Server Core / Remote Administrator Tools

💡Note: This lab is the first lab in the second half of our course. From this point, it's time to level up, and as such we will be providing fewer detailed steps going forward. This will require you to use your existing knowledge and to research items on your own, preparing you for industry. You got this! :)

Objectives:

- Setup a Windows 2019 Server Core machine to act as a file server. Use the command line to perform usual local tasks (change the IP, change the server name, etc).
- Connect to the new server **FS01** from **AD02** using RSAT and add File Services.

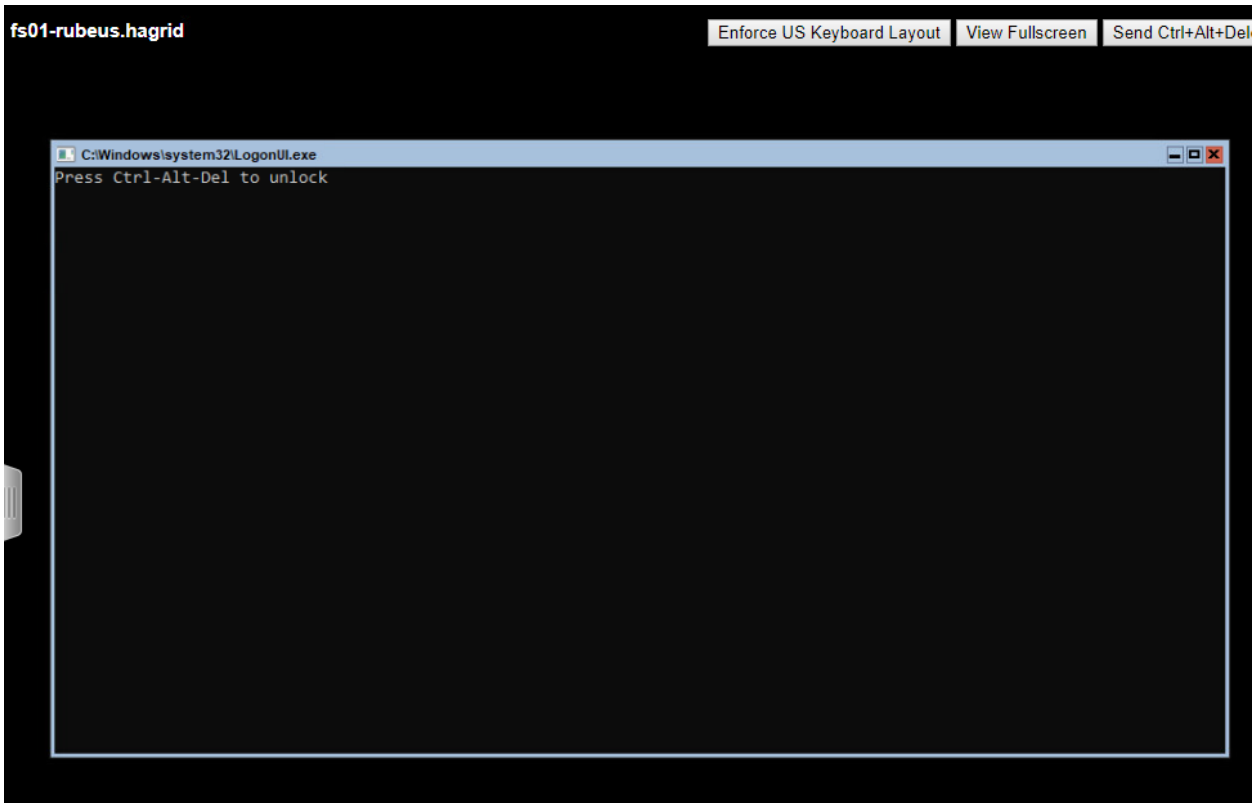
Prerequisites:

Completed Week 06 Assessment (we will build off the existing assessment lab framework for most of the remainder of the term).

💣**Time:** It is very important that all your Windows systems are on the same timezone and have accurate time with respect to one another. Windows authentication is sensitive to differences in time. Your assigned VMs have this set, but this is not always the case. Redmond, WA (home of Microsoft) is in the Pacific Standard Time-zone.

FS01 Requirements

- hostname = **FS01-***firstname*
- Domain = *yourdomain*.local (FQDN = *fs01-firstname*.*yourdomain*.local)
- IP = 10.0.5.8
- Gateway = Gateway's IP
- DNS = DNS Server's IP
- Join the server to your AD domain, after new OS is configured as previous OS's
- Connect to new server from ad02 using RSAT and add the **File Services Role**
- Create a security group



1. You will be prompted to setup a username and password. This is the ***Local*** administrator for this server (and *not* the AD Domain Admin, since it is not joined to your AD Domain yet). Note: be sure to document the userid and password you create.
2. Set the IP address settings and the Server name using the command line: **`sconfig.`** The following screenshot shows what your network configuration and sconfig status should look like.

💡You may notice that your file server receives a DHCP IP address initially (if your Assessment went well). Remember DHCP services are typically for *client* systems like workstations, laptops and mobile devices. Well-known services need a *static* IP address (one that does not change).

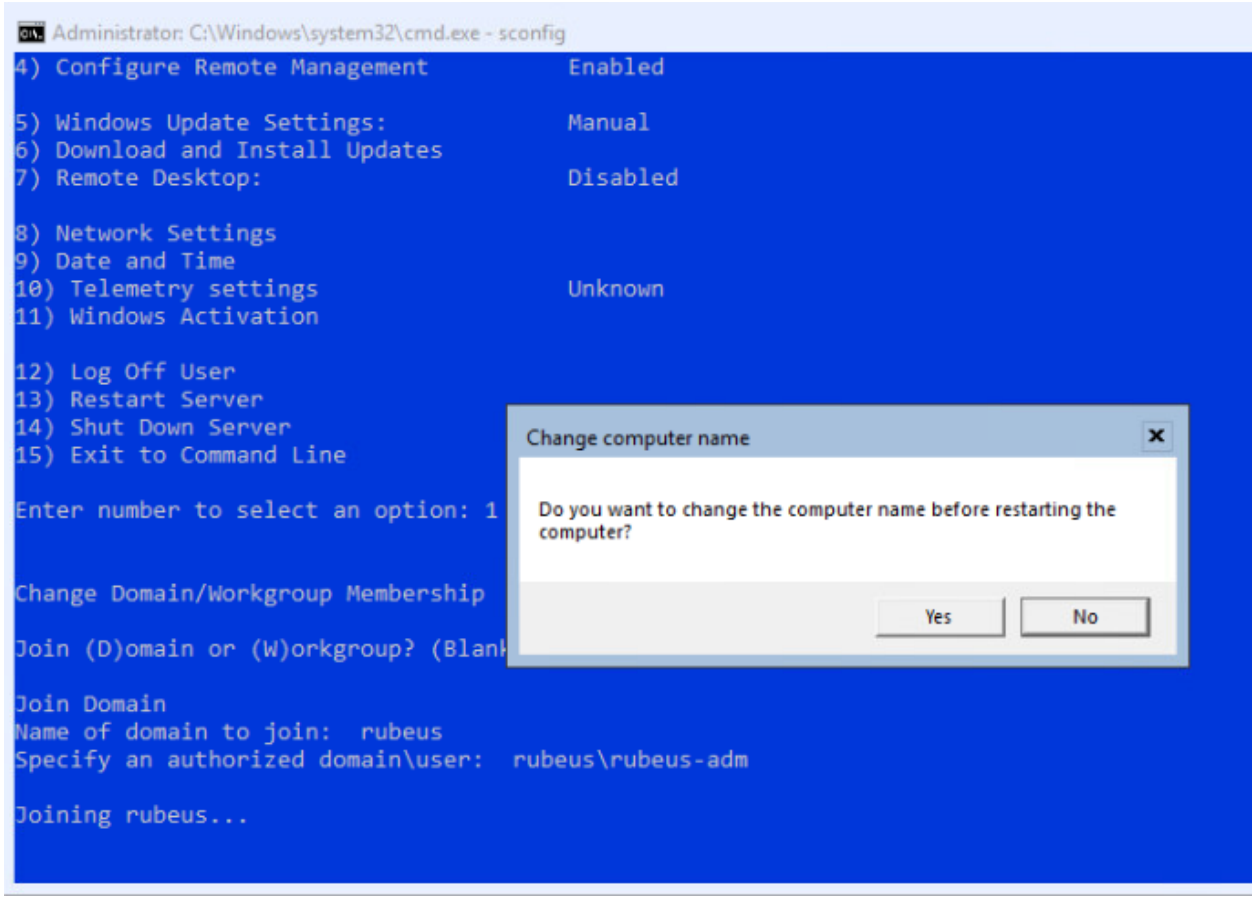
Sample Static Network Address Settings

```
-------------------------------
    Network Adapter Settings
-------------------------------


NIC Index               1
Description             Intel(R) 82574L Gigabit Network Connection
IP Address              10.0.5.8        fe80::108f:a879:13bb:90ca
Subnet Mask             255.255.255.0
DHCP enabled            False
Default Gateway         10.0.5.2
Preferred DNS Server    10.0.5.6
Alternate DNS Server

1) Set Network Adapter Address
2) Set DNS Servers
3) Clear DNS Server Settings
4) Return to Main Menu


Select option:
```

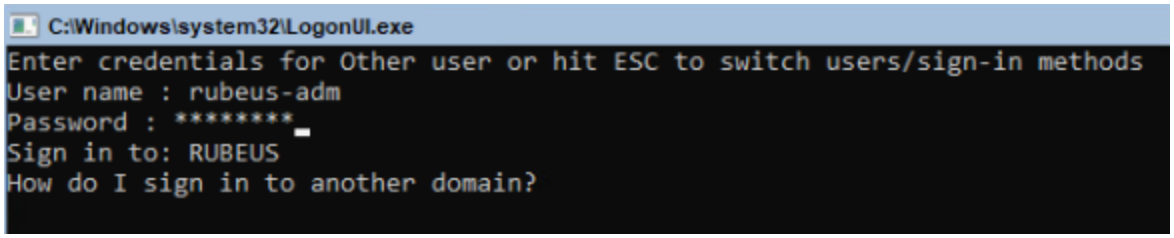
Sample sconfig before Domain Join

```
Administrator: C:\Windows\system32\cmd.exe - sconfig
Microsoft (R) Windows Script Host Version 5.812
Copyright (C) Microsoft Corporation. All rights reserved.

Inspecting system...


===============================================================================
                         Server Configuration
===============================================================================

1) Domain/Workgroup:                    Workgroup:  WORKGROUP
2) Computer Name:                       FS01-RUBEUS
3) Add Local Administrator
4) Configure Remote Management          Enabled

5) Windows Update Settings:             Manual
6) Download and Install Updates
7) Remote Desktop:                      Disabled

8) Network Settings
9) Date and Time
10) Telemetry settings                  Unknown
11) Windows Activation

12) Log Off User
13) Restart Server
14) Shut Down Server
15) Exit to Command Line

Enter number to select an option:
```

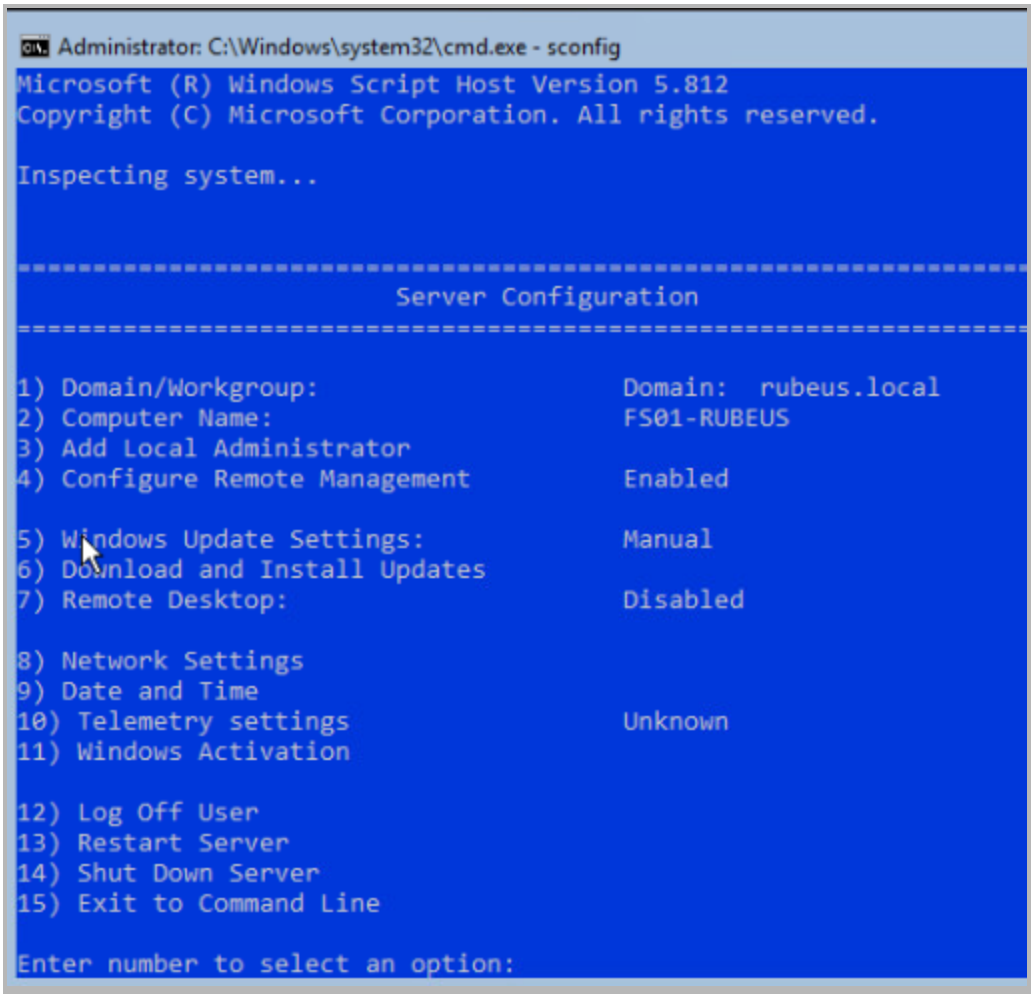
3. After changing the server name, reboot the server and then join your Active Directory Domain using sconfig's Domain/Workgroup option (it might sit there for a couple minutes).



4. Log in to your AD Domain using -**adm** account via the Other user option.



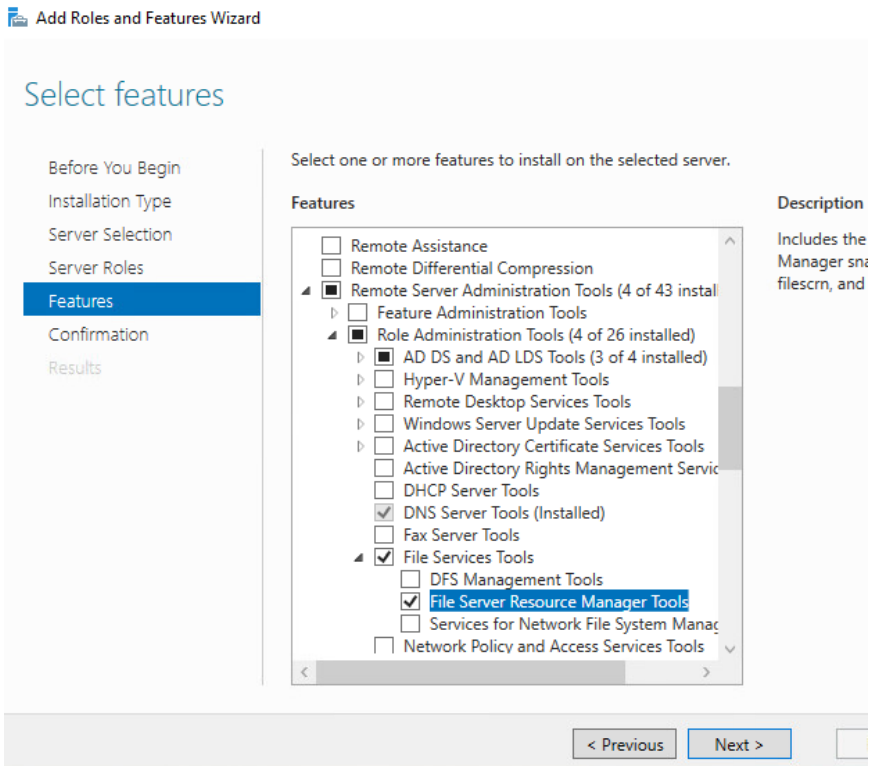
Deliverable 1: Show the sconfig cmd after setting the network, computer name, update settings, and joining the AD domain. (example below)



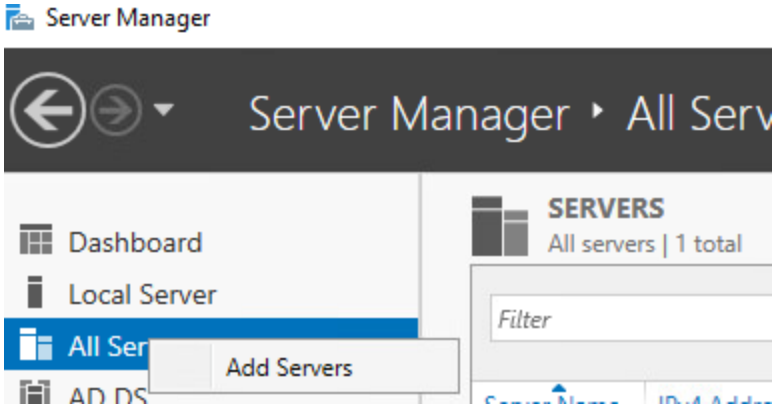
Use RSAT to Manage FS01 via AD02

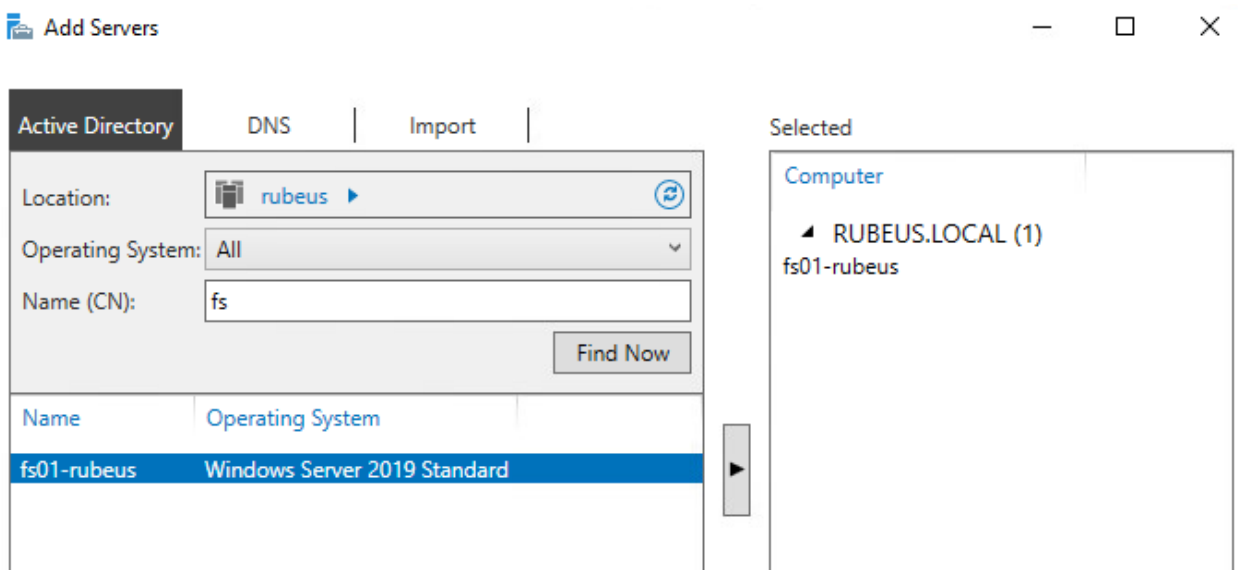
On AD02, within the **R**emote **S**erver **A**dministration **T**ools (RSAT) Feature (which is not a Role), add File Service Tools *and* File Server Resource Manager Tools. Make sure you are logged on to ad02 as your AD Domain named -adm user.

> 💡Remote Administration in an enterprise environment would likely not be done on the Domain Controller, but rather a Domain Joined Workstation or Server with Remote Server Administration Tools installed. We are doing to avoid the installation of another server and server administration tools.

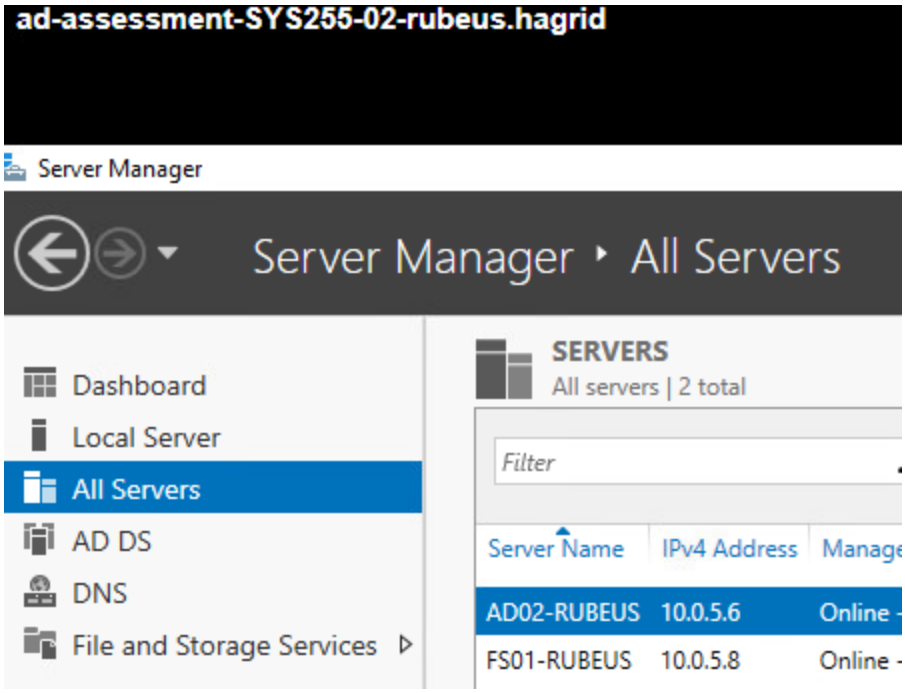


Add FS01 to All Servers

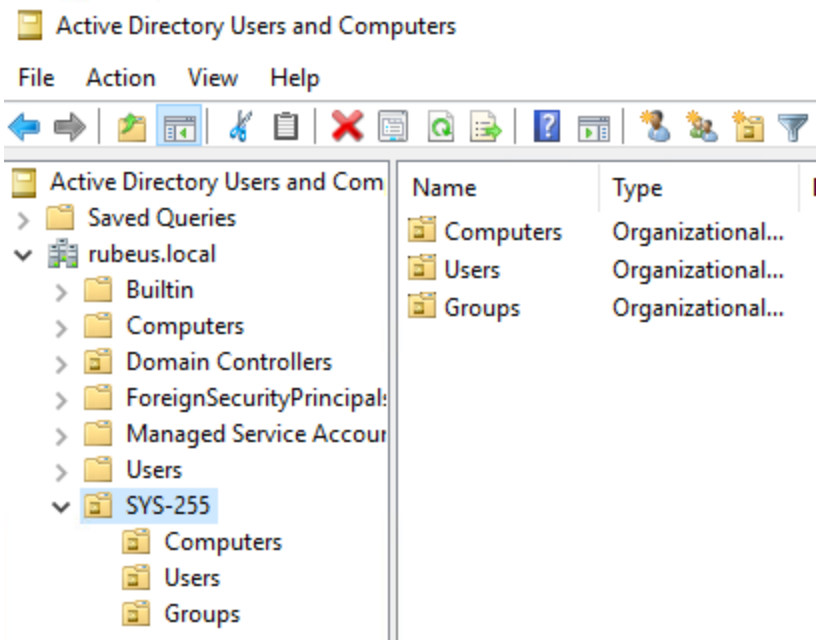




Deliverable 2. Provide a screenshot that shows that from AD02, you have access to FS01 and AD02



On AD02, create the following OU Structure:

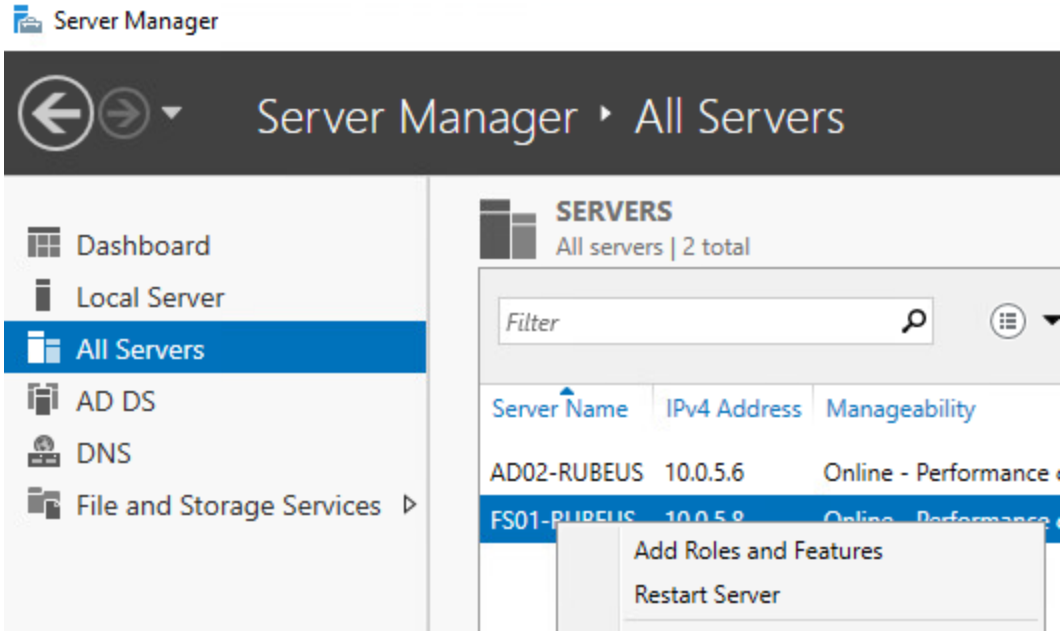


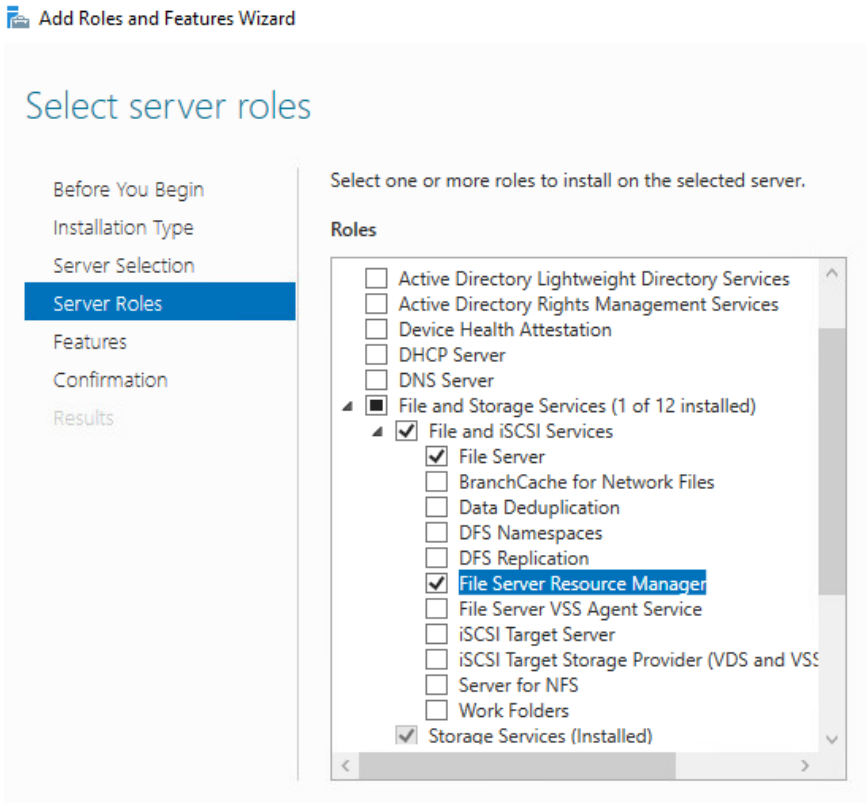
- Create a new Global security group (Sales-Users) in the Groups OU.
- Create two users (Bob and Alice) as standard domain users, in the new SYS255\Users OU
- Add Alice to the Sales-Users group

💡What's with the Alice and Bob Users? See https://en.wikipedia.org/wiki/Alice_and_Bob

Use RSAT to add to FS01 and create a Sales Users share

On AD02, use the Add Roles and Features option on FS01

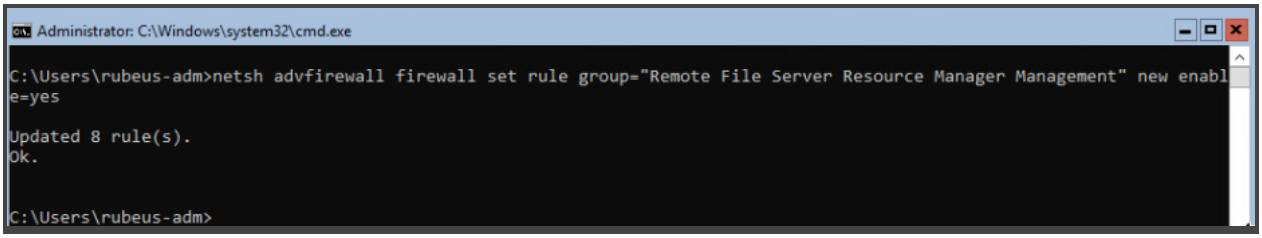




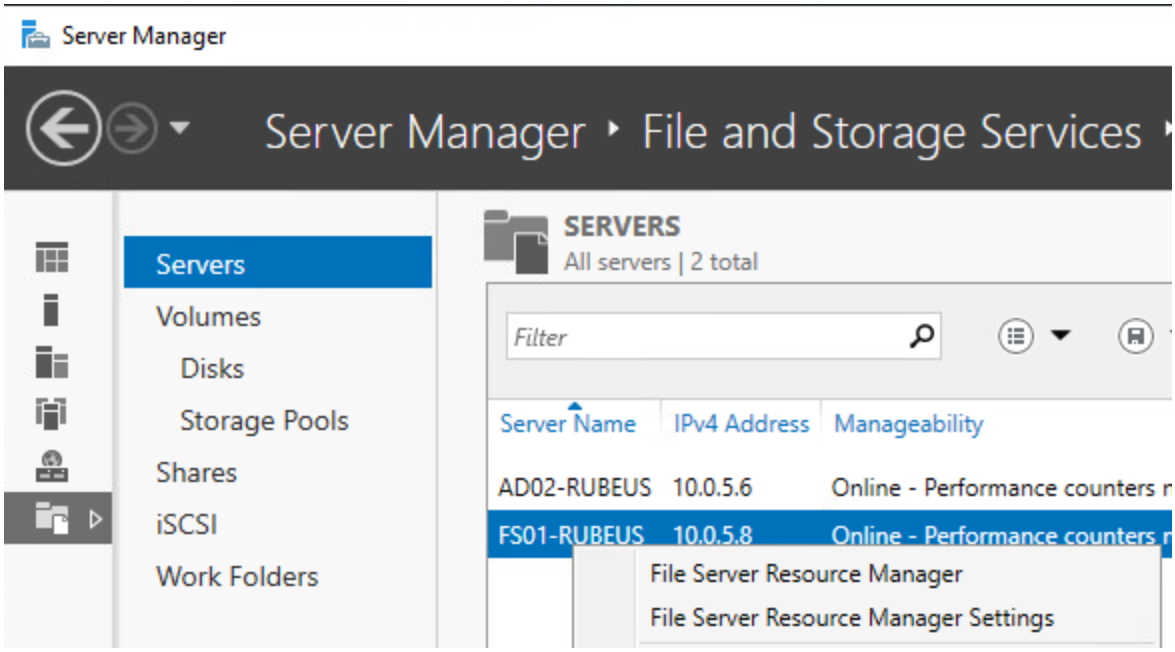
💡Although not necessary for simple share management and configuration, the Remote File Server Resource Management Tool is useful for more advanced configuration and is often installed alongside remote management for File Servers.

1. Run the following Net Shell (netsh) command on **fs01** to open the firewall for managing the File Server

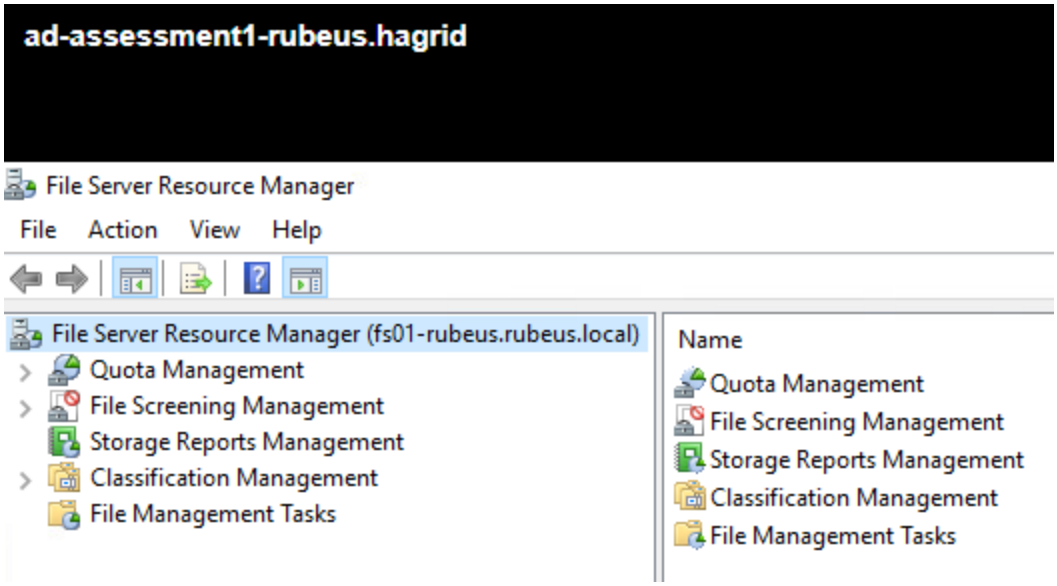
```
netsh advfirewall firewall set rule group="Remote File Server Resource Manager Management" new enable=yes
```



2. On AD02, Connect to **FS01** using File Server Resource Manager to test the command just ran above. Make sure to select Files and Storage Services -> Servers.



Deliverable 3: Take a screenshot of the FSRM and VM banner similar to that below:



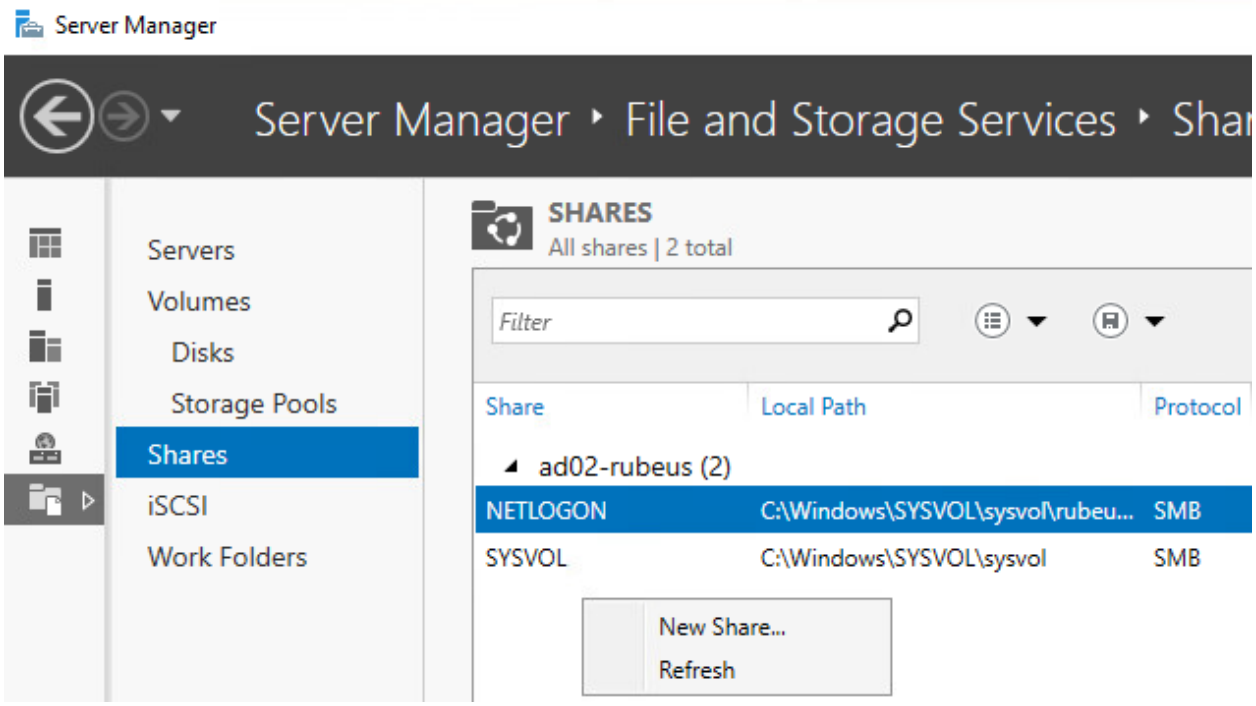
Create a new share on **FS01** using **Server Manager**

💡Note: An extremely common issue you'll encounter in MS Window environments are the differences between *Local Permissions* vs. *Share Permissions:*

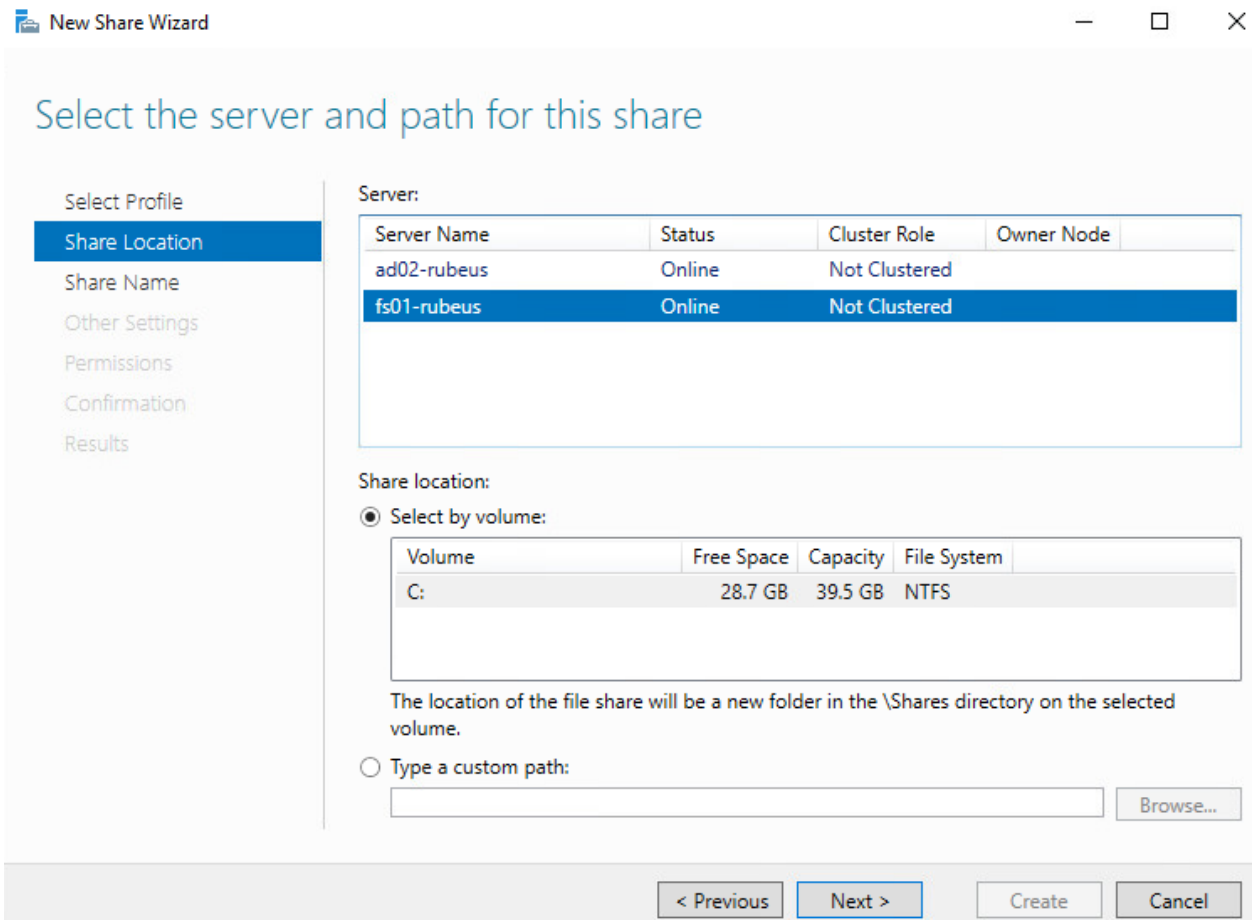
- Local Permissions (also called NTFS Permissions): Permissions that are applied only Locally (and not Remotely) on the OS, and affects both Local (i.e. via keyboard) and Remote (i.e. via network) account access.
- Share Permissions: Permissions that are applied only Remotely (and not Locally) to the OS, and affects only Remote (i.e. via network shares) account access.
- If both Shared & Local Permissions are set, then MOST RESTRICTIVE PERMISSION WINS. #LeastPriledgeRules

Decent summary here.

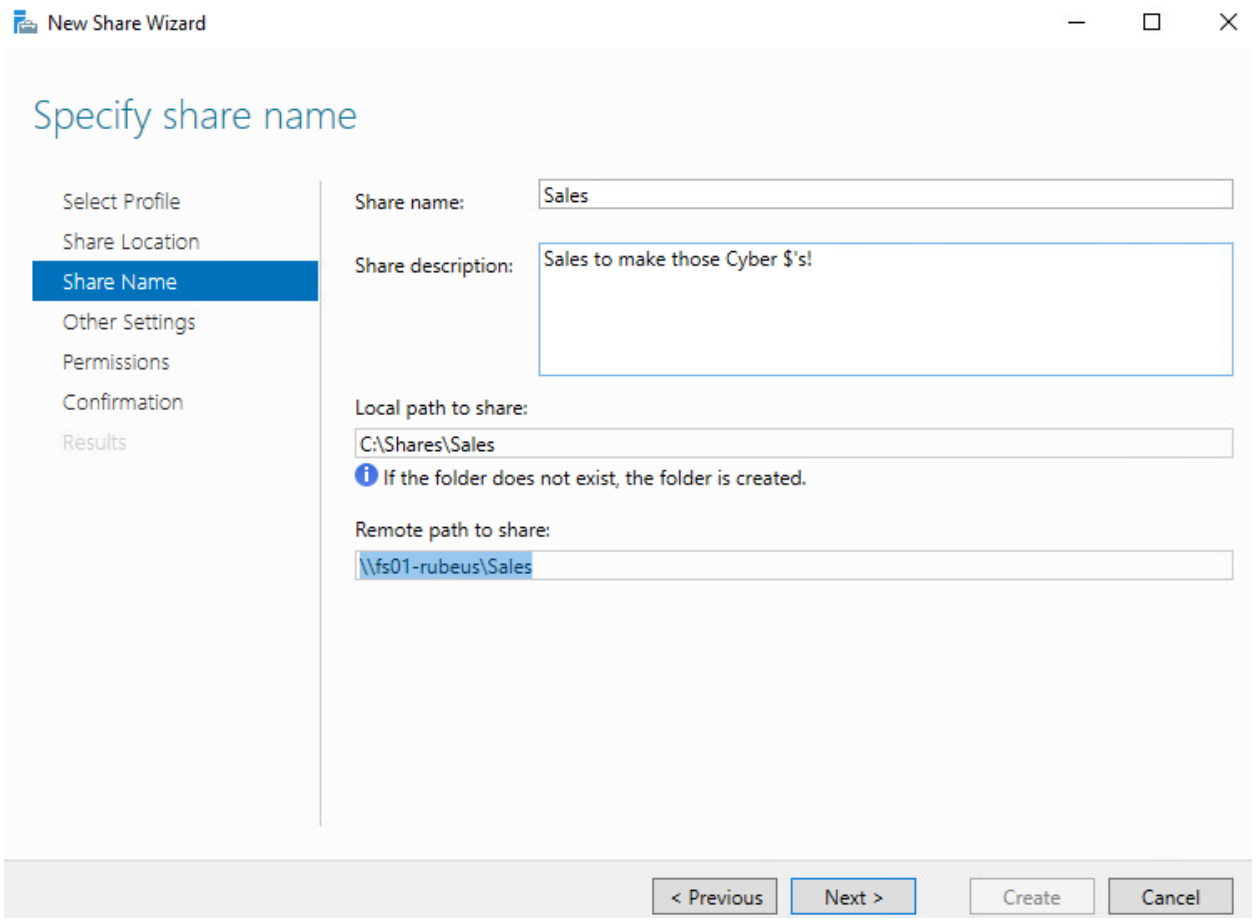
Launch Server Manager and create a New Share



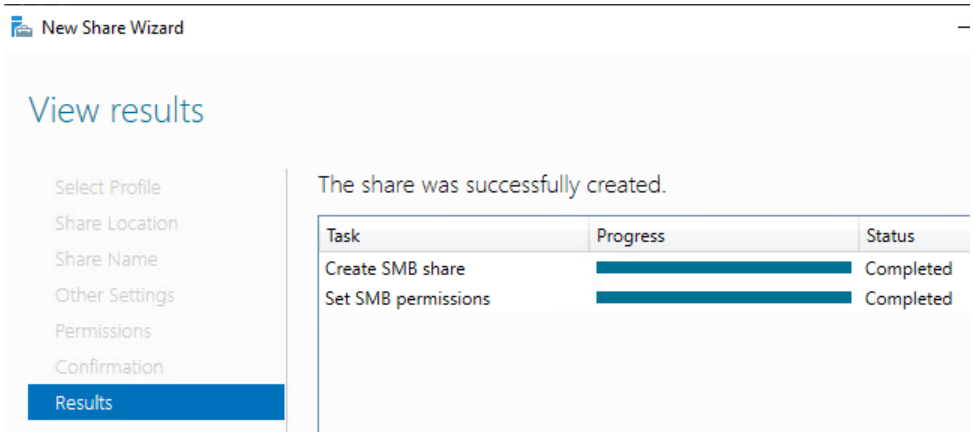
Choose the SMB Quick Share option.
Choose the fs01 server, and leave the Select by volume options alone.



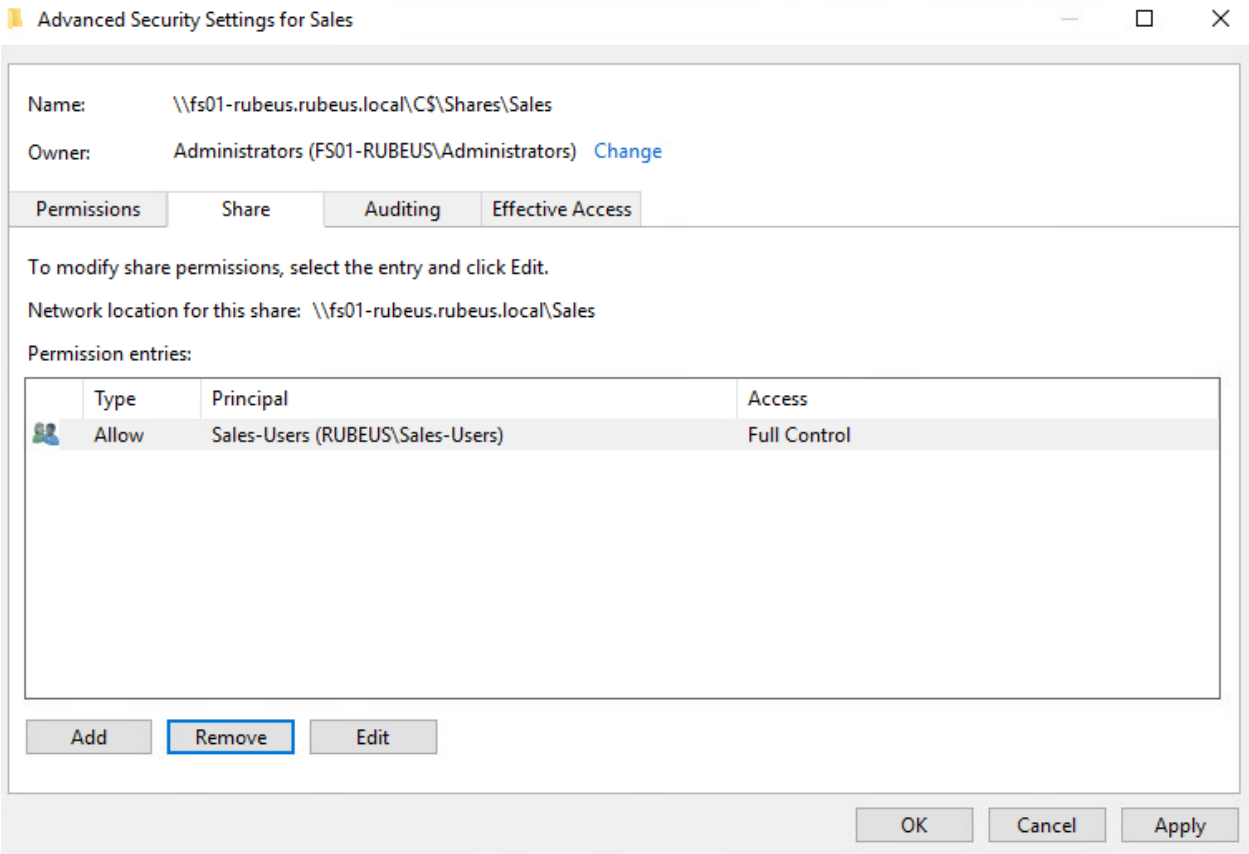
Create a share named Sales, & take note of the **Local** and **Remote** paths to the share:



Next & Finish the remaining Configure Share Settings.



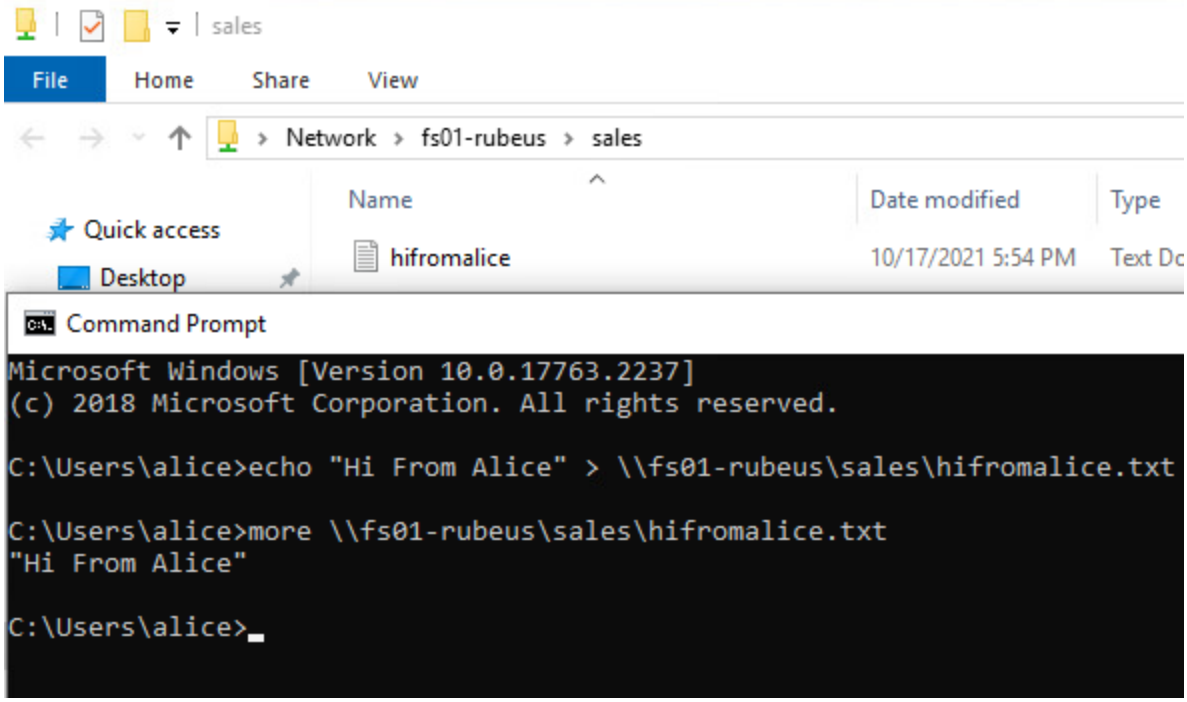
For Customized Permissions, assign the Sales-Users Group created earlier with Full Control Custom Permissions to the share. Remove "Everyone access to the Share".



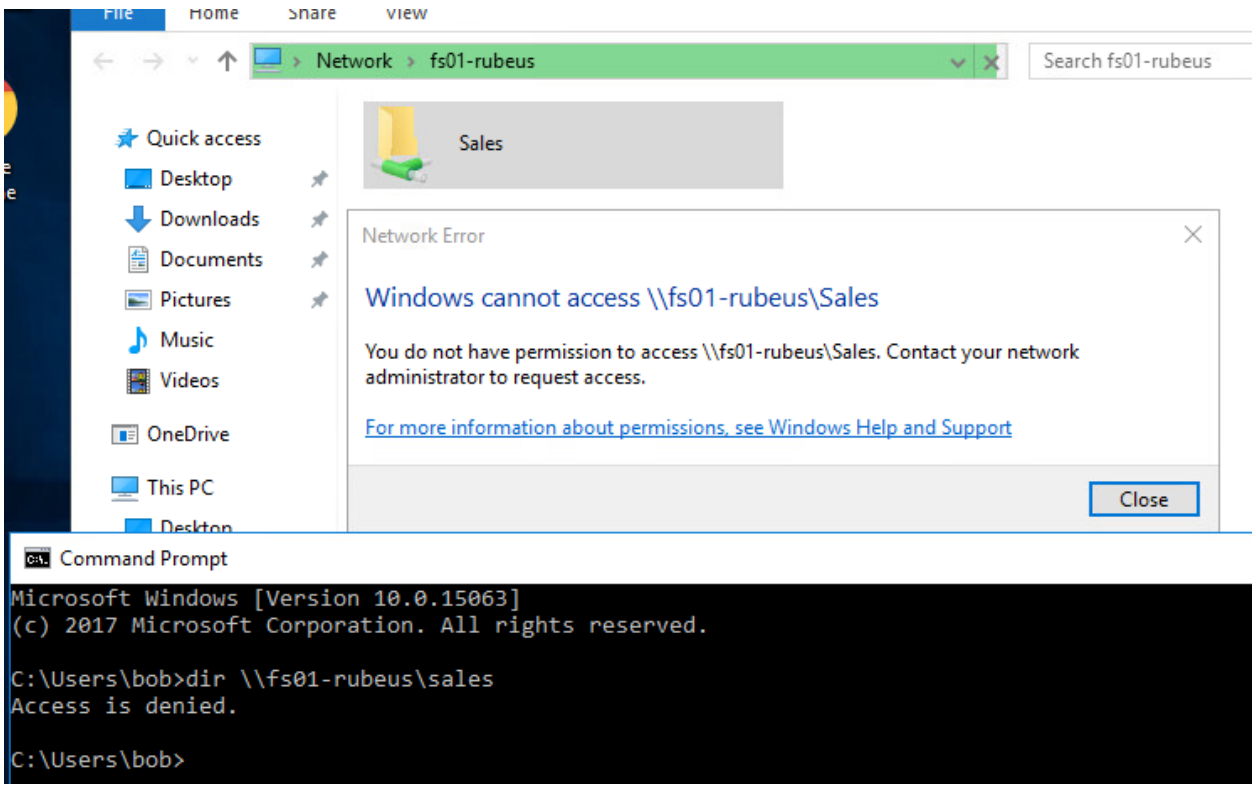
Test access for Bob and Alice.

`Deliverable 4:  Test access to the \\fs01-yourname\Sales while alternately logged into WSK02 as Bob and as Alice.  Provide screenshots showing that Alice can write and read from \\fs01\Sales and that Bob cannot.`

Alice Can Read and Write:



Bob Cannot Read nor Write:



Deliverable 5. Research and Create a Group Policy to Map the S:\ drive to the \\FS01\Sales share for all users in the the Sales-Users group, and then document this process in your tech-journal.

Provide:

- Screenshot showing your successful gpresults
- Screenshot of the mapped drive
- Link to your tech-journal article exploring some of this lab's topics further