Installation and Configuration of Windows File Server Using Windows Server 2016.

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Windows File Server:

A file server is a computer responsible for the **storage and management of data files so that other computers on the same network can access the files.** It enables users to share information over a network without having to physically transfer files.

Windows File Servers typically support several file sharing protocols, including:

- **SMB (Server Message Block):** The most common protocol for Windows file sharing.
- **NFS (Network File System):** Common on Unix-based systems and supported on Windows for interoperability.
- **FTP (File Transfer Protocol):** Used for secure and non-secure file transfer over networks.

NTFS Permissions:

Full Control: Allows users to read, write, change and delete files and sub folders. In addition, users can change permission settings for all files and sub directories.

Modify: Allows users to read and write of files and subfolders. Also allows users to delete the files.

Read and Execute: Allows users to view and run executable files, including scripts.

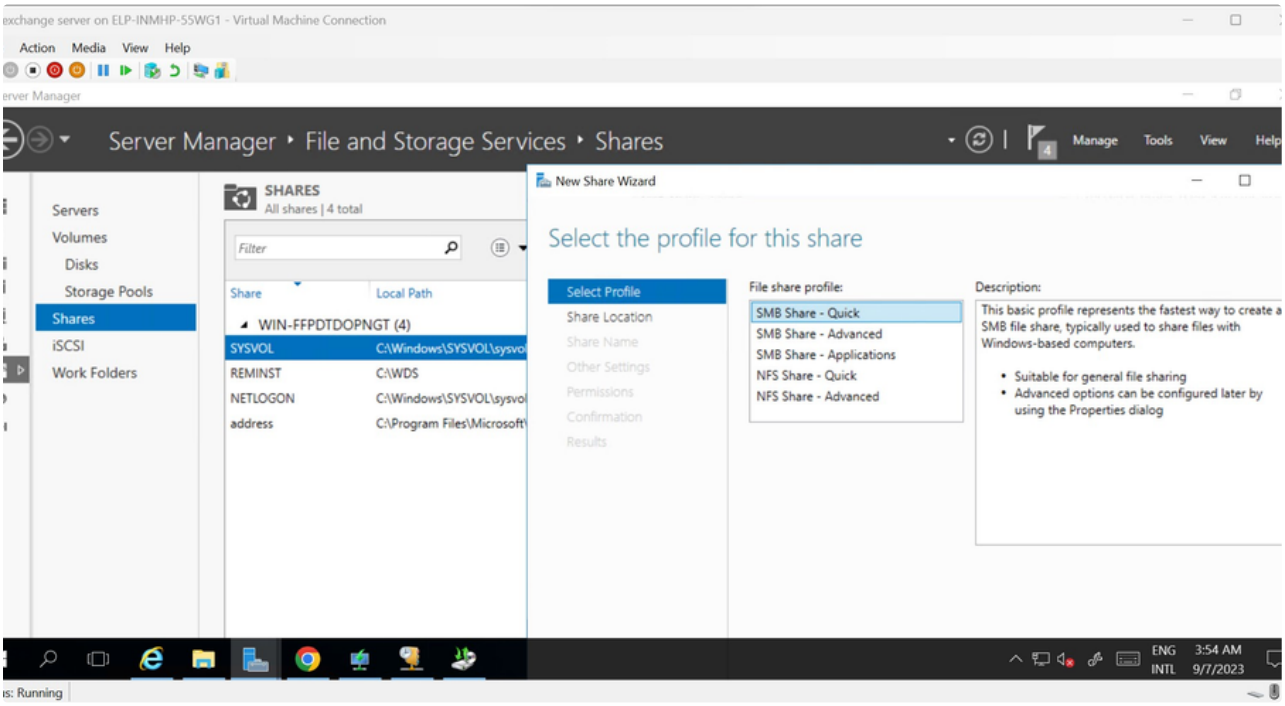
List Folder Contents: Permits viewing and listing of files and subfolders as well as executing of files, inherited by folders only.

Read: Allows users to view the file and subfolder contents.

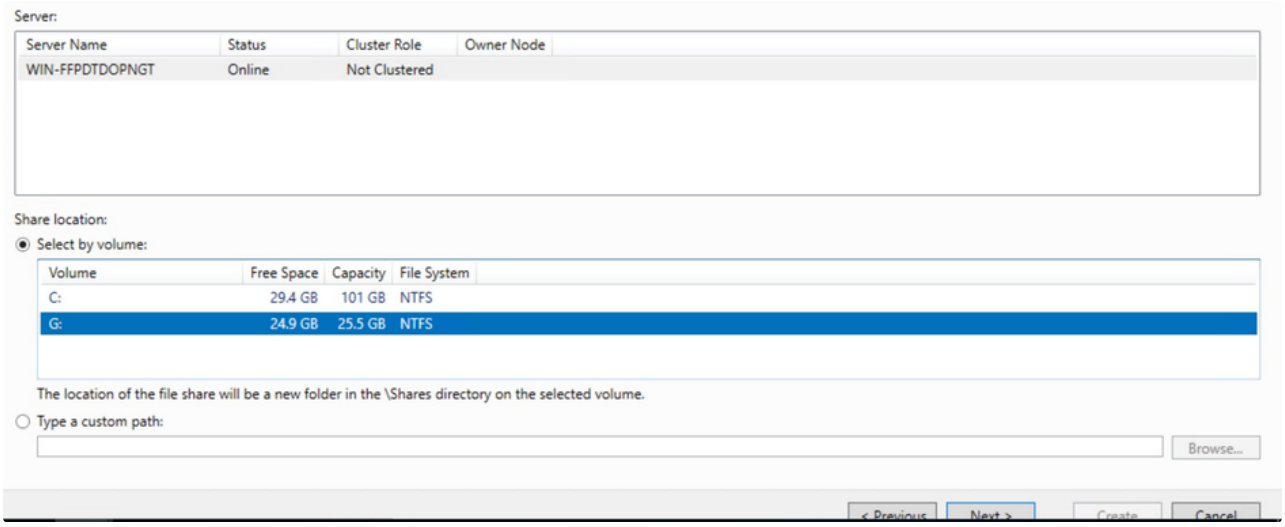
Write: Allows users to add files and subfolders, allows you to write to a file as well.

Installation and Configuration of Windows File Server:

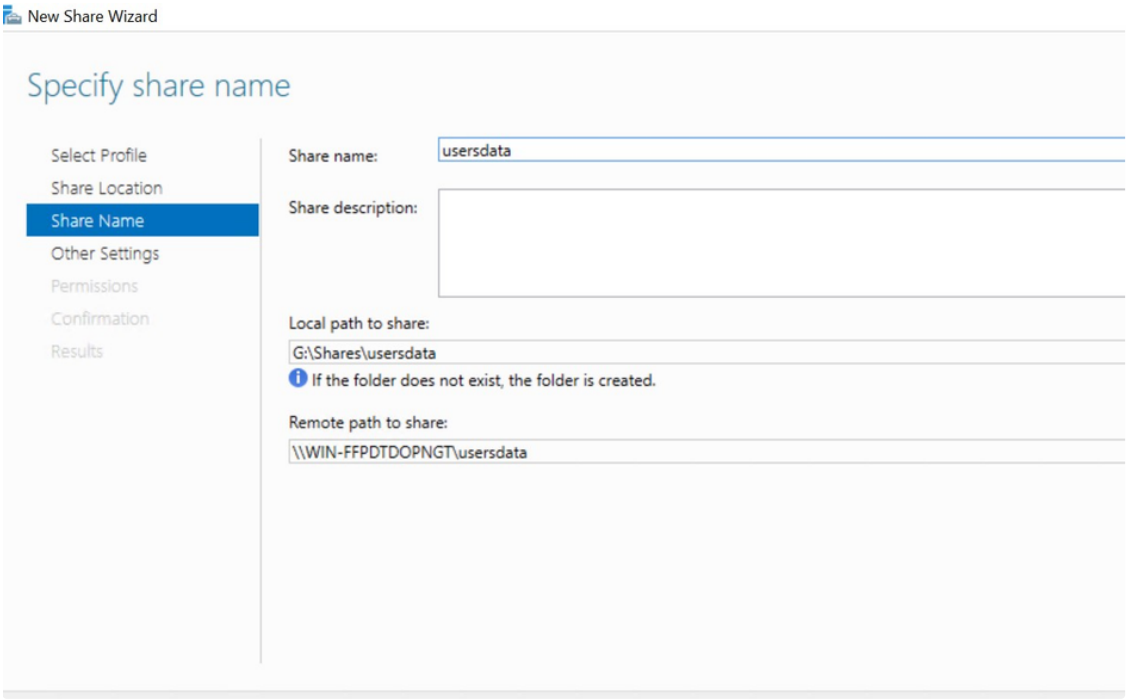
- To install and configure windows file server, we need at least one another VM, joined into the active directory domain/network of our Windows Server 2016 Virtual Machine.
- Open Server Manager from Windows Server 2016 and install the file server. By installing file server, we may get all the necessary things such as shares, iSCSI, work folders etc.
- Now create a new file share, select the option of quick share from the list.



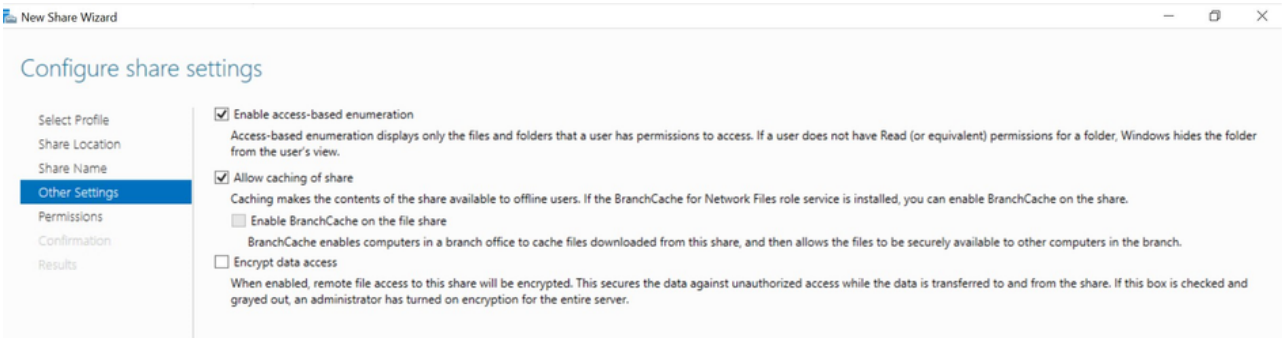
- After selecting the option of quick share, select the option of select by volume, to mention that where to save the file.



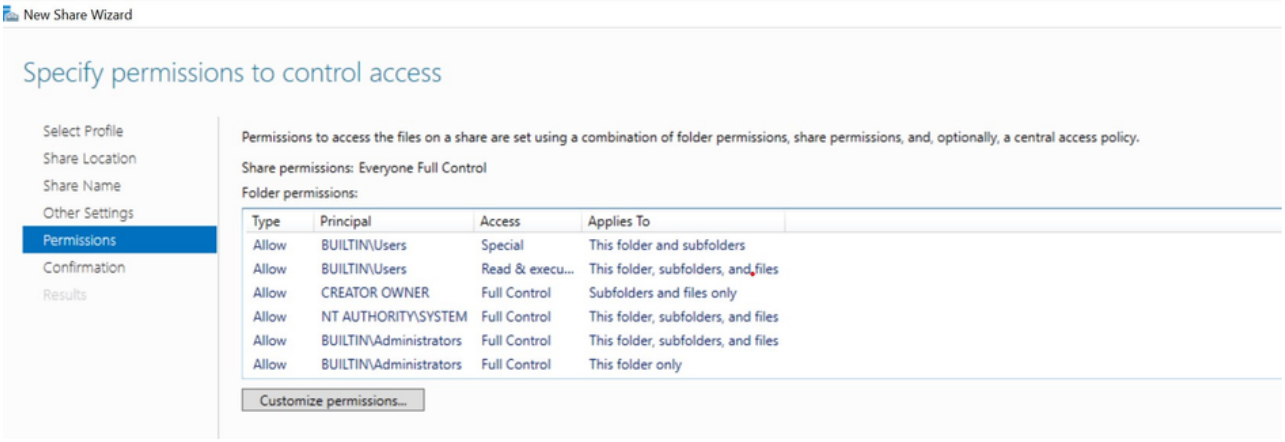
- After selecting the option of select by volume, we have to give a name to our file. Our file name wil automatically updated in local path and remote path.
- Local path is defined as which is going to be on G-drive shares data and users data.
- Remote path is defined as the path where users access it over the network.



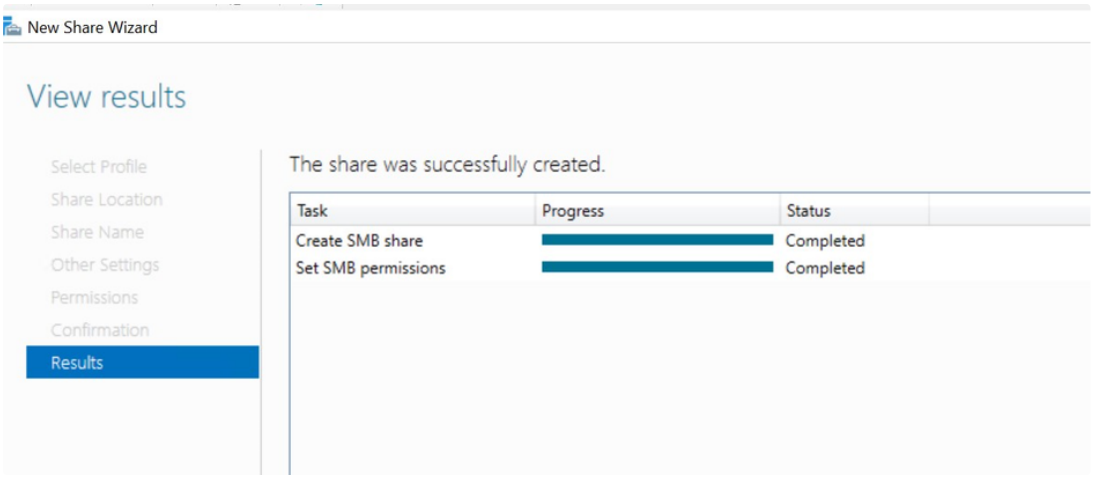
- We need to enable the access-based enumeration, which displays only the files and folders that a user has permissions to access. If a user does not have read permissions for a folder, Windows hides the folder from the user's view.



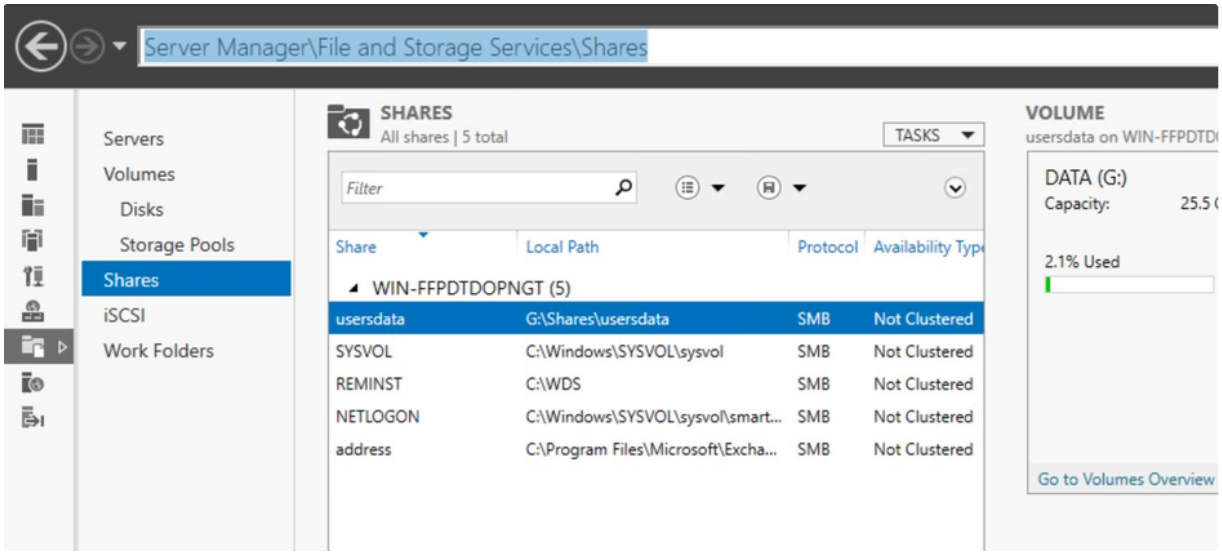
- These are the control access permissions where we can give permissions as per our requirements.



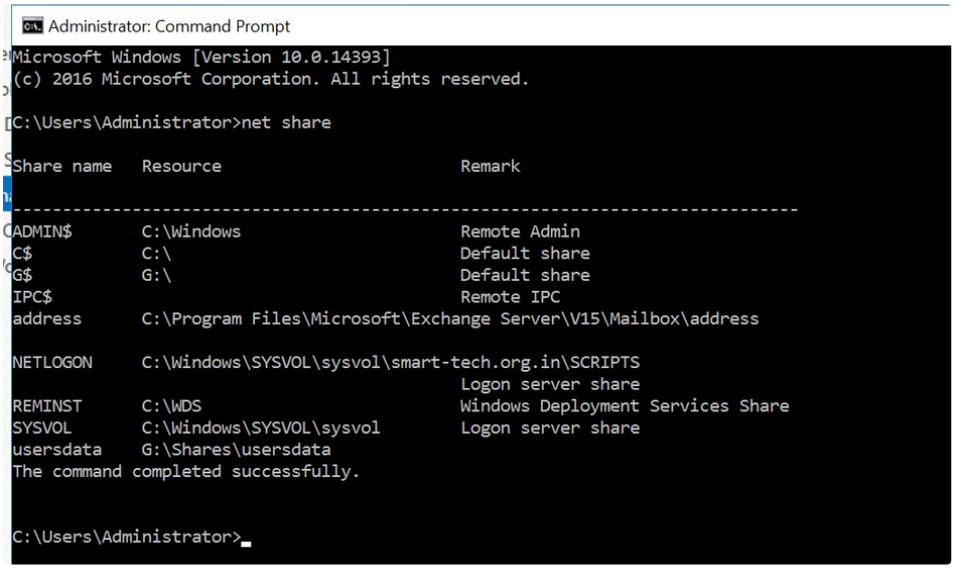
- Here we have successfully created SMB share and permissions. The setup of WFS is completed.

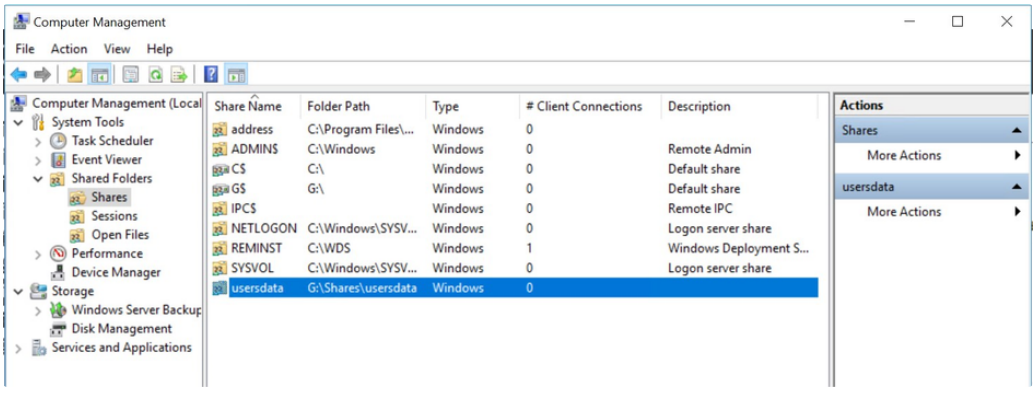


- Now we can find the file we created in the list of shares.

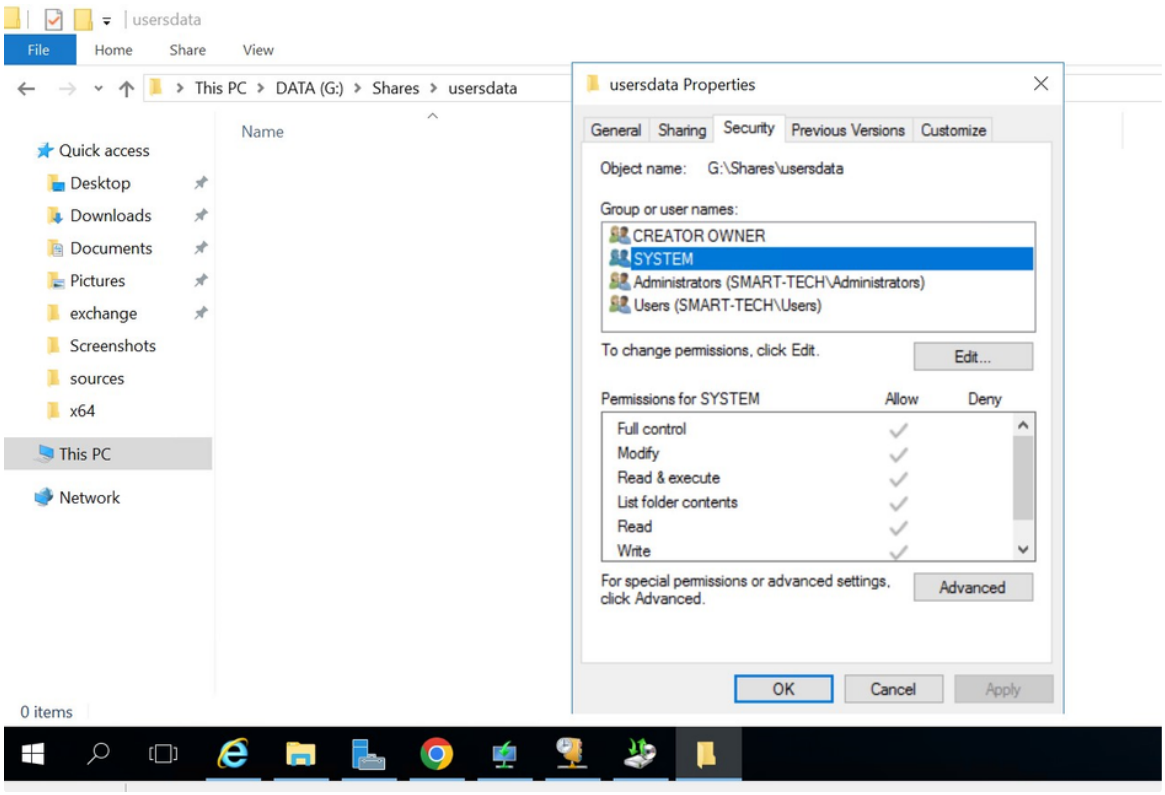


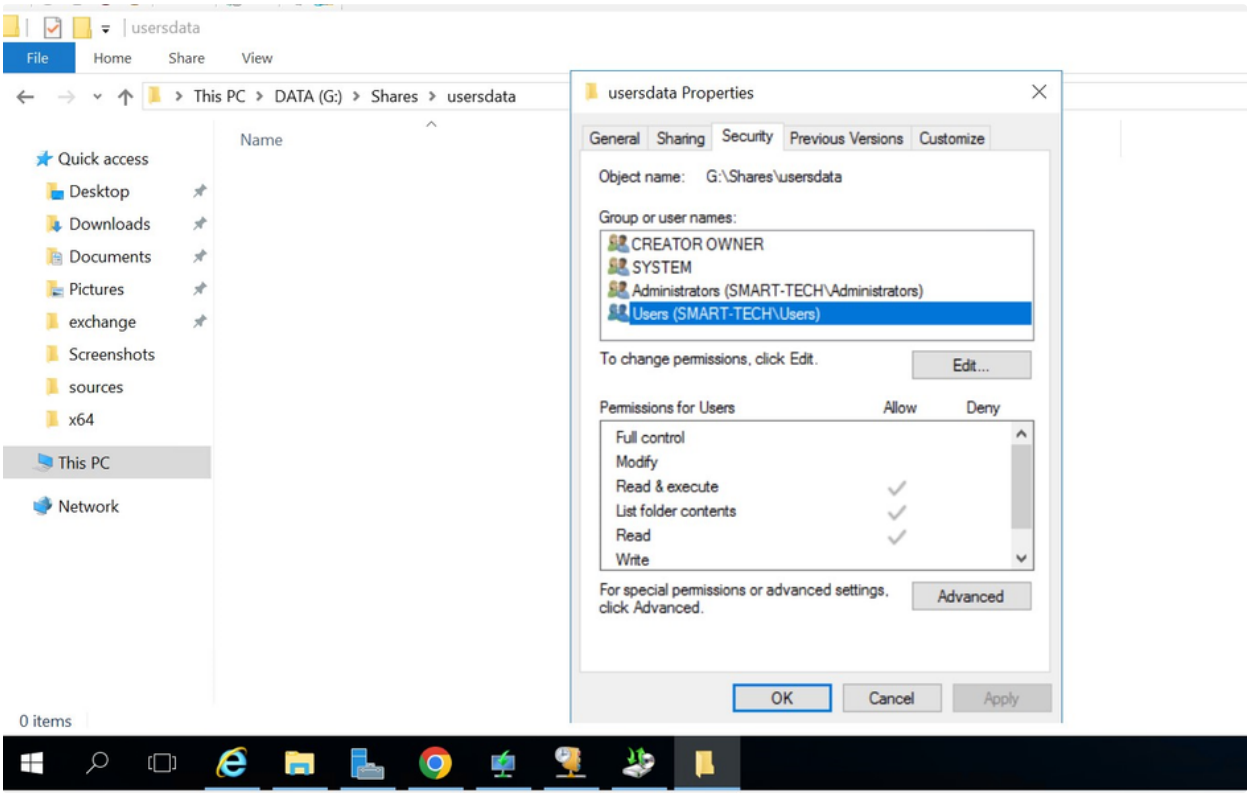
- To check that the share file we have created is correctly configured in the network we have two ways, one is use a command of net share in command prompt, another is to check in computer management.



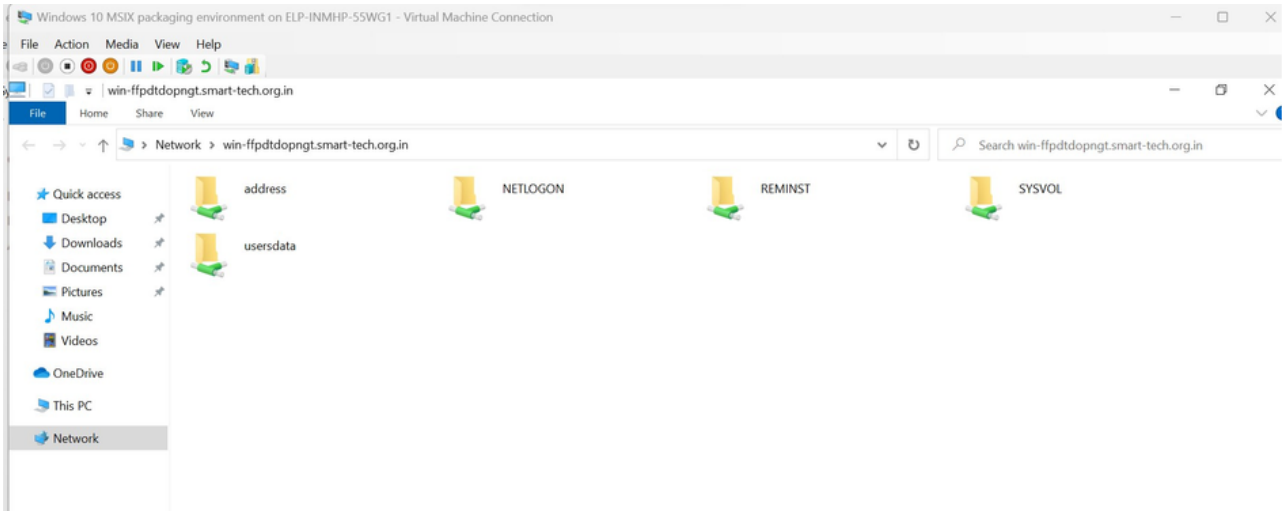


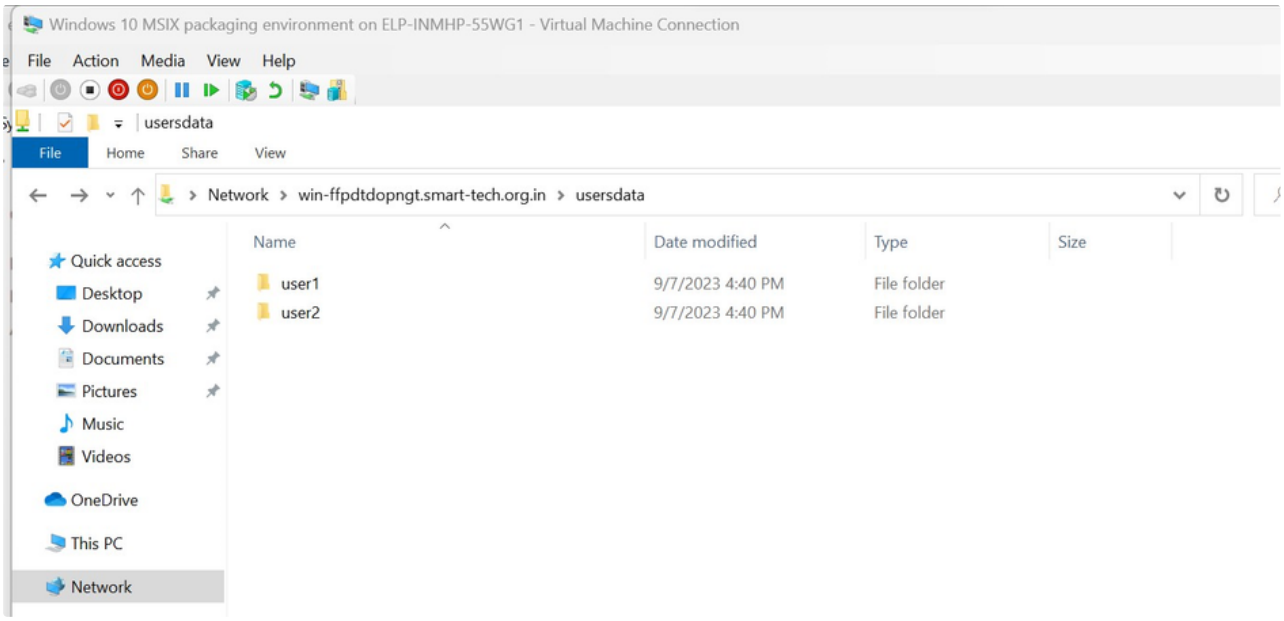
- Open file explorer >> DATA-G >> shares >> userdata. Here we can check that for system we have all the permission with full control. But for users we have only read and execute, read and list folder contents permissions. We can edit the permissions as per our requirements.





- Create a folder named with user1 and create a file with some text. It helps to check after sharing the file.
- Create another VM and join the system to the domain and network of windows server 2016. And make sure both the virtual machines have the network connectivity.
- After joining the system open the run and use \\win-ffpdtdopngt.smart-tech.org.in, we can be directed to the shared folder from windows server 2016.





- Here as per the given permissions we use this folders and files, if we have full control, we can read, write, delete etc. Otherwise, it will deny the access.