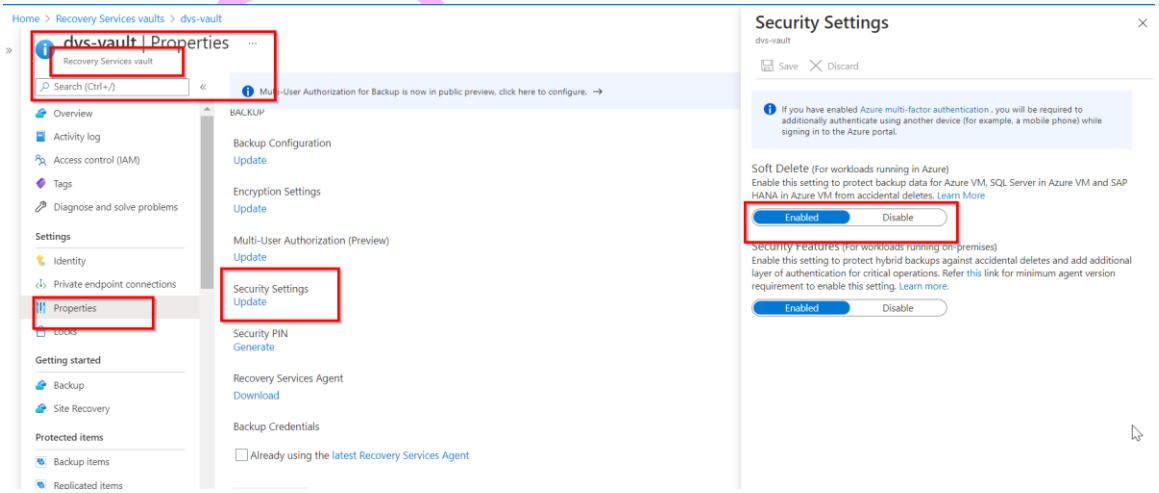
Just imagine a situation you are trying to delete the backup configured for the production server and you feel that, that server no need to have backup hence you tried to delete the backup.

After 2 days there is some production bug & you found that this server have to be restored to old backup. Since you deleted the backup you can't restore the server to old state.

If you feel that you don't want to see you in that situation then you can enable the soft delete option for the recovery backup vault. This help you to keep the data backup for atleast 14 days so that if any issue you can still have backup.

You will get the soft delete option under recovery service vault.

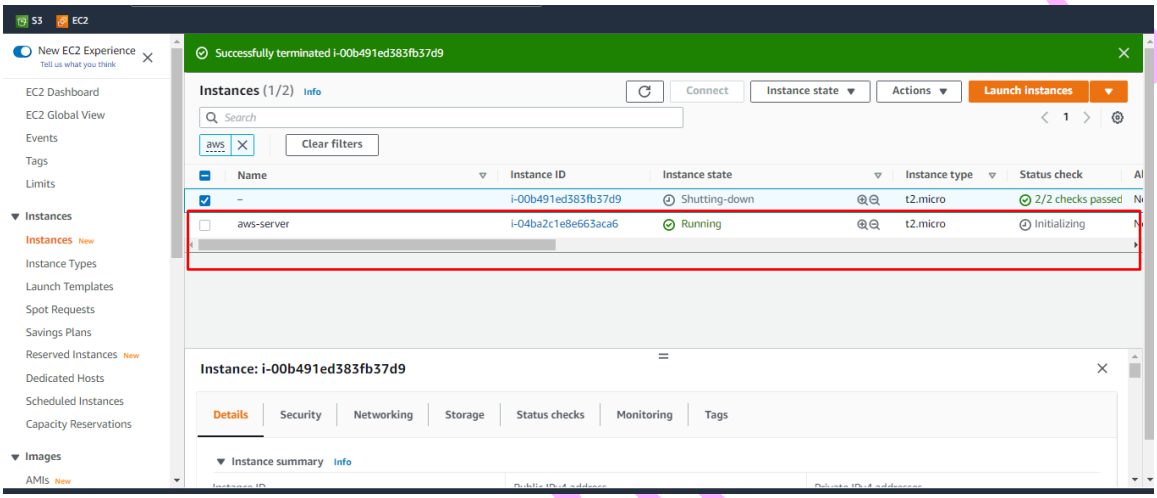




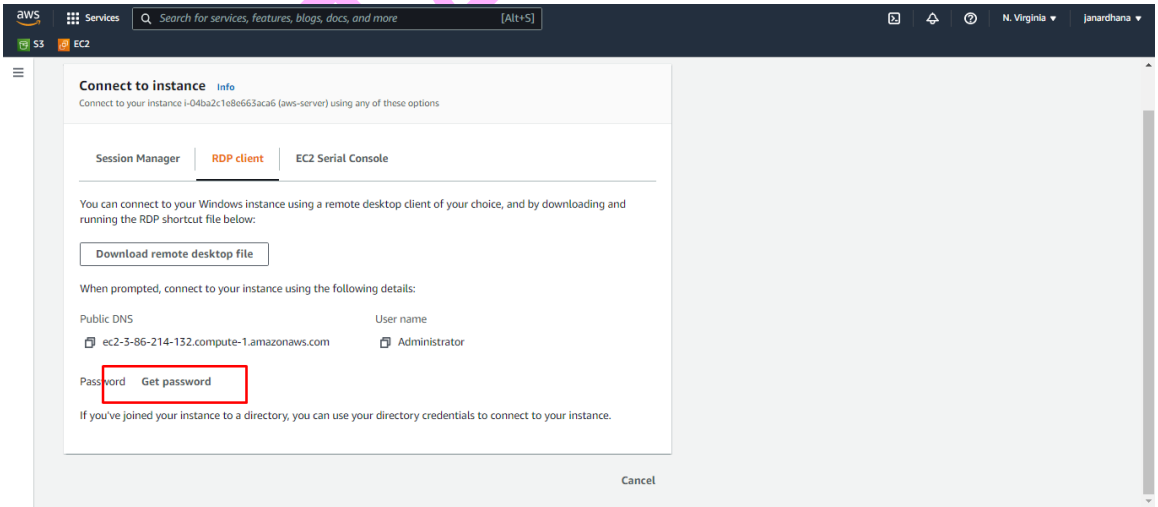
5 Azure backup for onprem servers

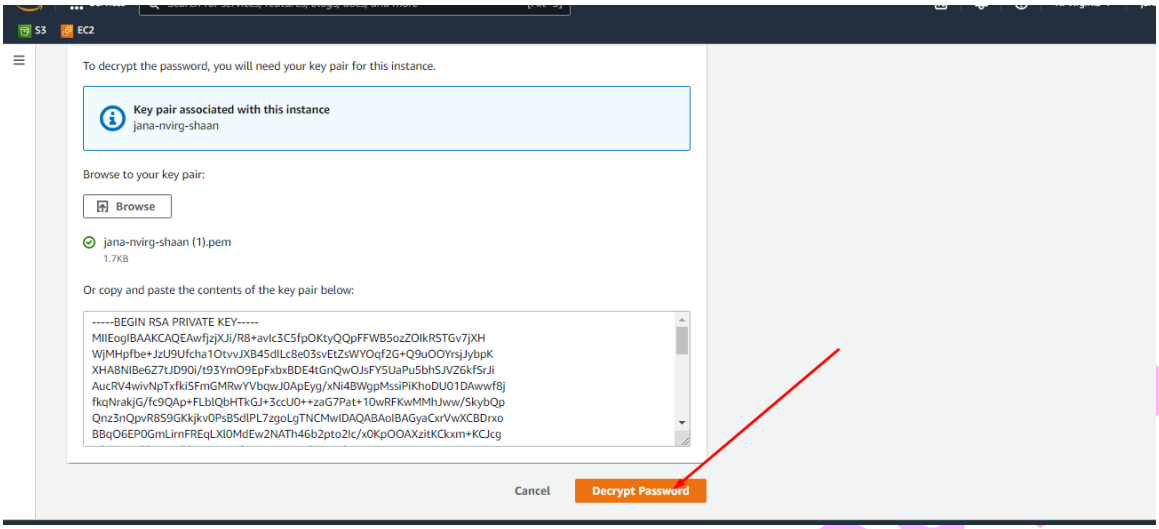
Let's say that we have on prem servers and we need to take their backup to the azure then we can do the below.

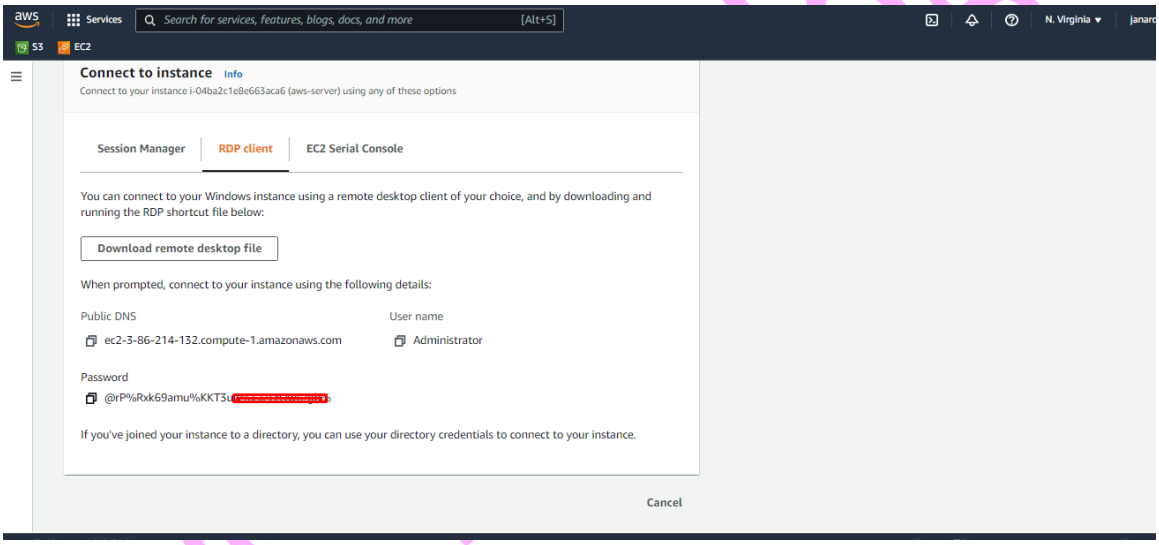
Since we don't have infrastructure we are going to build the server in aws



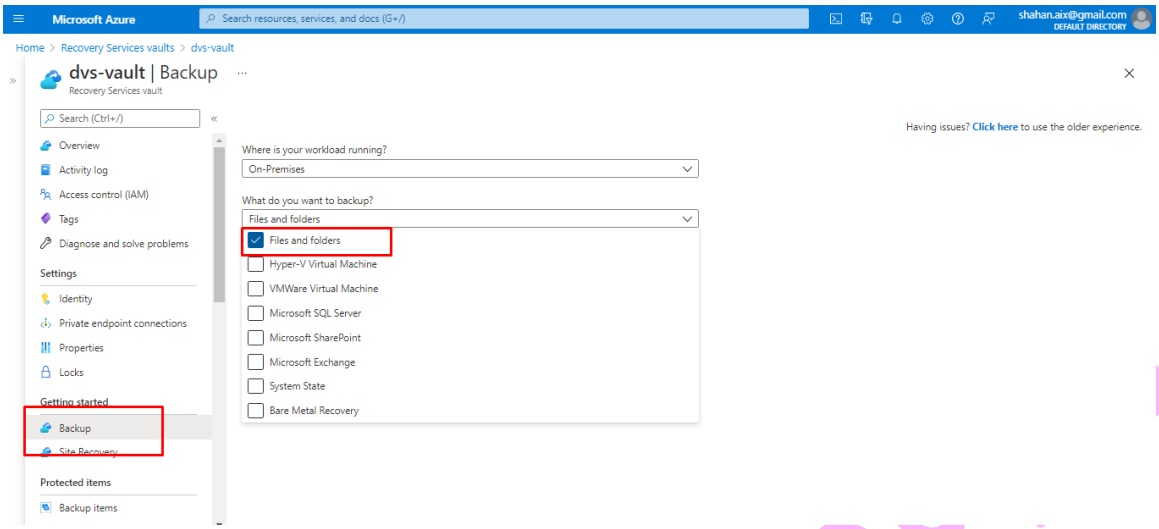
Let's try to login in to the server

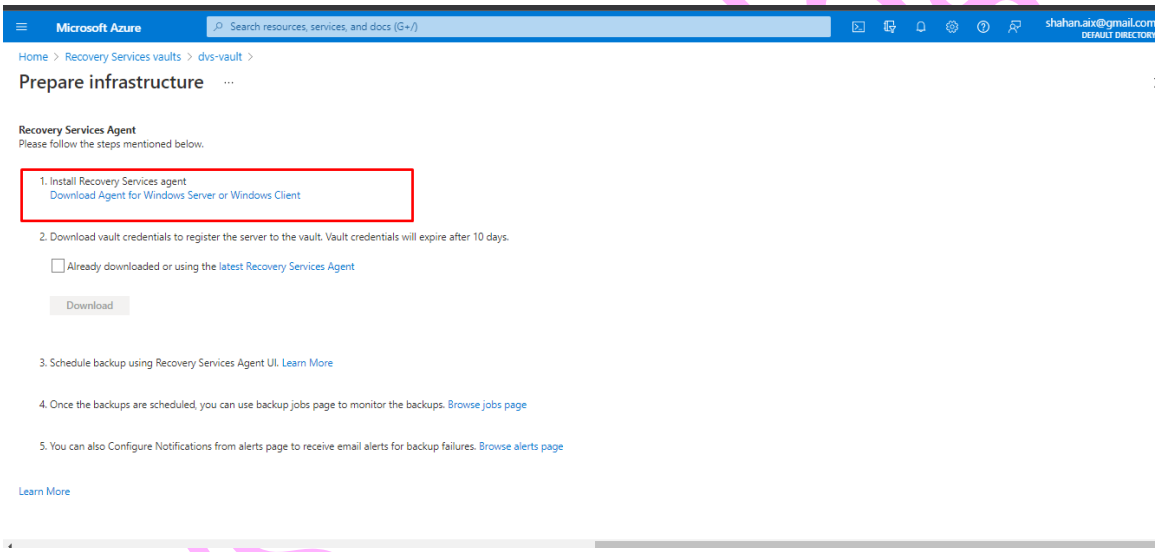


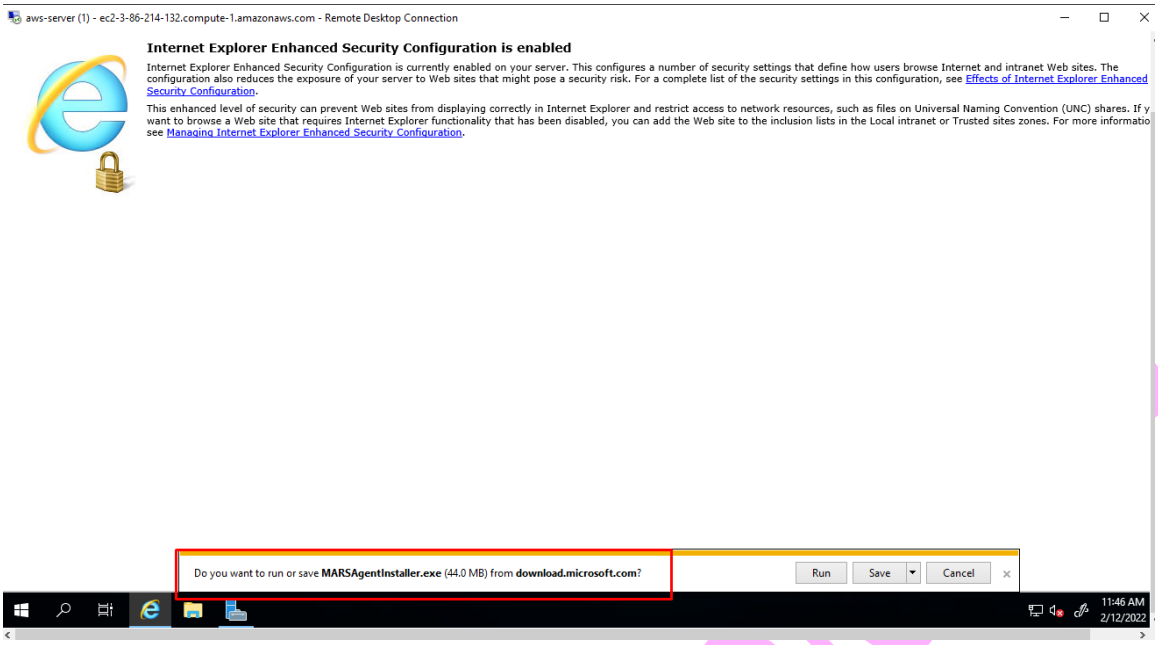


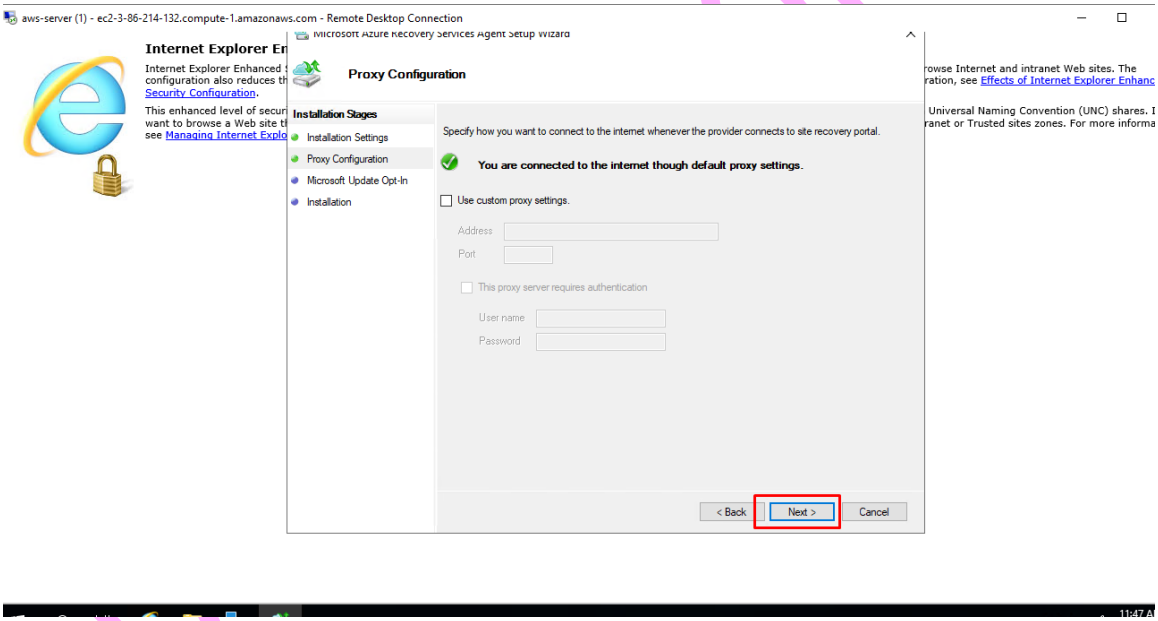


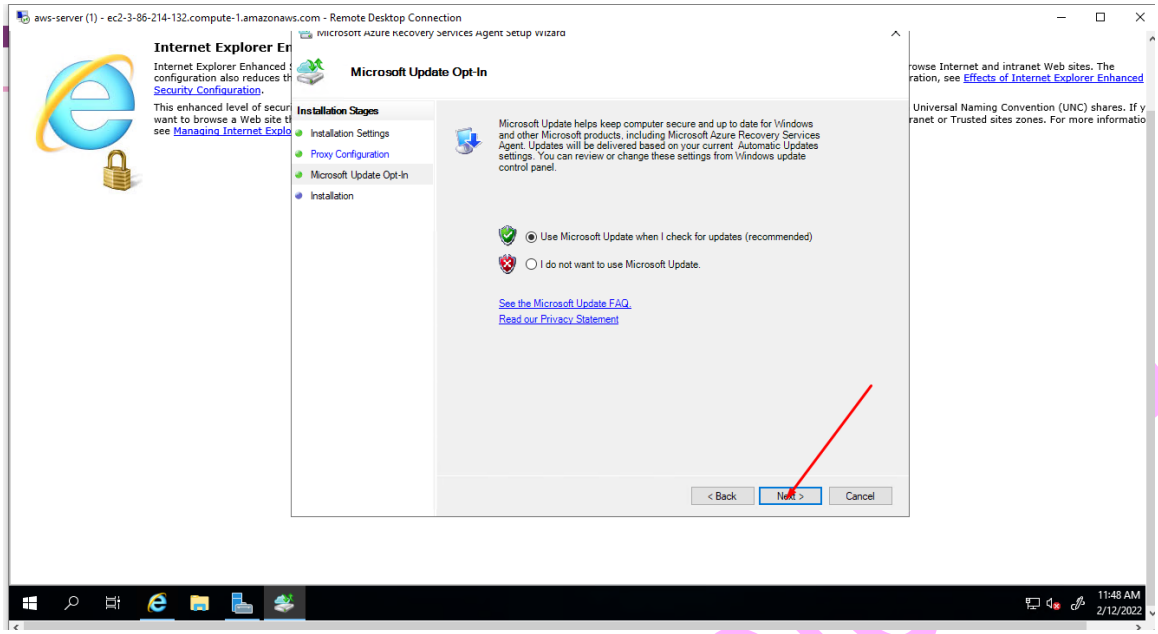
Configure the backup:

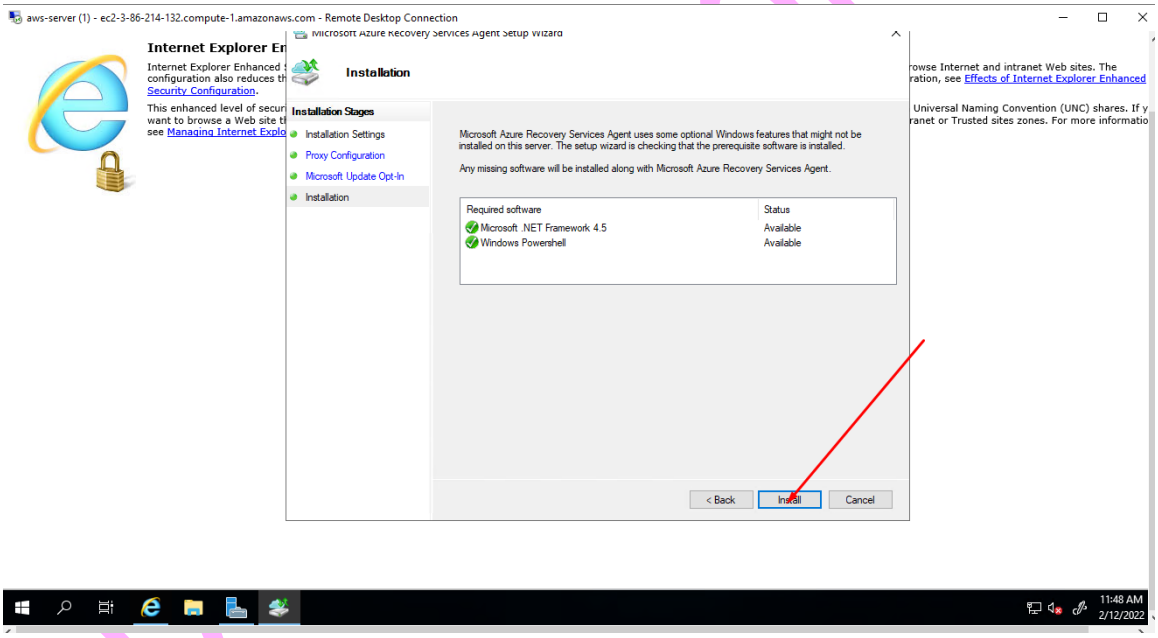

Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Recovery Services vaults > dvs-vault
dvs-vault | Backup
Recovery Services vault
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Identity
Private endpoint connections
Properties
Locks
Getting started
Backup
Protected items
Backup items
Having issues? Click here to use the older experience.
Where is your workload running?
On-Premises
What do you want to backup?
Files and folders
Files and folders
Hyper-V Virtual Machine
VMWare Virtual Machine
Microsoft SQL Server
Microsoft SharePoint
Microsoft Exchange
System State
Bare Metal Recovery

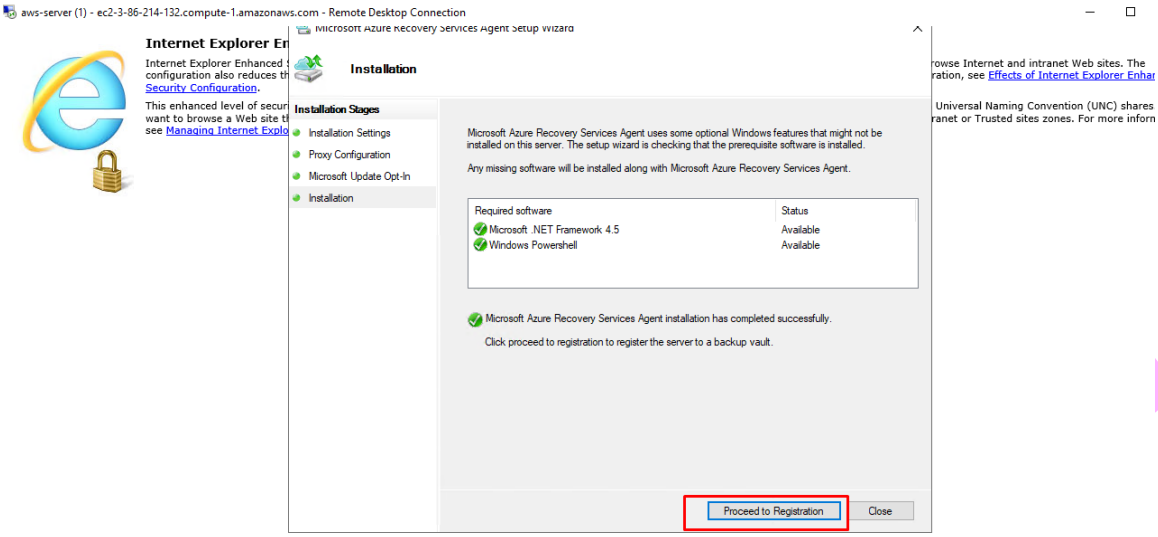

Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Recovery Services vaults > dvs-vault >
Prepare infrastructure
Recovery Services Agent
Please follow the steps mentioned below.
1. Install Recovery Services agent
Download Agent for Windows Server or Windows Client
2. Download vault credentials to register the server to the vault. Vault credentials will expire after 10 days.
Already downloaded or using the latest Recovery Services Agent
Download
3. Schedule backup using Recovery Services Agent UI. Learn More
4. Once the backups are scheduled, you can use backup jobs page to monitor the backups. Browse jobs page
5. You can also Configure Notifications from alerts page to receive email alerts for backup failures. Browse alerts page
Learn More

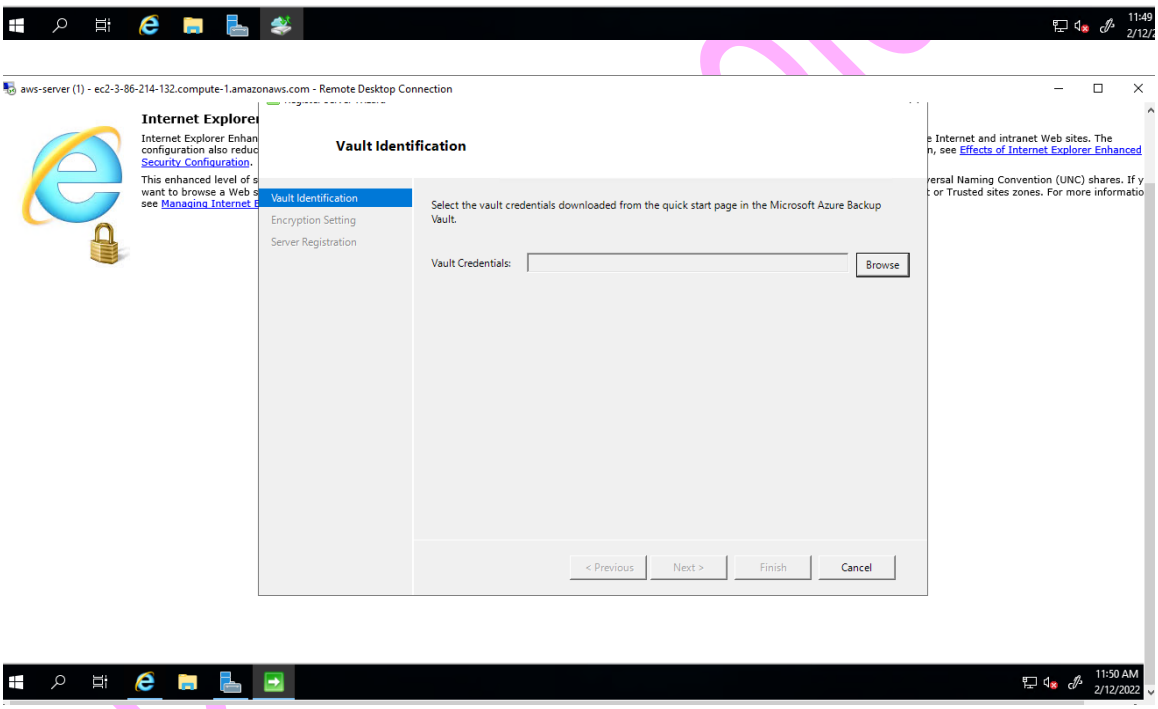

aws-server (1) - ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Internet Explorer Enhanced Security Configuration is enabled
Internet Explorer Enhanced Security Configuration is currently enabled on your server. This configures a number of security settings that define how users browse Internet and intranet Web sites. The configuration also reduces the exposure of your server to Web sites that might pose a security risk. For a complete list of the security settings in this configuration, see Effects of Internet Explorer Enhanced Security Configuration.
This enhanced level of security can prevent Web sites from displaying correctly in Internet Explorer and restrict access to network resources, such as files on Universal Naming Convention (UNC) shares. If y
want to browse a Web site that requires Internet Explorer functionality that has been disabled, you can add the Web site to the inclusion lists in the Local intranet or Trusted sites zones. For more informatio
see Managing Internet Explorer Enhanced Security Configuration.
Do you want to run or save MARSAgentInstaller.exe (44.0 MB) from download.microsoft.com?
Run
Save
Cancel
11:46 AM
2/12/2022

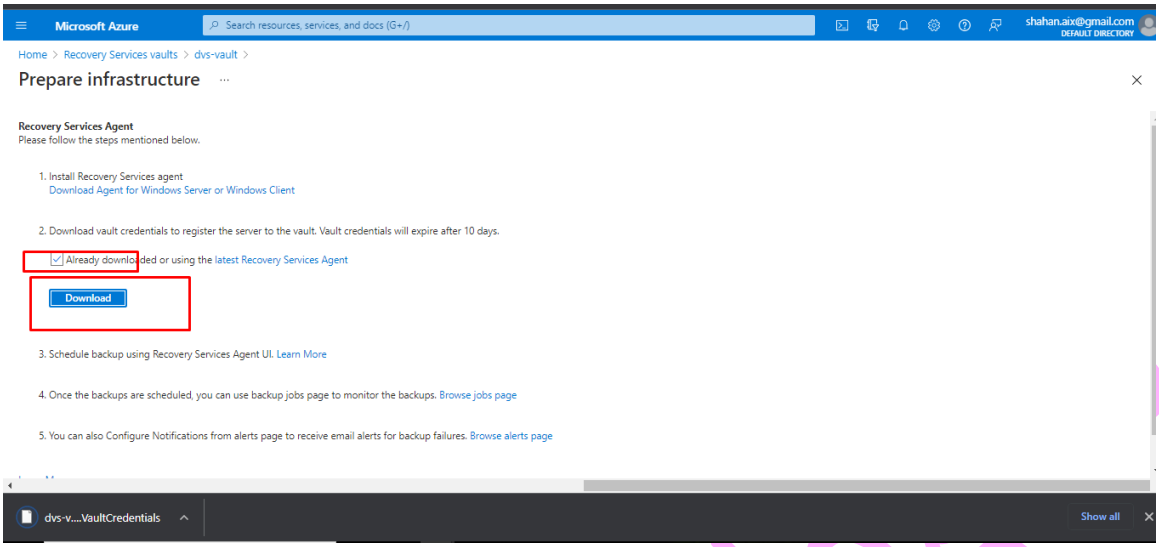

aws-server (1) - ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Recovery Services Agent Setup Wizard
Proxy Configuration
Installation Stages
Installation Settings
Proxy Configuration
Microsoft Update Opt-In
Installation
Specify how you want to connect to the internet whenever the provider connects to site recovery portal.
You are connected to the internet though default proxy settings.
Use custom proxy settings.
Address
Port
This proxy server requires authentication
User name
Password
< Back
Next >
Cancel

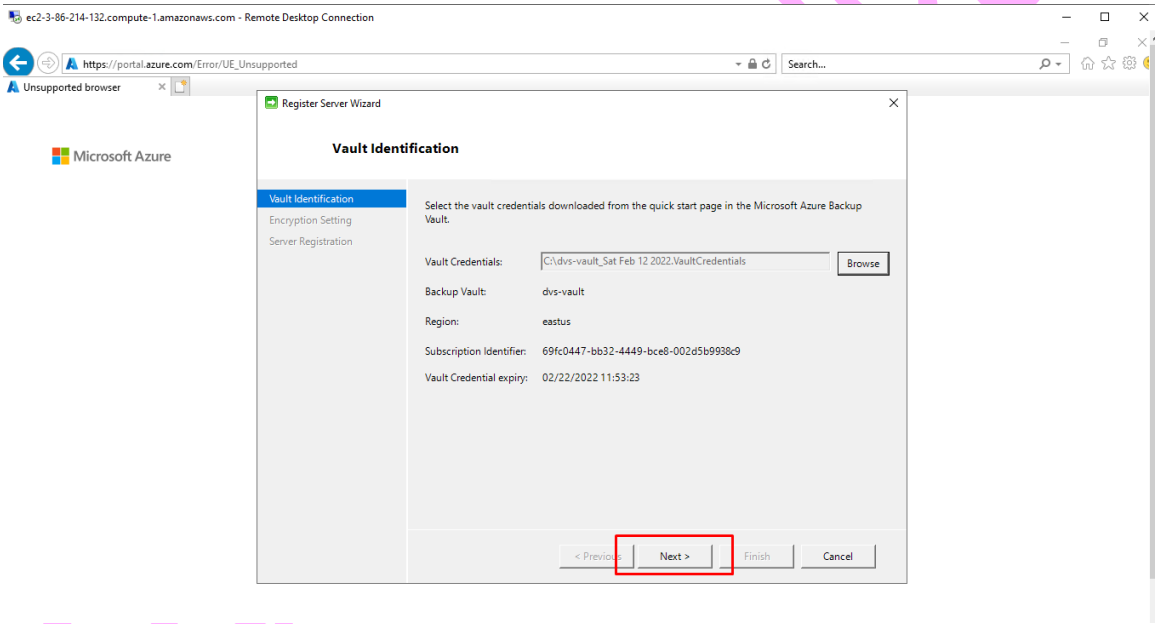

aws-server (1) - ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Recovery Services Agent Setup Wizard
Microsoft Update Opt-In
Installation Stages
Installation Settings
Proxy Configuration
Microsoft Update Opt-In
Installation
Microsoft Update helps keep computer secure and up to date for Windows and other Microsoft products, including Microsoft Azure Recovery Services Agent. Updates will be delivered based on your current Automatic Updates settings. You can review or change these settings from Windows update control panel.
Use Microsoft Update when I check for updates (recommended)
I do not want to use Microsoft Update.
See the Microsoft Update FAQ
Read our Privacy Statement
< Back
Next >
Cancel
11:48 AM
2/12/2022

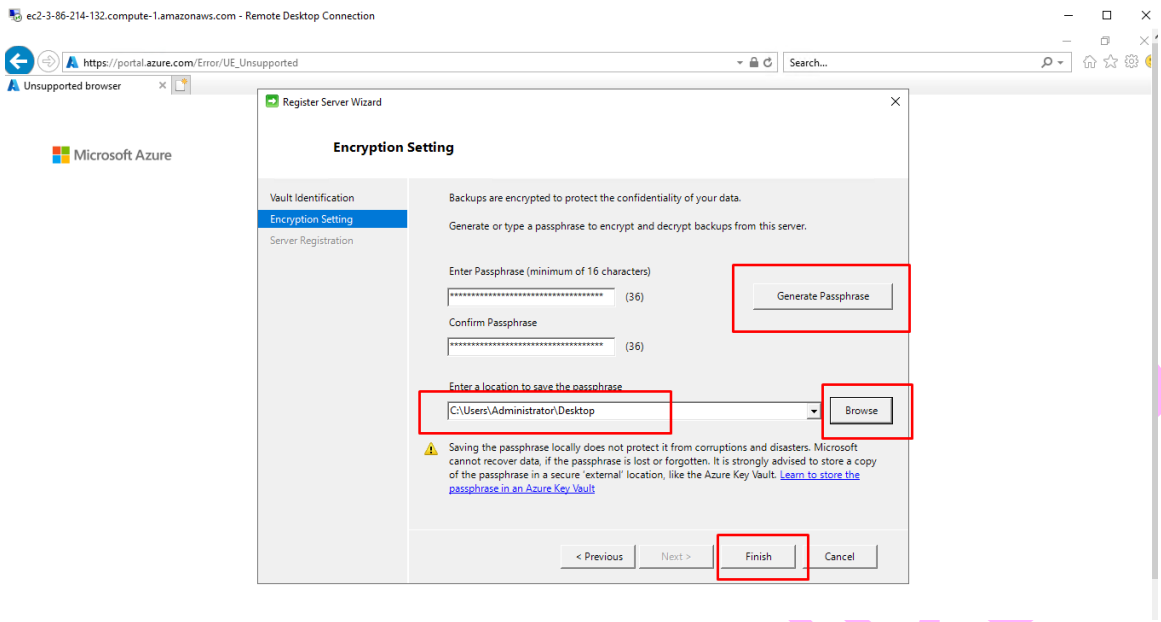

aws-server (1) - ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Recovery Services Agent Setup Wizard
Installation
Installation Stages
Installation Settings
Proxy Configuration
Microsoft Update Opt-In
Installation
Microsoft Azure Recovery Services Agent uses some optional Windows features that might not be installed on this server. The setup wizard is checking that the prerequisite software is installed.
Any missing software will be installed along with Microsoft Azure Recovery Services Agent.
Required software
Status
Microsoft .NET Framework 4.5
Available
Windows Powershell
Available
< Back
Install
Cancel
11:48 AM
2/12/2022

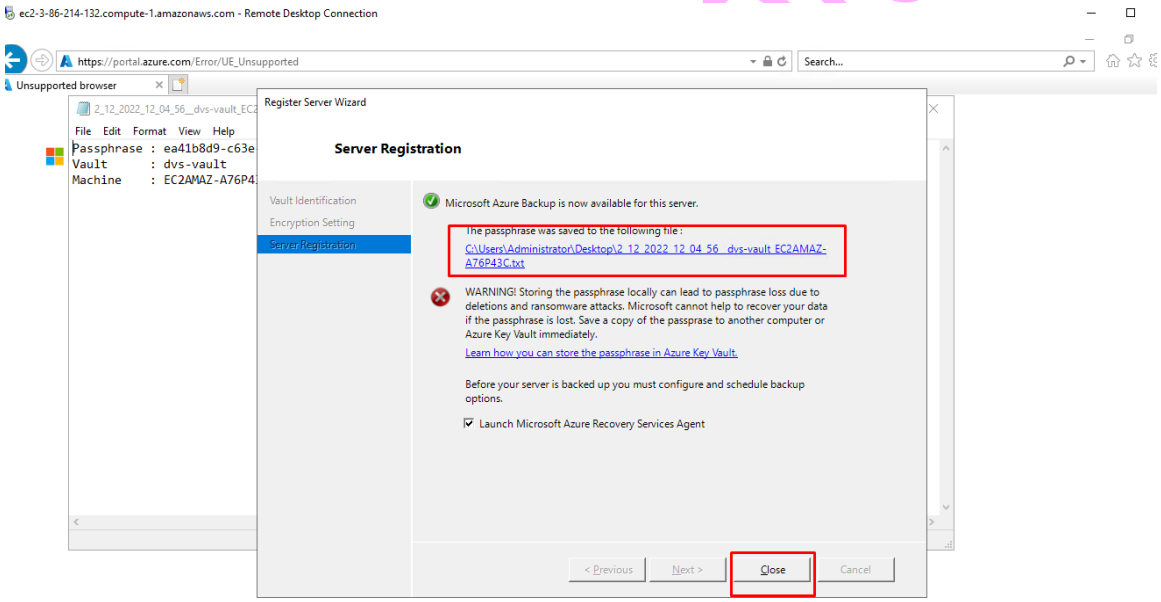

aws-server (1) - ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Recovery Services Agent Setup Wizard
Installation
Installation Stages
Installation Settings
Proxy Configuration
Microsoft Update Opt-In
Installation
Microsoft Azure Recovery Services Agent uses some optional Windows features that might not be installed on this server. The setup wizard is checking that the prerequisite software is installed.
Any missing software will be installed along with Microsoft Azure Recovery Services Agent.
Required software
Status
Microsoft .NET Framework 4.5
Available
Windows Powershell
Available
Microsoft Azure Recovery Services Agent installation has completed successfully.
Click proceed to registration to register the server to a backup vault.
Proceed to Registration
Close


aws-server (1) - ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Vault Identification
Vault Identification
Encryption Setting
Server Registration
Select the vault credentials downloaded from the quick start page in the Microsoft Azure Backup Vault.
Vault Credentials:
Browse
< Previous
Next >
Finish
Cancel


Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Recovery Services vaults > dvs-vault >
Prepare infrastructure
Recovery Services Agent
Please follow the steps mentioned below.
1. Install Recovery Services agent
Download Agent for Windows Server or Windows Client
2. Download vault credentials to register the server to the vault. Vault credentials will expire after 10 days.
Already downloaded or using the latest Recovery Services Agent
Download
3. Schedule backup using Recovery Services Agent UI. Learn More
4. Once the backups are scheduled, you can use backup jobs page to monitor the backups. Browse jobs page
5. You can also Configure Notifications from alerts page to receive email alerts for backup failures. Browse alerts page
dvs-v....VaultCredentials
Show all

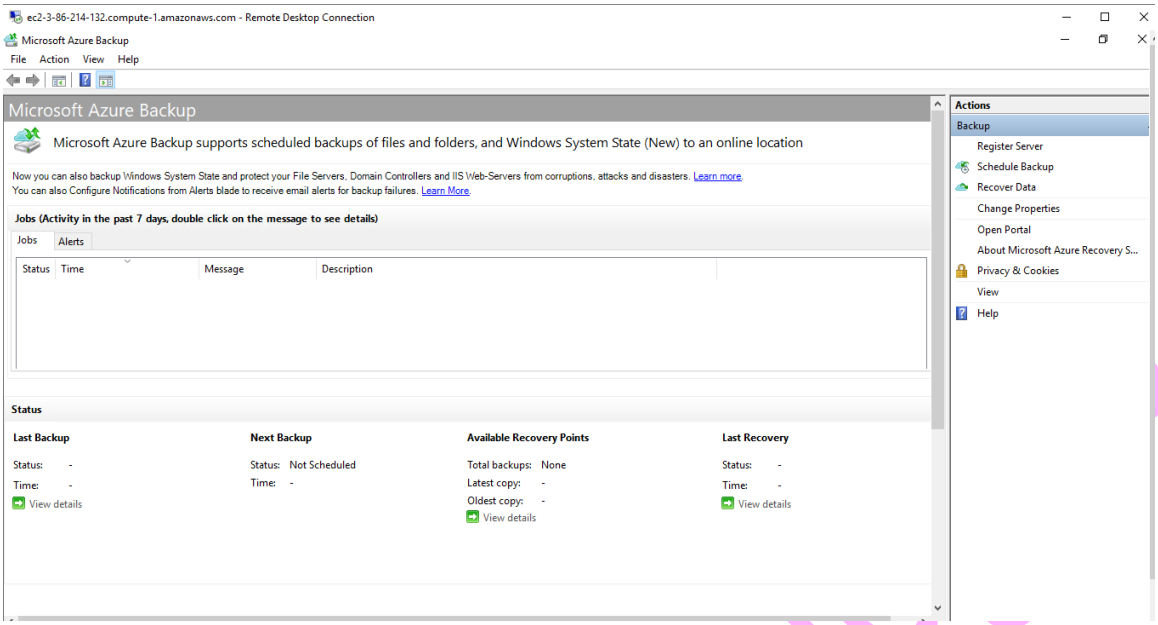

ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
https://portal.azure.com/Error/UE_Unsupported
Search...
Unsupported browser
Microsoft Azure
Register Server Wizard
Vault Identification
Vault Identification
Encryption Setting
Server Registration
Select the vault credentials downloaded from the quick start page in the Microsoft Azure Backup Vault.
Vault Credentials:
C:\dvs-vault_Sat Feb 12 2022.VaultCredentials
Browse
Backup Vault:
dvs-vault
Region:
eastus
Subscription Identifier:
69fc0447-bb32-4449-bce8-002d5b9938c9
Vault Credential expiry:
02/22/2022 11:53:23
< Previous
Next >
Finish
Cancel

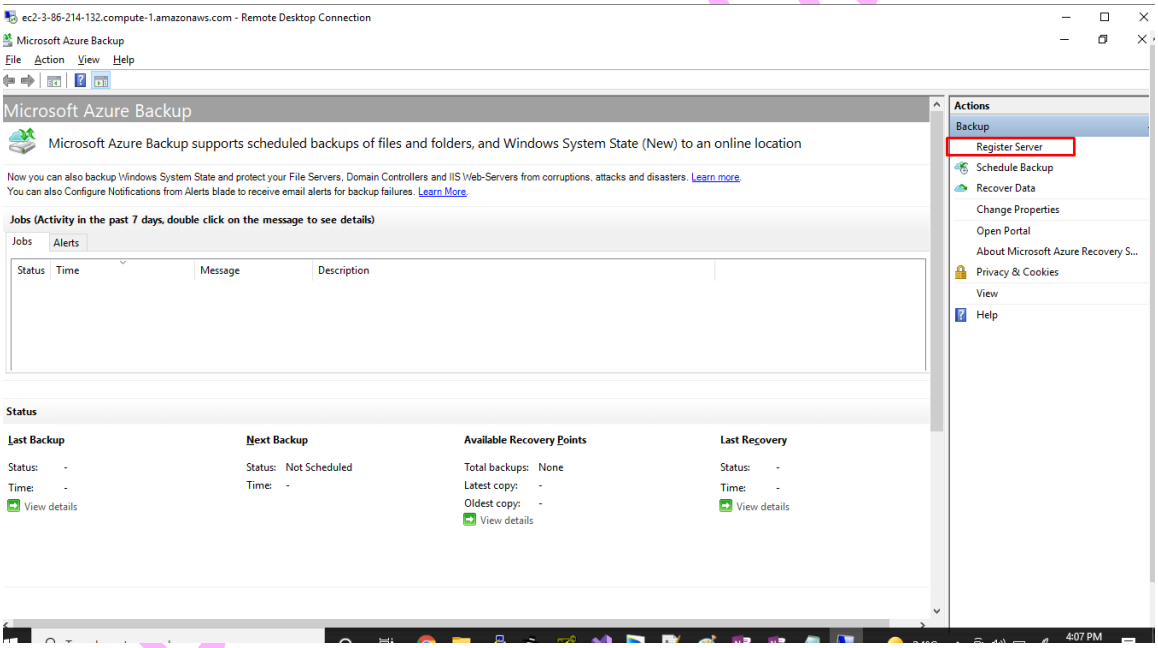


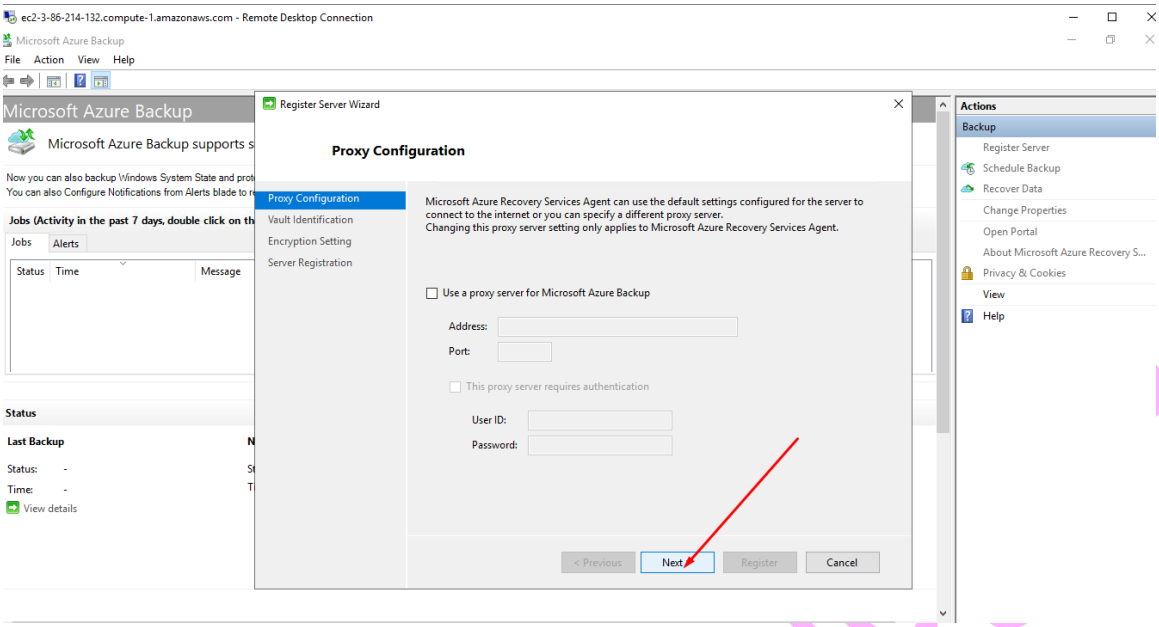


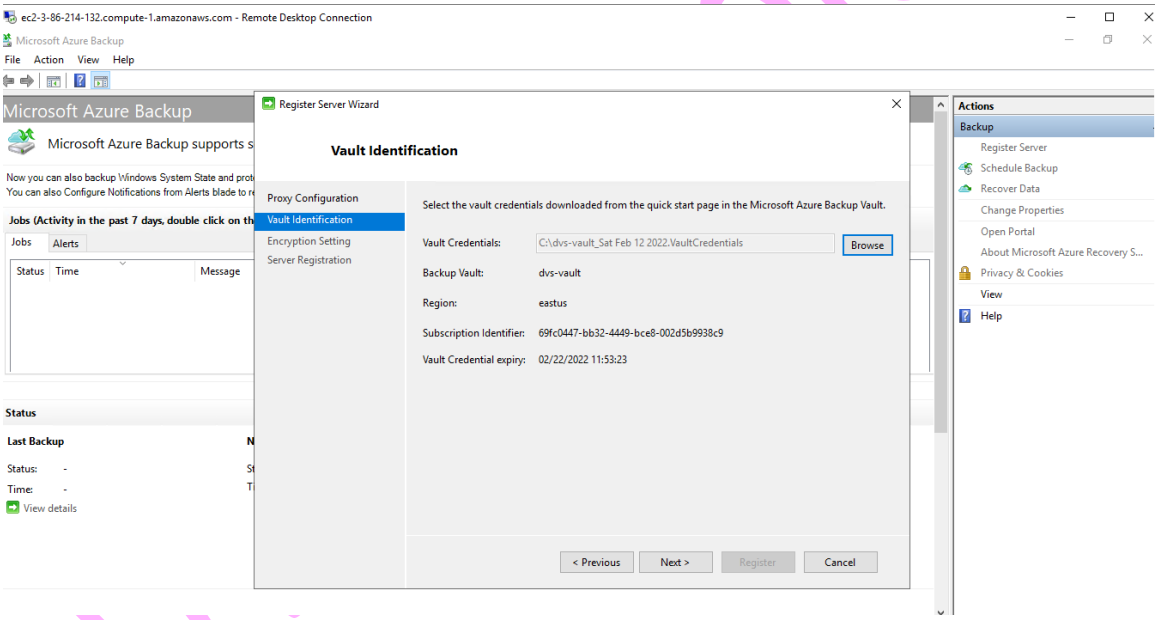
Finally we have configured the backup agent to the azure vault

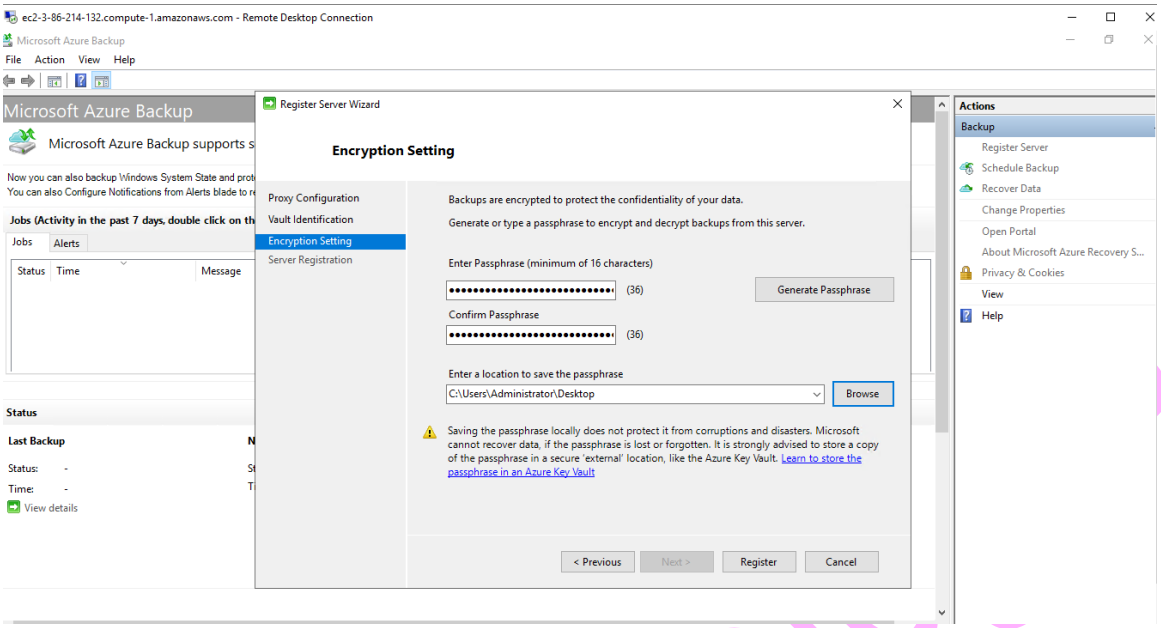
Let's register the aws vm to azure recovery vault:

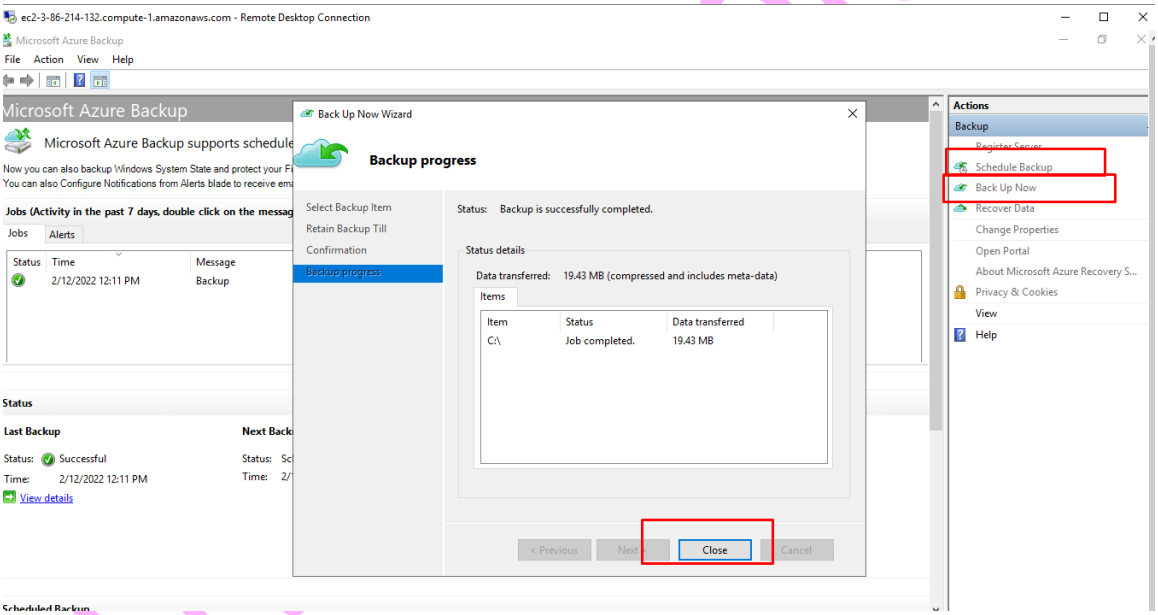

ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Backup
File Action View Help
Microsoft Azure Backup
Microsoft Azure Backup supports scheduled backups of files and folders, and Windows System State (New) to an online location
Now you can also backup Windows System State and protect your File Servers, Domain Controllers and IIS Web-Servers from corruptions, attacks and disasters. Learn more.
You can also Configure Notifications from Alerts blade to receive email alerts for backup failures. Learn More.
Jobs (Activity in the past 7 days, double click on the message to see details)
Jobs
Alerts
Status
Time
Message
Description
Status
Last Backup
Status: -
Time: -
View details
Next Backup
Status: Not Scheduled
Time: -
Available Recovery Points
Total backups: None
Latest copy: -
Oldest copy: -
View details
Last Recovery
Status: -
Time: -
View details
Actions
Backup
Register Server
Schedule Backup
Recover Data
Change Properties
Open Portal
About Microsoft Azure Recovery S...
Privacy & Cookies
View
Help


ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Backup
File Action View Help
Microsoft Azure Backup
Microsoft Azure Backup supports scheduled backups of files and folders, and Windows System State (New) to an online location
Now you can also backup Windows System State and protect your File Servers, Domain Controllers and IIS Web-Servers from corruptions, attacks and disasters. Learn more.
You can also Configure Notifications from Alerts blade to receive email alerts for backup failures. Learn More.
Jobs (Activity in the past 7 days, double click on the message to see details)
Jobs
Alerts
Status
Time
Message
Description
Status
Last Backup
Status: -
Time: -
View details
Next Backup
Status: Not Scheduled
Time: -
Available Recovery Points
Total backups: None
Latest copy: -
Oldest copy: -
View details
Last Recovery
Status: -
Time: -
View details
Actions
Backup
Register Server
Schedule Backup
Recover Data
Change Properties
Open Portal
About Microsoft Azure Recovery S...
Privacy & Cookies
View
Help
4:07 PM


ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Backup
File Action View Help
Microsoft Azure Backup
Microsoft Azure Backup supports s
Now you can also backup Windows System State and prot
You can also Configure Notifications from Alerts blade to r
Jobs (Activity in the past 7 days, double click on th
Jobs Alerts
Status Time Message
Status
Last Backup
Status: -
Time: -
View details
Register Server Wizard
Proxy Configuration
Proxy Configuration
Vault Identification
Encryption Setting
Server Registration
Microsoft Azure Recovery Services Agent can use the default settings configured for the server to connect to the internet or you can specify a different proxy server.
Changing this proxy server setting only applies to Microsoft Azure Recovery Services Agent.
Use a proxy server for Microsoft Azure Backup
Address:
Port:
This proxy server requires authentication
User ID:
Password:
< Previous
Next >
Register
Cancel
Actions
Backup
Register Server
Schedule Backup
Recover Data
Change Properties
Open Portal
About Microsoft Azure Recovery S...
Privacy & Cookies
View
Help


ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Microsoft Azure Backup
File Action View Help
Microsoft Azure Backup
Microsoft Azure Backup supports s
Now you can also backup Windows System State and prot
You can also Configure Notifications from Alerts blade to r
Jobs (Activity in the past 7 days, double click on th
Jobs Alerts
Status Time Message
Status
Last Backup
Status: -
Time: -
View details
Register Server Wizard
Vault Identification
Proxy Configuration
Vault Identification
Encryption Setting
Server Registration
Select the vault credentials downloaded from the quick start page in the Microsoft Azure Backup Vault.
Vault Credentials: C:\dvs-vault_Sat Feb 12 2022.VaultCredentials
Browse
Backup Vault: dvs-vault
Region: eastus
Subscription Identifier: 69fc0447-bb32-4449-bce8-002d5b9938c9
Vault Credential expiry: 02/22/2022 11:53:23
< Previous
Next >
Register
Cancel
Actions
Backup
Register Server
Schedule Backup
Recover Data
Change Properties
Open Portal
About Microsoft Azure Recovery S...
Privacy & Cookies
View
Help





Verifying from azure console:

Microsoft Azure | Search resources, services, and docs (G+/) | shahan.aix@gmail.com DEFAULT DIRECTORY

Home > Recovery Services vaults > dvs-vault

dvs-vault | Backup items

Recovery Services vault

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

Settings

- Identity
- Private endpoint connections
- Properties
- Locks

Getting started

- Backup
- Site Recovery

Refresh

For backups, try our new Backup Center. It offers Azure Backup customers a unified view of Recovery Services Vaults used for backup in Azure. It also provides improved sorting and filtering along with new governance capabilities. Click here to get the new experience.

Primary Region | Secondary Region

BACKUP MANAGEMENT TYPE	BACKUP ITEM COUNT
Azure Backup Agent	1
Azure Virtual Machine	1
SAP HANA in Azure VM	0
SQL in Azure VM	0
Azure Storage (Azure Files)	0
DPM	0
Azure Backup Server	0

Microsoft Azure | Search resources, services, and docs (G+/) | shahan.aix@gmail.com DEFAULT DIRECTORY

Home > Recovery Services vaults > dvs-vault >

Backup Items (Azure Backup Agent)

dvs-vault

Refresh | Add | Filter

Fetching data from service completed.

Filter items ...

Backup item	Protected server	Last backup	Last Backup Time
C:\	ec2amaz-a76p43c.		1/1/2001, 4:00:00 AM

Microsoft Azure | Search resources, services, and docs (G+/) | shahan.aix@gmail.c DEFAULT DIREC

Home > Recovery Services vaults > dvs-vault > Backup Items (Azure Backup Agent) >

C:\ on ec2amaz-a76p43c.

Backup Item

Essentials

Recovery services vault
dvs-vault
Computer name
ec2amaz-a76p43c.
Item type
File-Folders

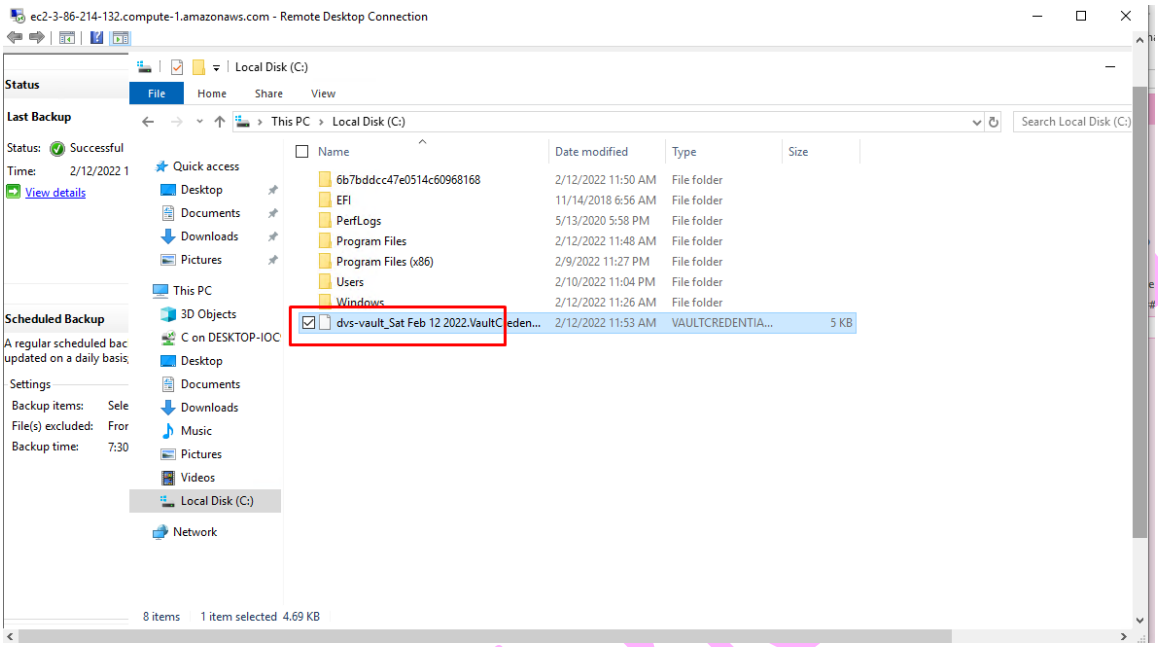
Last backup status
-
Last refreshed at
-

Monitoring

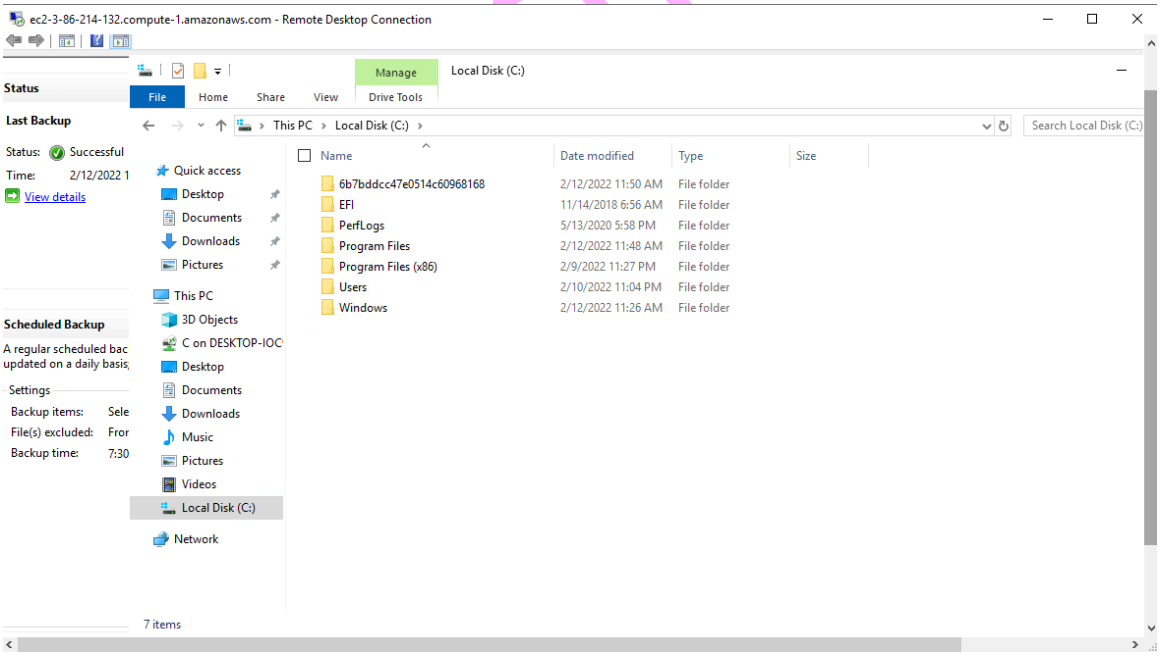
Recovery points

Latest	2/12/2022, 4:11:23 PM
Oldest	2/12/2022, 4:11:23 PM
Total	1

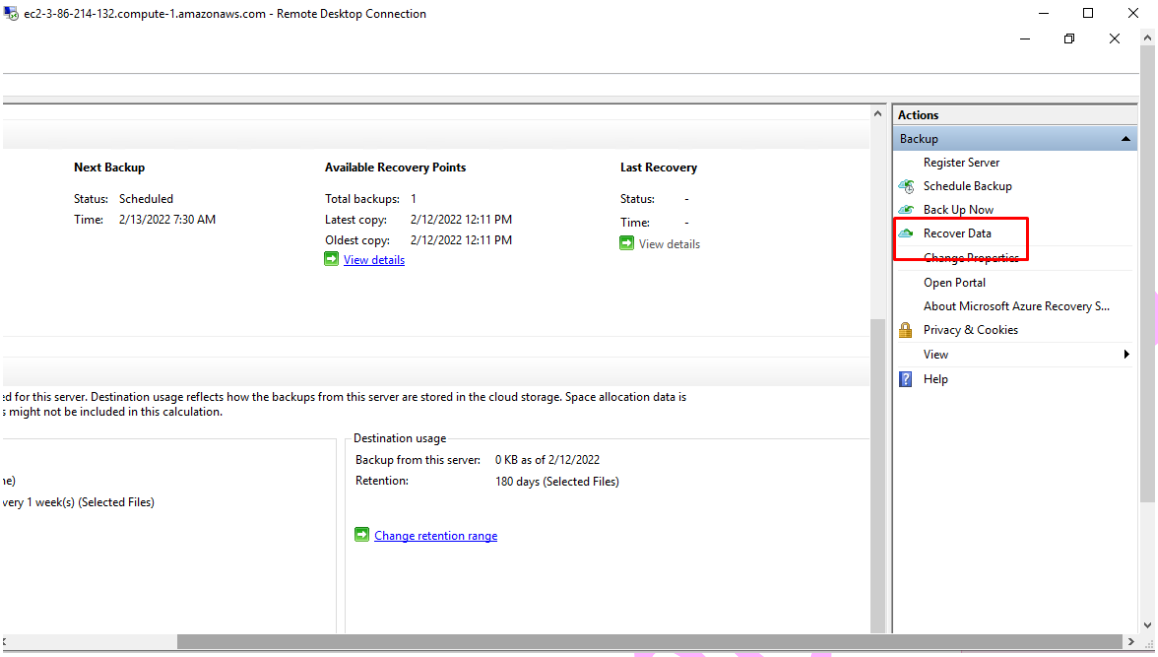
Configure the backup & push some files to the azure recovery. Let's delete the file & try to download it.

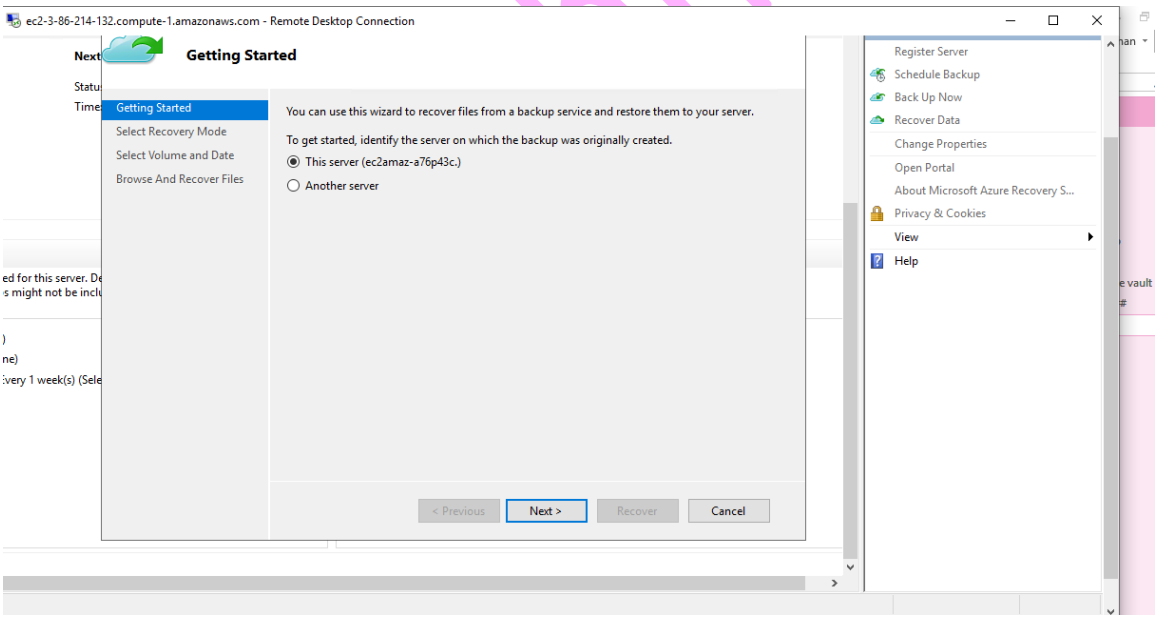


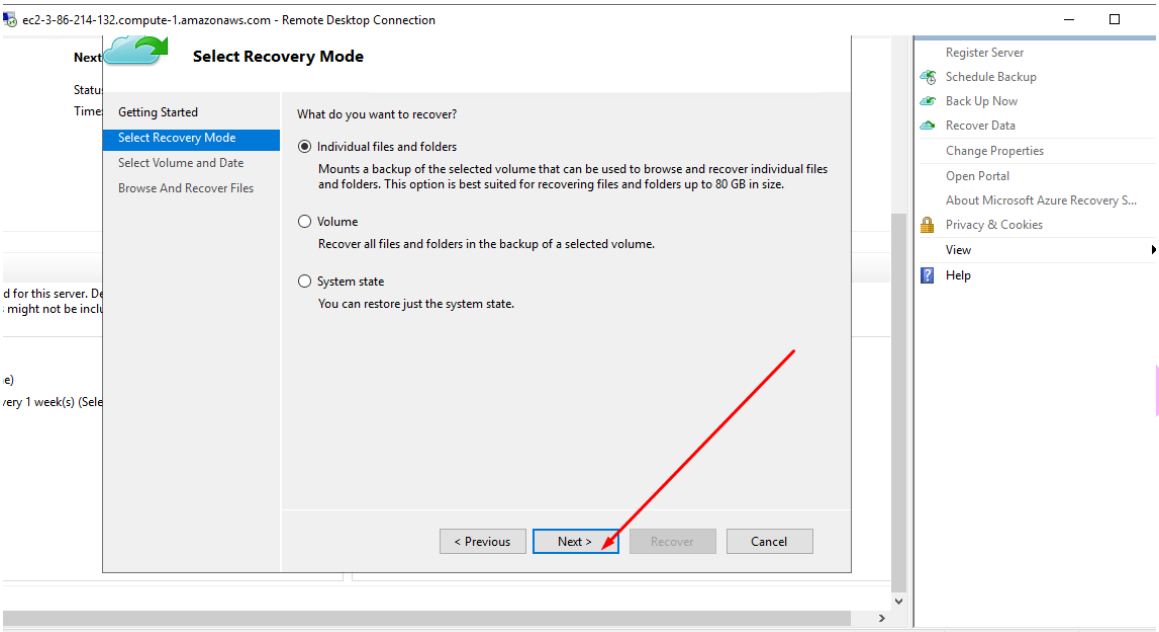
Delete this file

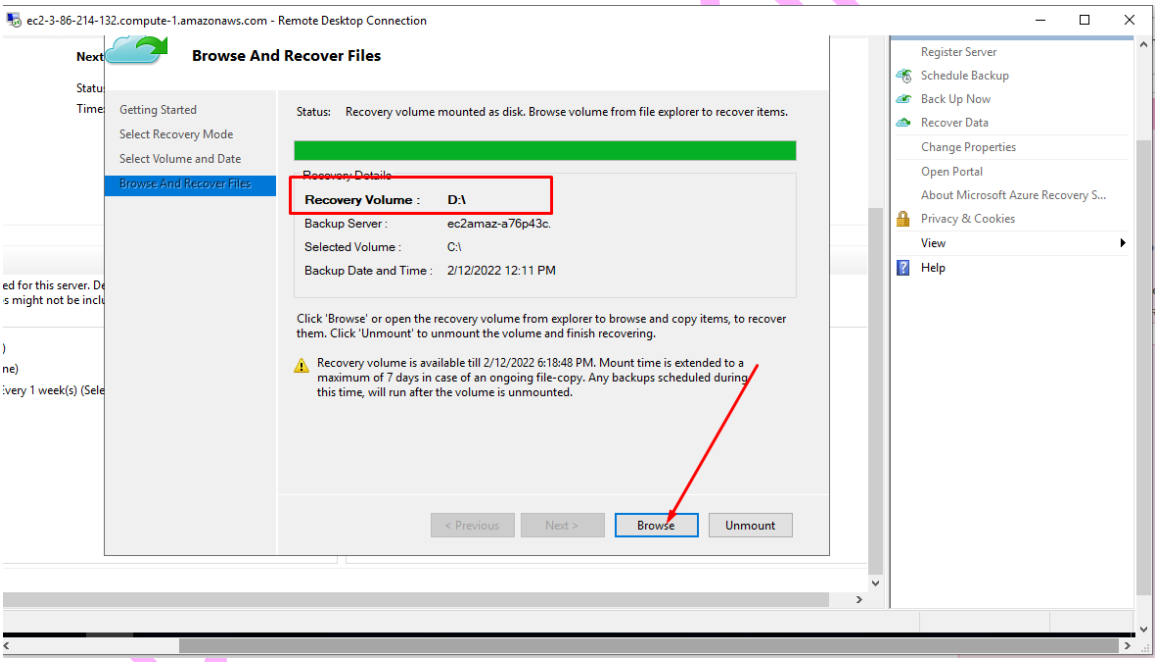


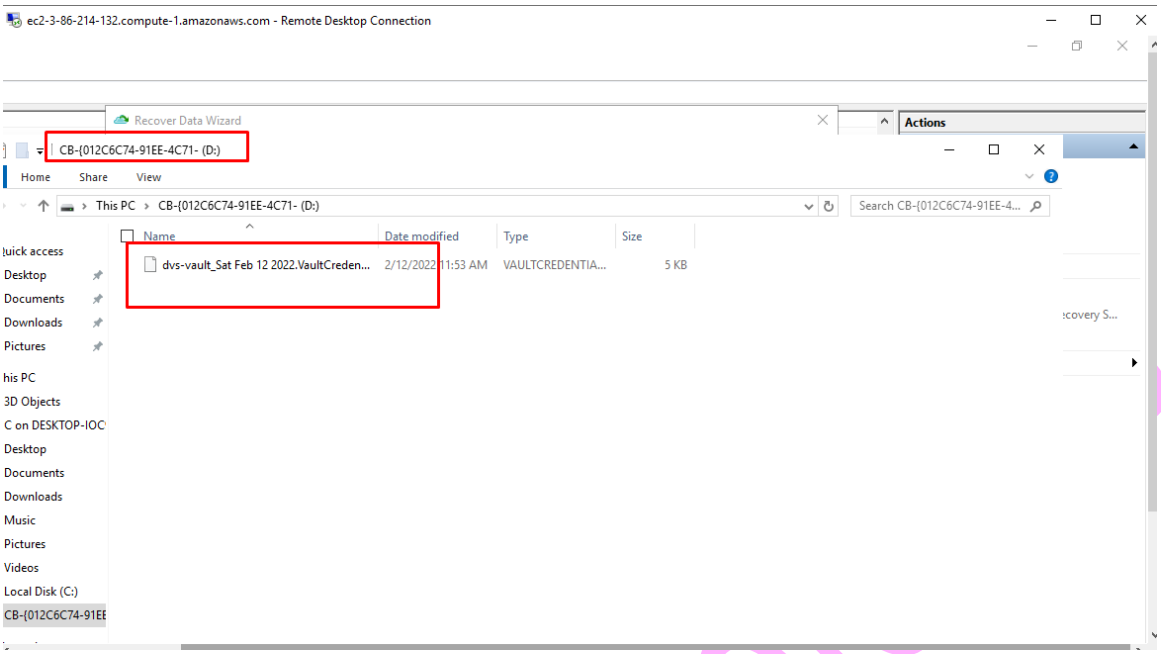
Recover from azure vault:



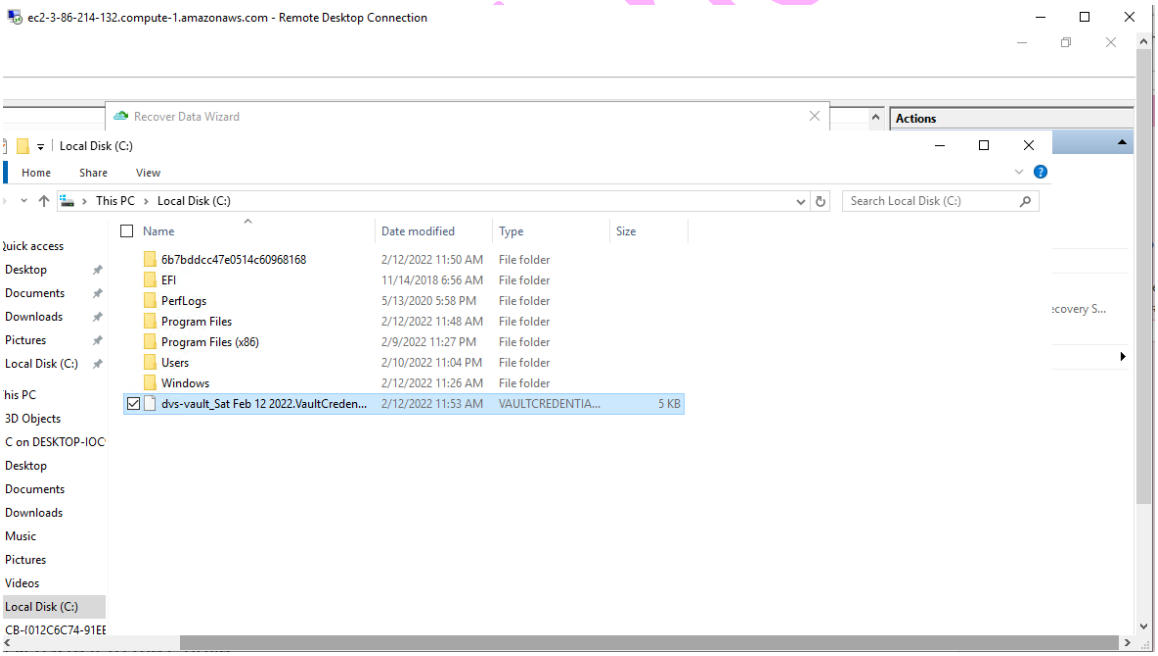



ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Select Recovery Mode
Getting Started
Select Recovery Mode
Select Volume and Date
Browse And Recover Files
What do you want to recover?
Individual files and folders
Mounts a backup of the selected volume that can be used to browse and recover individual files and folders. This option is best suited for recovering files and folders up to 80 GB in size.
Volume
Recover all files and folders in the backup of a selected volume.
System state
You can restore just the system state.
< Previous
Next >
Recover
Cancel
Register Server
Schedule Backup
Back Up Now
Recover Data
Change Properties
Open Portal
About Microsoft Azure Recovery S...
Privacy & Cookies
View
Help


ec2-3-86-214-132.compute-1.amazonaws.com - Remote Desktop Connection
Browse And Recover Files
Getting Started
Select Recovery Mode
Select Volume and Date
Browse And Recover Files
Status: Recovery volume mounted as disk. Browse volume from file explorer to recover items.
Recovery Details
Recovery Volume : D:\
Backup Server : ec2amaz-a76p43c.
Selected Volume : C:\
Backup Date and Time : 2/12/2022 12:11 PM
Click 'Browse' or open the recovery volume from explorer to browse and copy items, to recover them. Click 'Unmount' to unmount the volume and finish recovering.
Recovery volume is available till 2/12/2022 6:18:48 PM. Mount time is extended to a maximum of 7 days in case of an ongoing file-copy. Any backups scheduled during this time, will run after the volume is unmounted.
< Previous
Next >
Browse
Unmount
Register Server
Schedule Backup
Back Up Now
Recover Data
Change Properties
Open Portal
About Microsoft Azure Recovery S...
Privacy & Cookies
View
Help



Just copy & paste it to the C drive



Finally we are done with the onprem server data backup

6 Az site recovery for VM

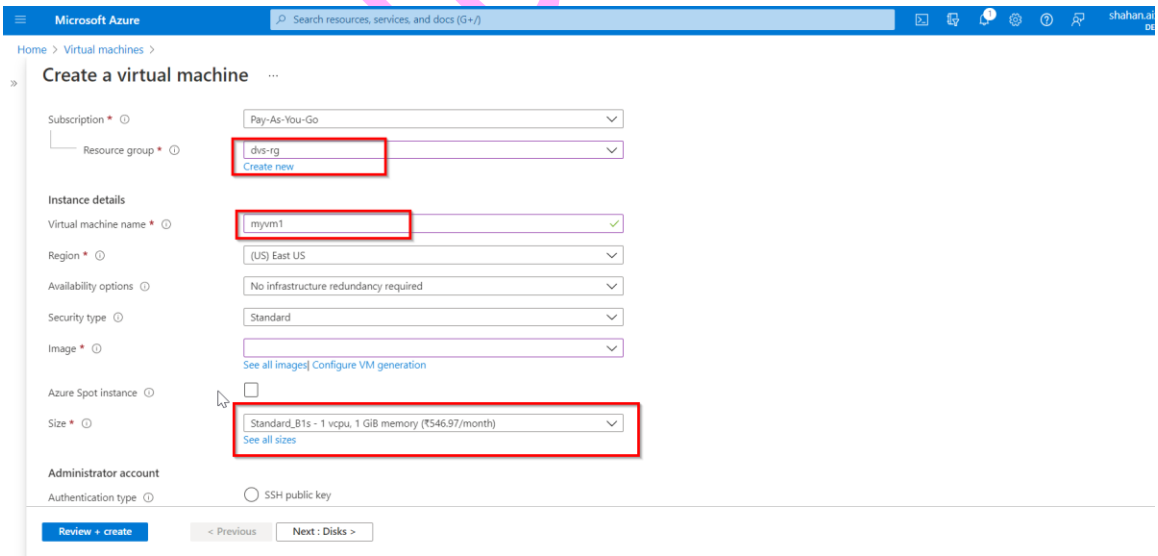
Note It will take at least 30-40 Mins to configure the setup:

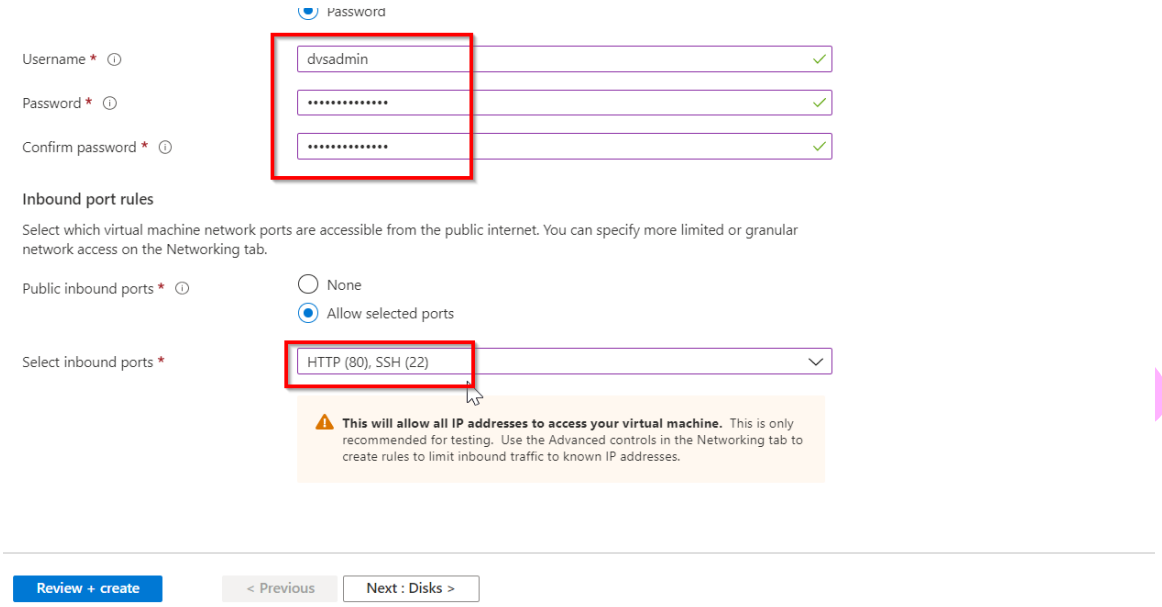
Let's create on VM in source region "east-us" let's try to replicate this one to our DR site "west-us"

Azure to Azure disaster recovery

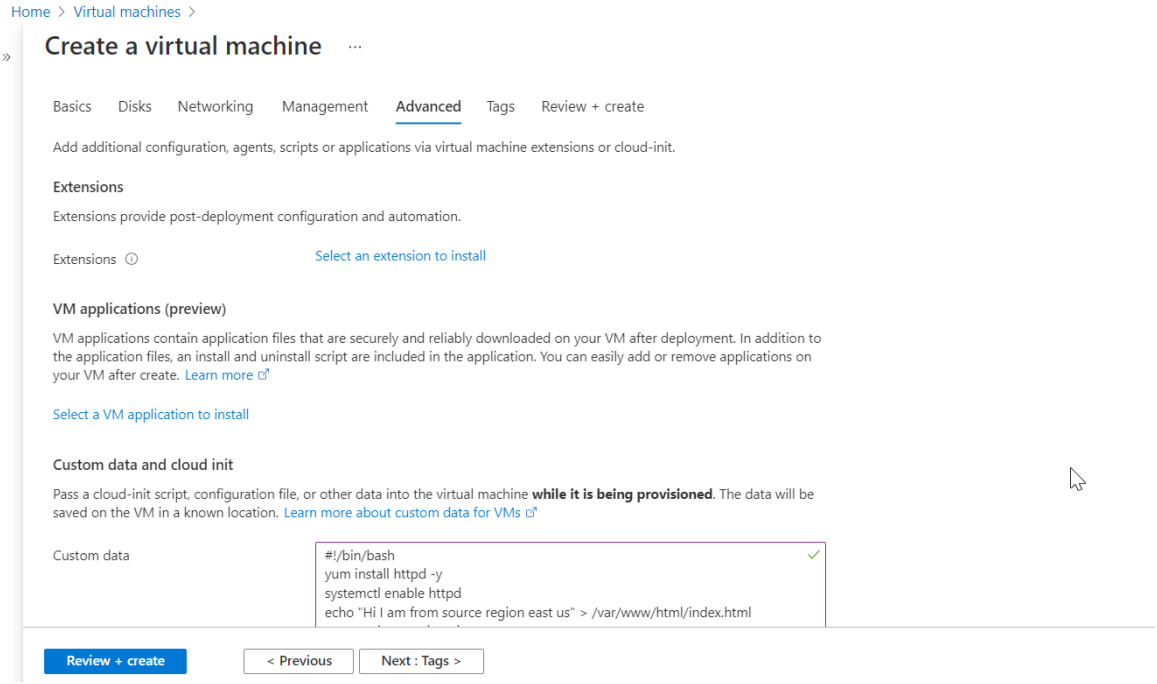
- What are all the components involved in disaster recovery for an Azure virtual machine.
- For the source region, you also need to create a storage account. This becomes the cache storage account. In the replication process, the VM changes are first stored in the cache storage account before they are sent to the target region.
- The replication will create the following target resources
- A resource group that the target VM will belong to
- A new virtual network that the target VM will reside in
- If the source virtual machine is using unmanaged disks , then a new storage account will be created in the target region.

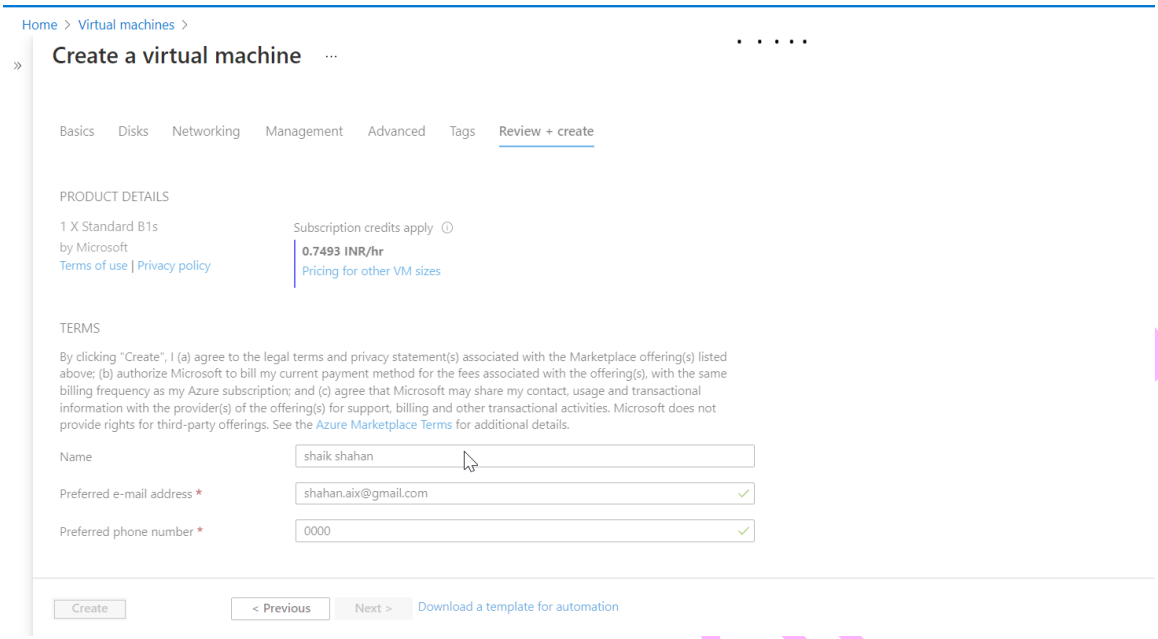
This help to maintain fast recovery for the infrastructure if in case of a region is failed. During the process of DR setup it will ask for cache storage setup this is created on the source region it makes you to speed up the process of backup and later it will copy the things to the destination region



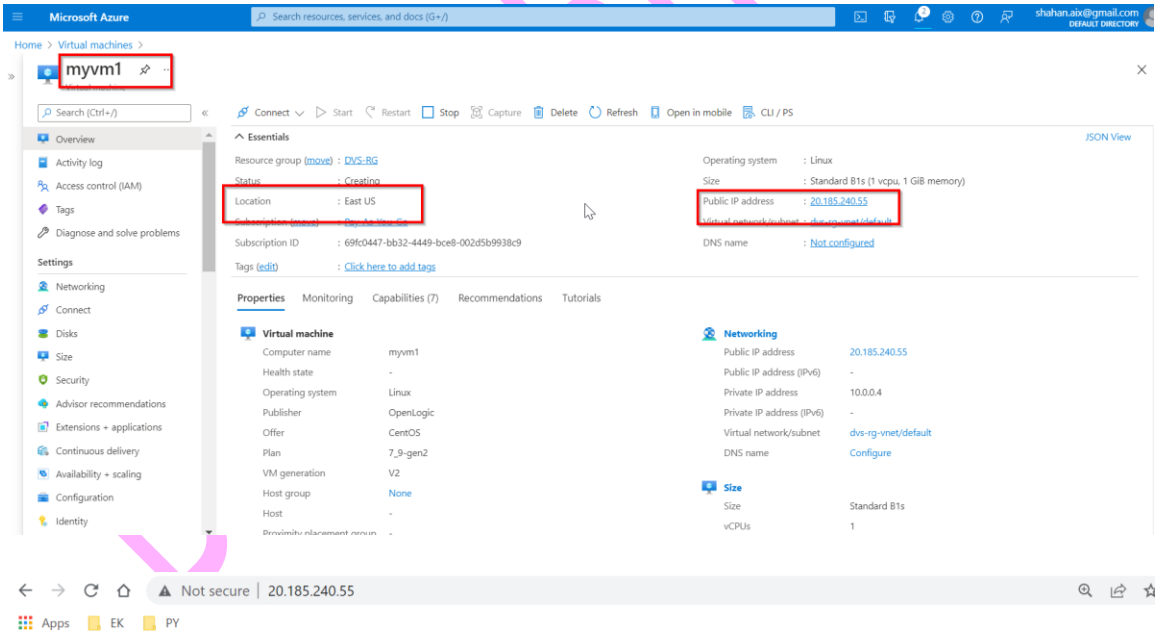



```
#!/bin/bash
yum install httpd -y
systemctl enable httpd
echo "Hi I am from source region east us" > /var/www/html/index.html
systemctl restart httpd
```



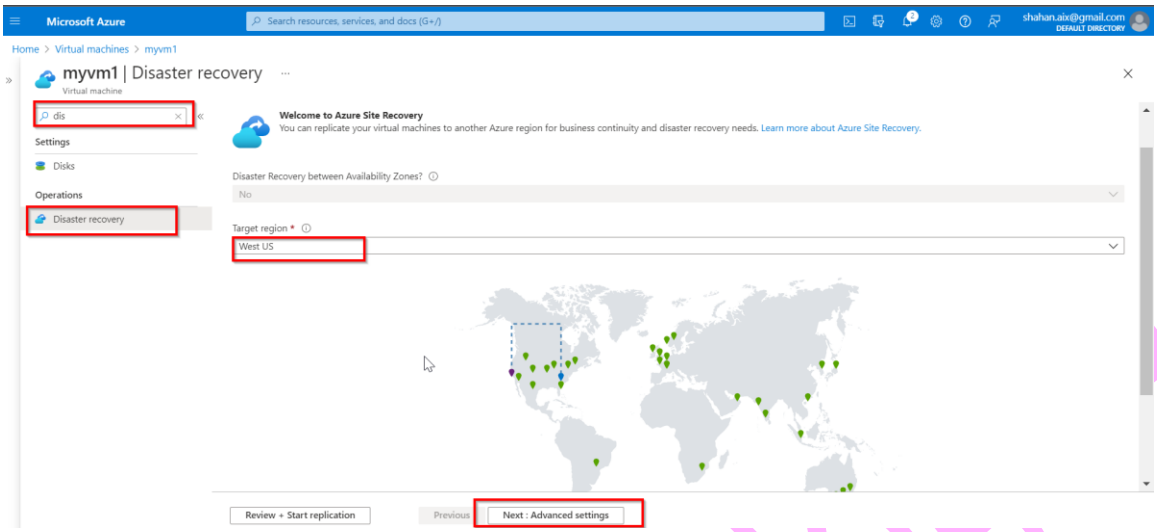


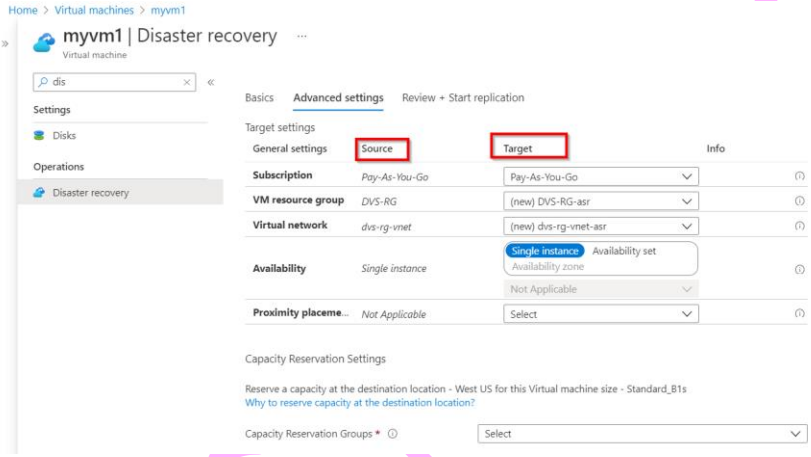
Verifying application in source region east us

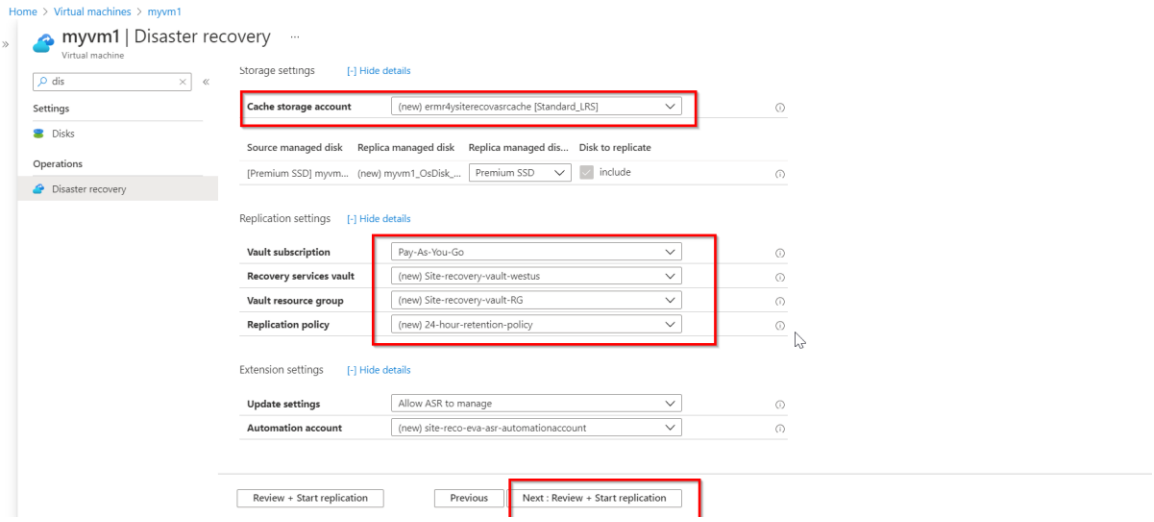


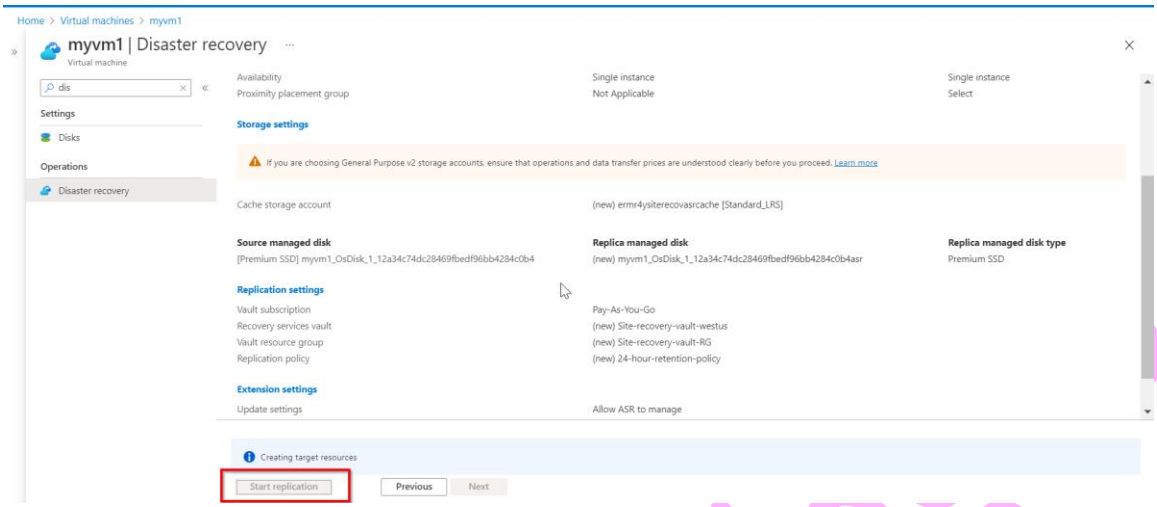
Hi I am from source region east us

Let's replicate this node to destination region "west us"

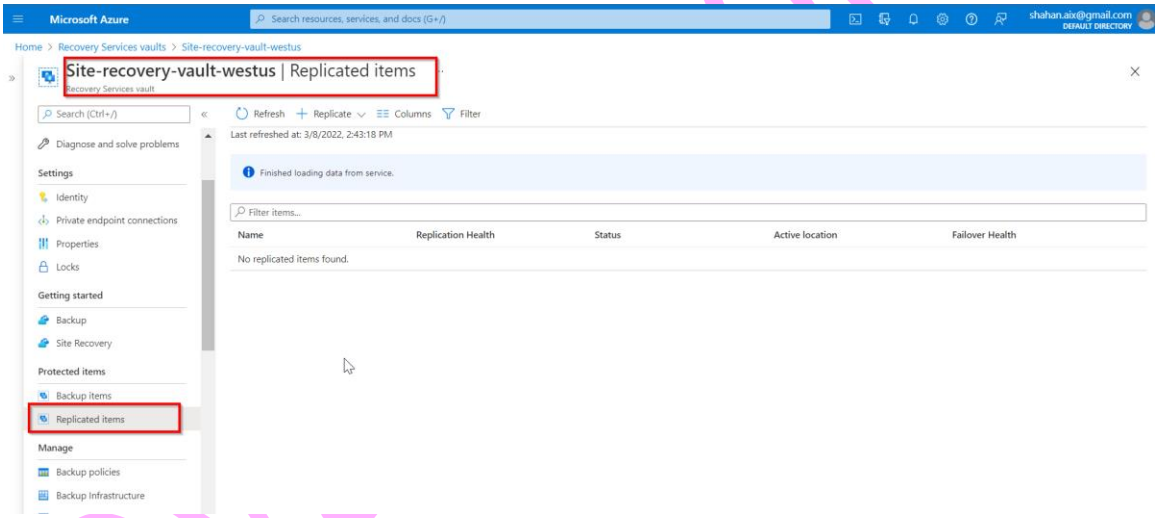

Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Virtual machines > myvm1
myvm1 | Disaster recovery
Virtual machine
dis
Settings
Disks
Operations
Disaster recovery
Welcome to Azure Site Recovery
You can replicate your virtual machines to another Azure region for business continuity and disaster recovery needs. Learn more about Azure Site Recovery.
Disaster Recovery between Availability Zones?
No
Target region *
West US
Review + Start replication
Previous
Next : Advanced settings

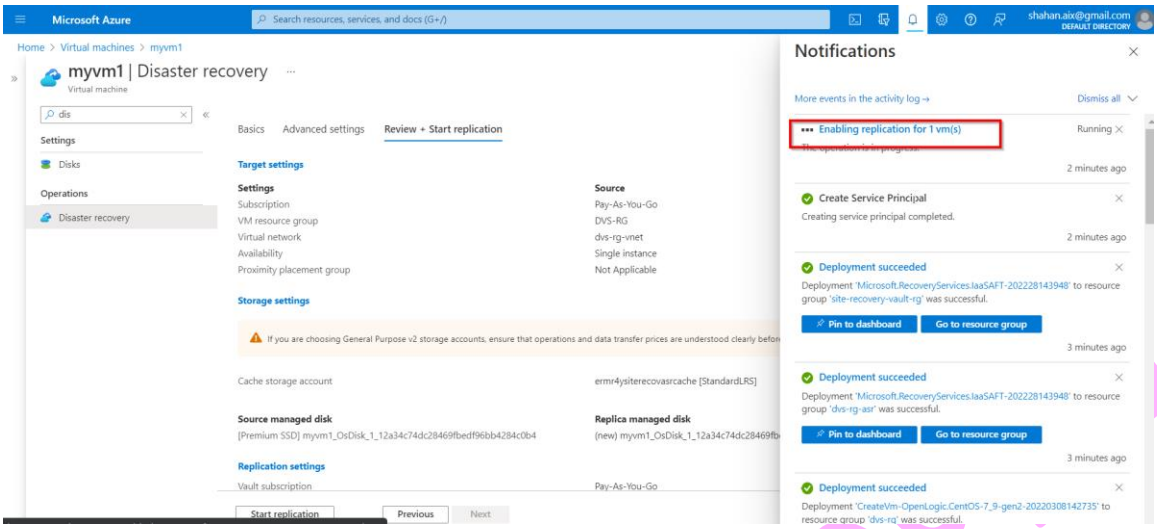

Home > Virtual machines > myvm1
myvm1 | Disaster recovery
Virtual machine
dis
Settings
Disks
Operations
Disaster recovery
Basics
Advanced settings
Review + Start replication
Target settings
General settings
Source
Target
Info
Subscription
Pay-As-You-Go
Pay-As-You-Go
VM resource group
DVS-RG
(new) DVS-RG-asr
Virtual network
dvs-rg-vnet
(new) dvs-rg-vnet-asr
Availability
Single instance
Single instance
Availability set
Availability zone
Not Applicable
Proximity placeme...
Not Applicable
Select
Capacity Reservation Settings
Reserve a capacity at the destination location - West US for this Virtual machine size - Standard_B1s
Why to reserve capacity at the destination location?
Capacity Reservation Groups *
Select

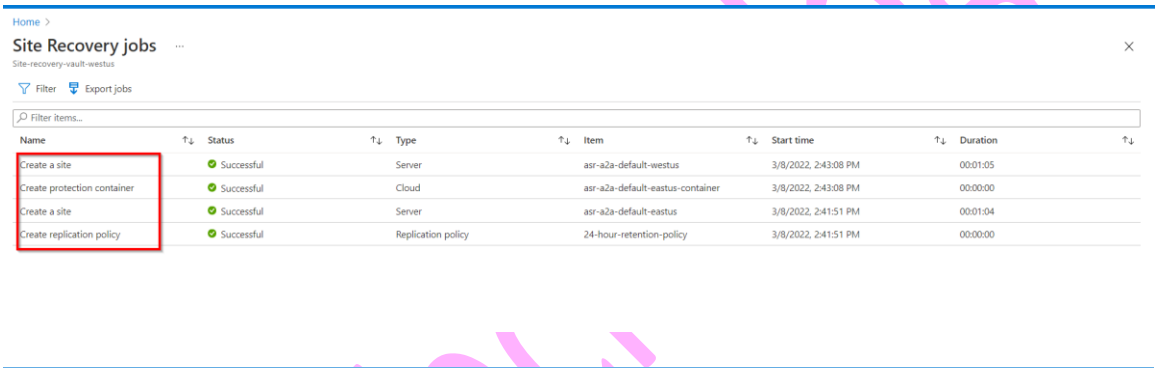

Home > Virtual machines > myvm1
myvm1 | Disaster recovery
Virtual machine
dis
Settings
Disks
Operations
Disaster recovery
Storage settings
[-] Hide details
Cache storage account
(new) ermr4ysiterecovasrcache [Standard_LRS]
Source managed disk
Replica managed disk
Replica managed dis...
Disk to replicate
[Premium SSD] myvm...
(new) myvm1_OsDisk_...
Premium SSD
include
Replication settings
[-] Hide details
Vault subscription
Pay-As-You-Go
Recovery services vault
(new) Site-recovery-vault-westus
Vault resource group
(new) Site-recovery-vault-RG
Replication policy
(new) 24-hour-retention-policy
Extension settings
[-] Hide details
Update settings
Allow ASR to manage
Automation account
(new) site-reco-eva-asr-automationaccount
Review + Start replication
Previous
Next : Review + Start replication

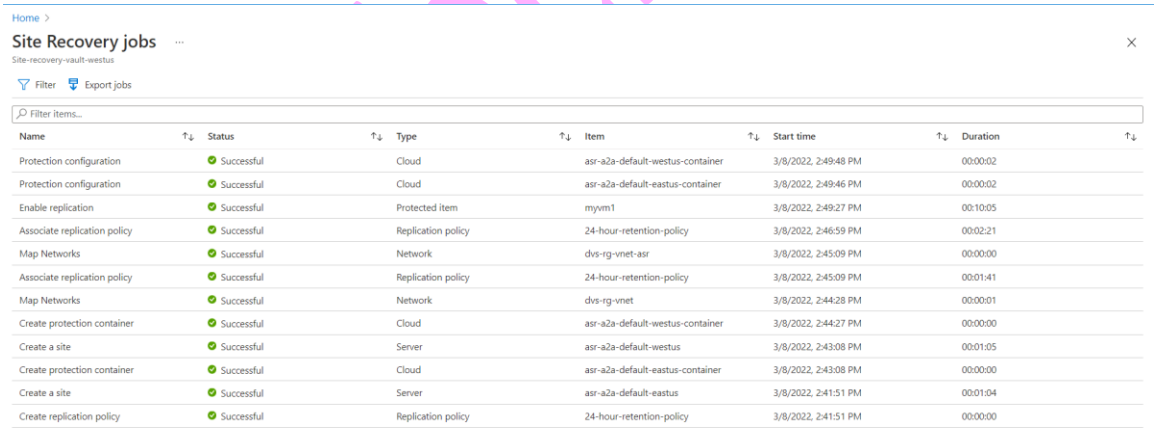


Note: It will take time to replicate the data from source region "east us" to "west us" so be patient

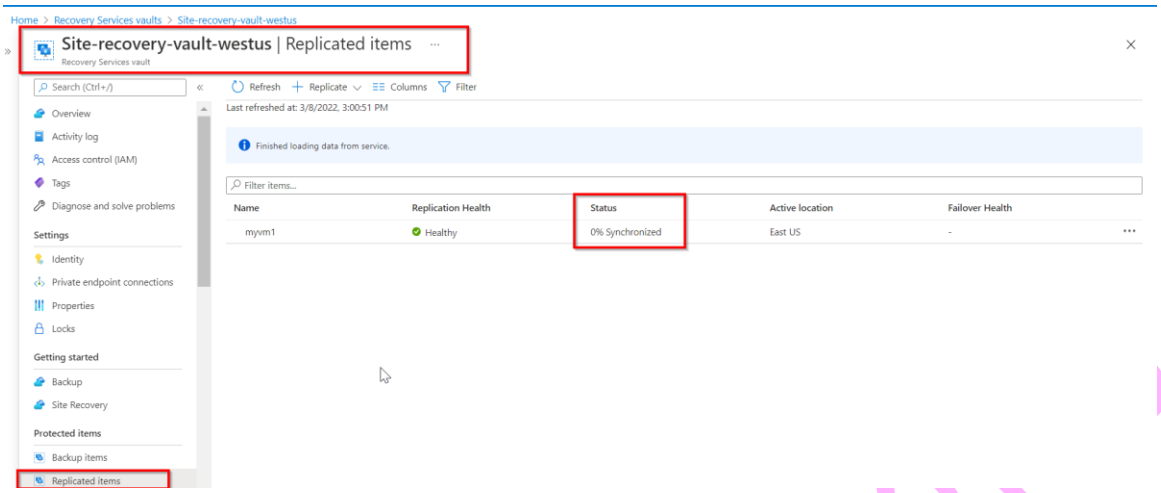






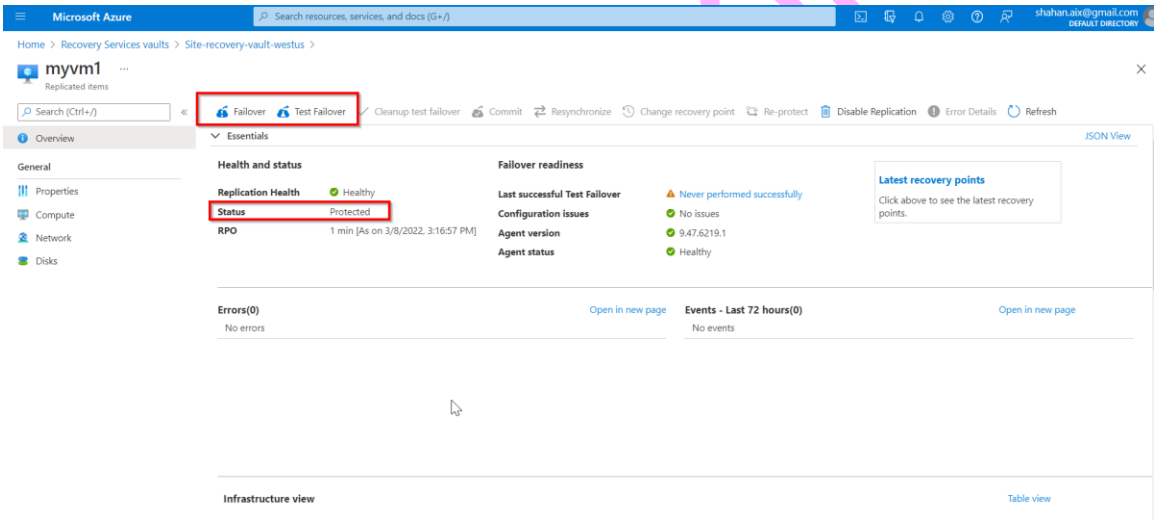


In the ARS of destination West Us:

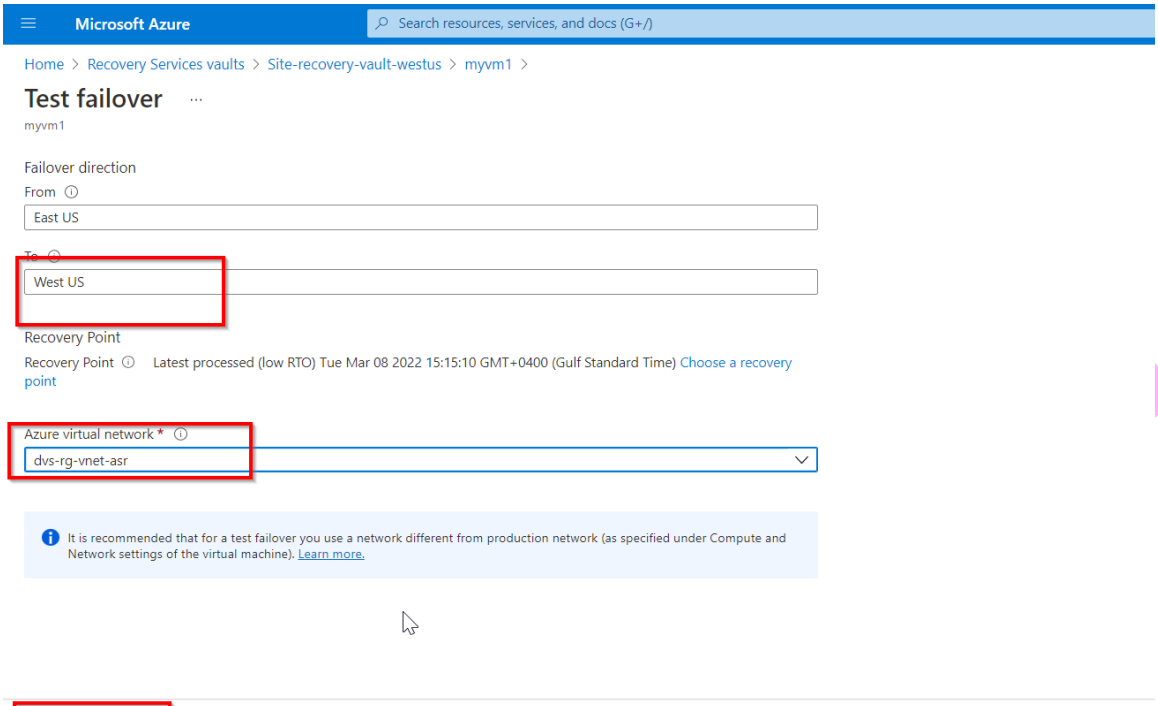


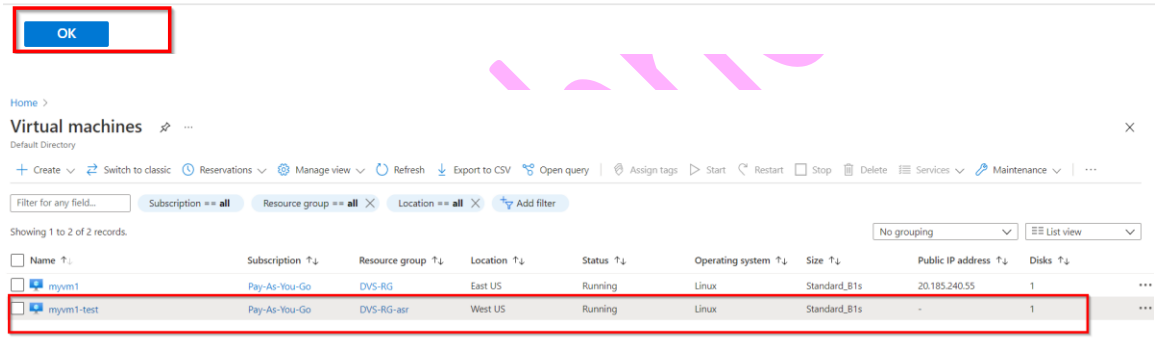
Once we are done with 100% sync then we can test the failover to West us.

Let's do the failover test to west us:



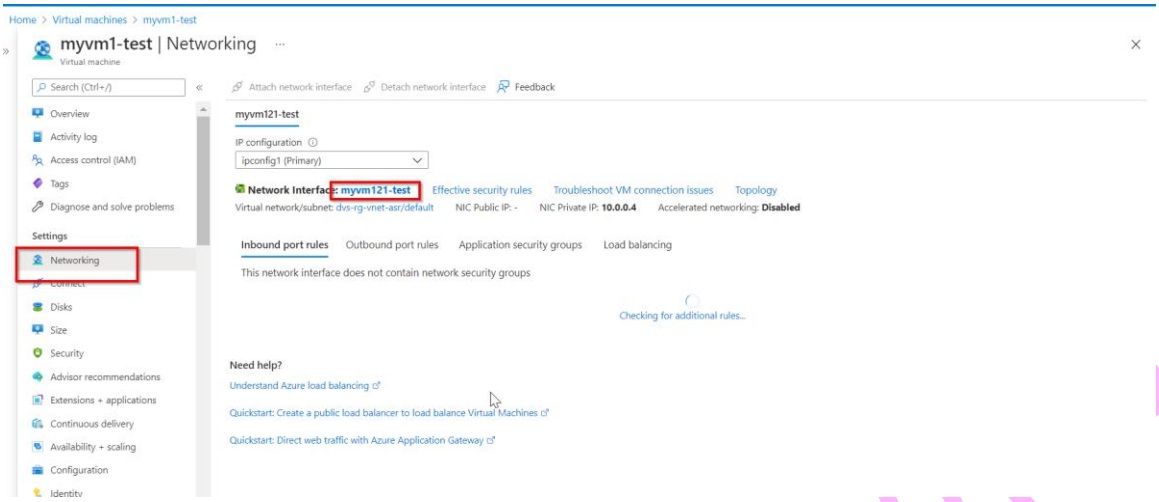
Now click on "Test failover" it will create the server in "West Us" once you fix everything working fine then you can revoke it back .

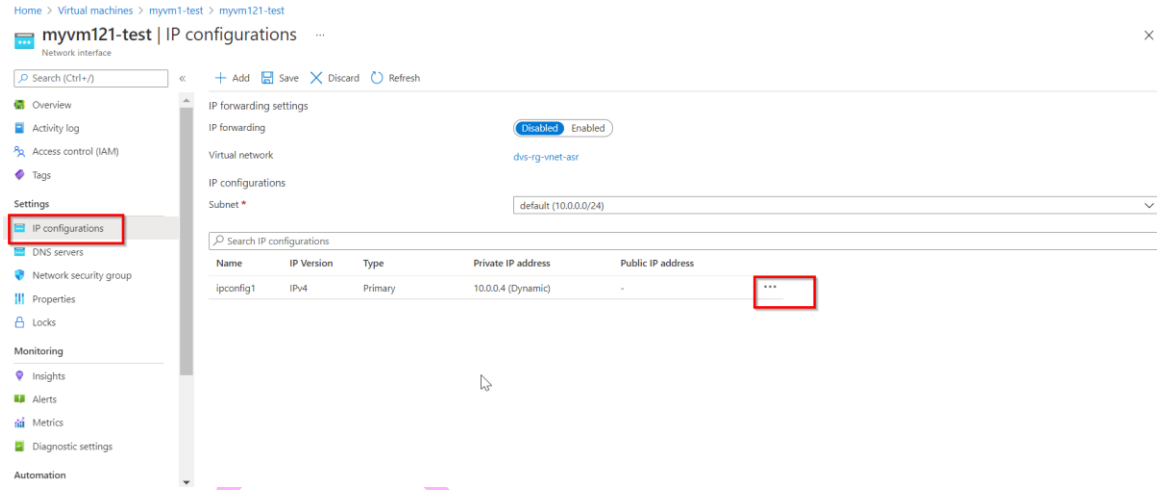


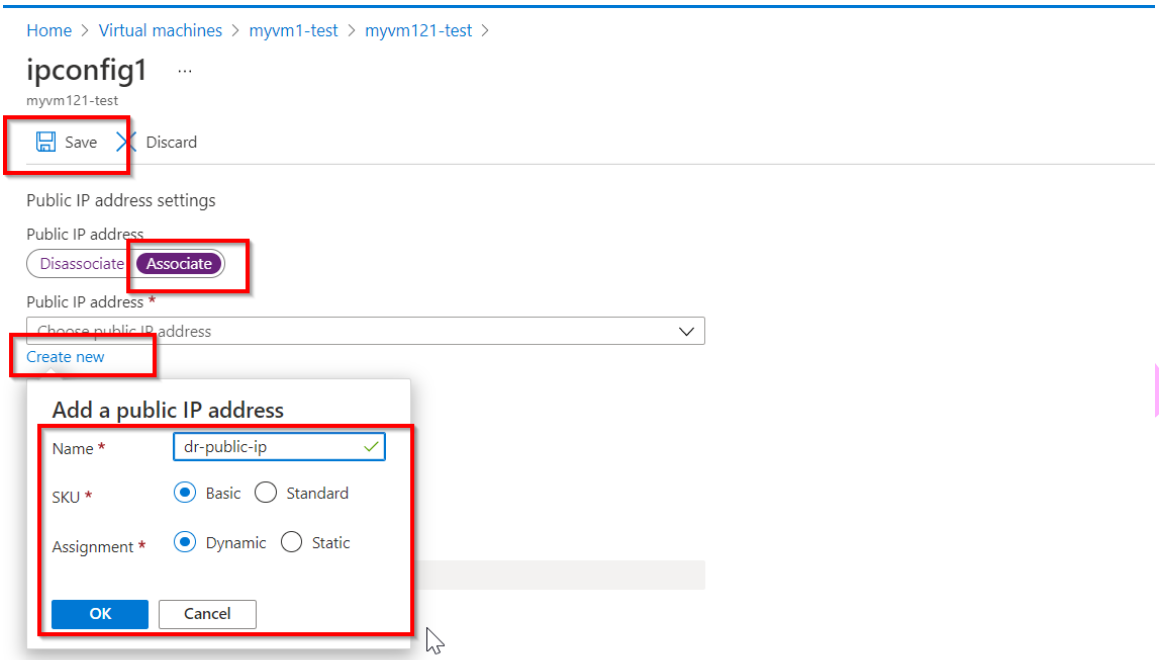


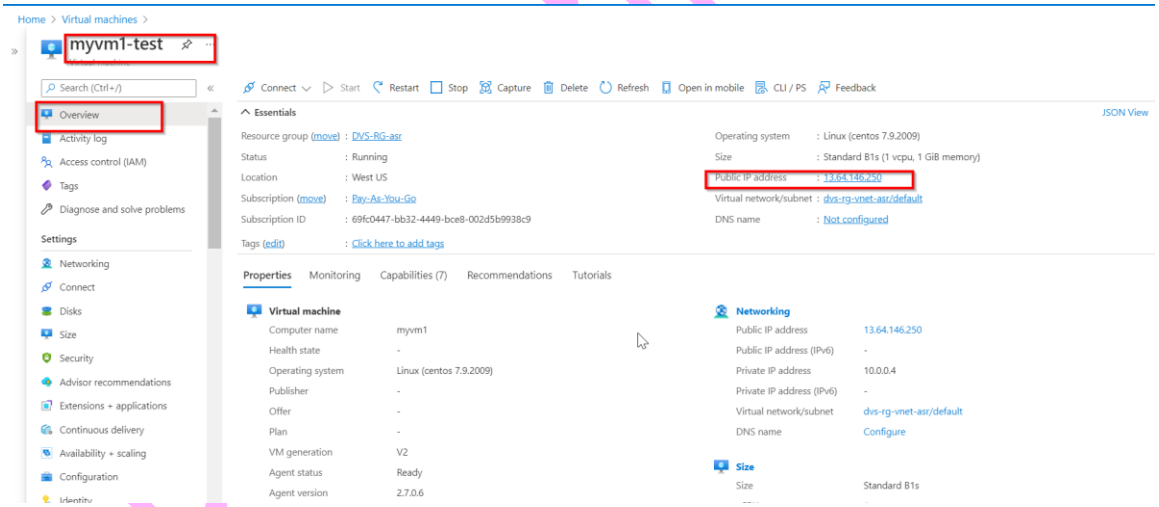
We can see that a new VM is up & running in West Us region.

For testing the application we don't have public ipaddress for this node. Let's enable the public ipaddress.


Home > Virtual machines > myvm1-test
myvm1-test | Networking
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Disks
Size
Security
Advisor recommendations
Extensions + applications
Continuous delivery
Availability + scaling
Configuration
Identity
Attach network interface
Detach network interface
Feedback
myvm121-test
IP configuration
ipconfig1 (Primary)
Network Interface: myvm121-test
Effective security rules
Troubleshoot VM connection issues
Topology
Virtual network/subnet: dvs-rg-vnet-asr/default
NIC Public IP: -
NIC Private IP: 10.0.0.4
Accelerated networking: Disabled
Inbound port rules
Outbound port rules
Application security groups
Load balancing
This network interface does not contain network security groups
Checking for additional rules...
Need help?
Understand Azure load balancing
Quickstart: Create a public load balancer to load balance Virtual Machines
Quickstart: Direct web traffic with Azure Application Gateway

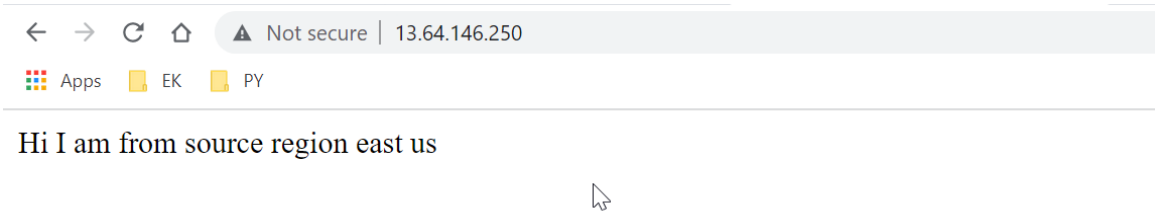

Home > Virtual machines > myvm1-test > myvm121-test
myvm121-test | IP configurations
Network interface
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Settings
IP configurations
DNS servers
Network security group
Properties
Locks
Monitoring
Insights
Alerts
Metrics
Diagnostic settings
Automation
Add
Save
Discard
Refresh
IP forwarding settings
IP forwarding
Disabled
Enabled
Virtual network
dvs-rg-vnet-asr
IP configurations
Subnet *
default (10.0.0.0/24)
Search IP configurations
Name
IP Version
Type
Private IP address
Public IP address
ipconfig1
IPv4
Primary
10.0.0.4 (Dynamic)
-





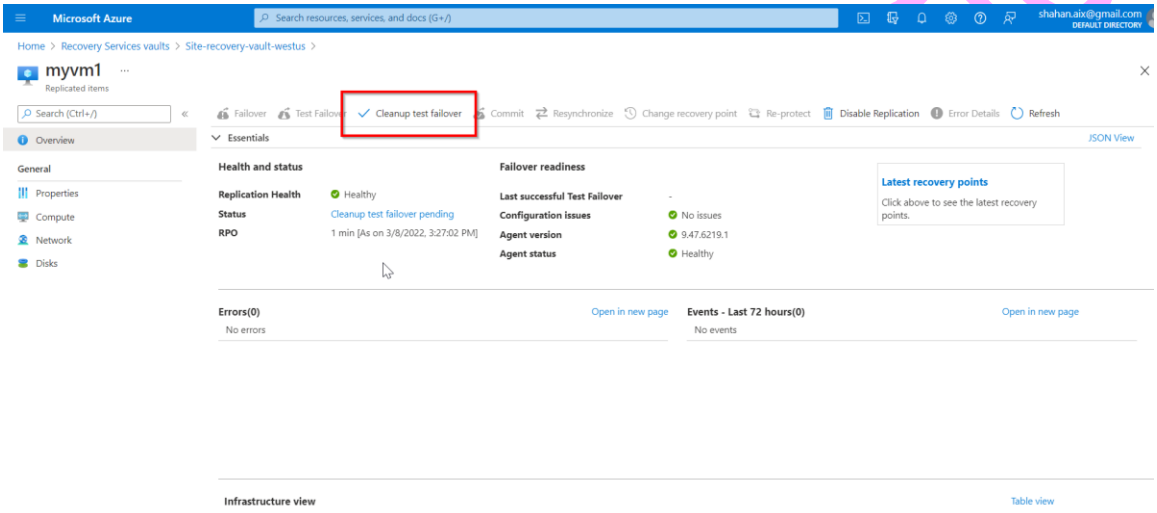
Now we see the ipaddress & region as "West Us"

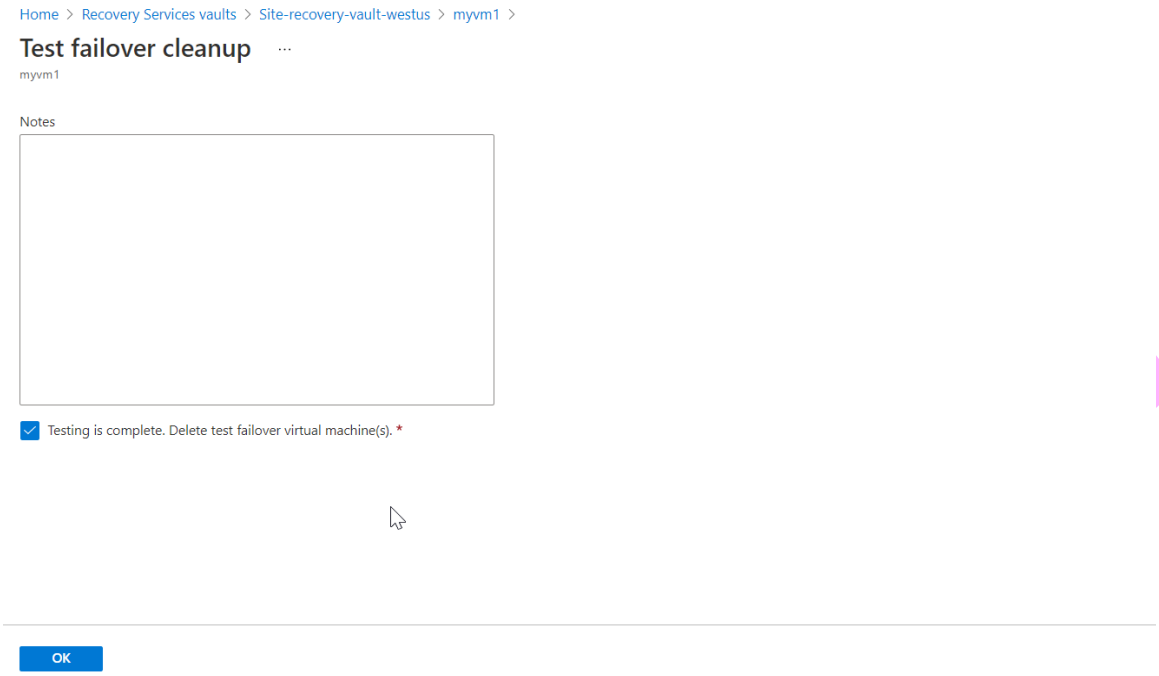
Let's hit the URL:



We can see that our failover server is up and running with our application.

Note: This is just a failover test !!!!! Once done with testing you can select clean up test failover it will delete everything.





If you want to do the complete real failover then you can select the below option.

"Failover"

When you select this option then it will ask you to shut down the server in the source region in our case "East Us" so that it can bring up the application in secondary region "West Us"

Note: It take some time to do the entire failover.

DVS Technologies