

Old Dominion University

IT 416 Group Project

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Network & Server Configuration

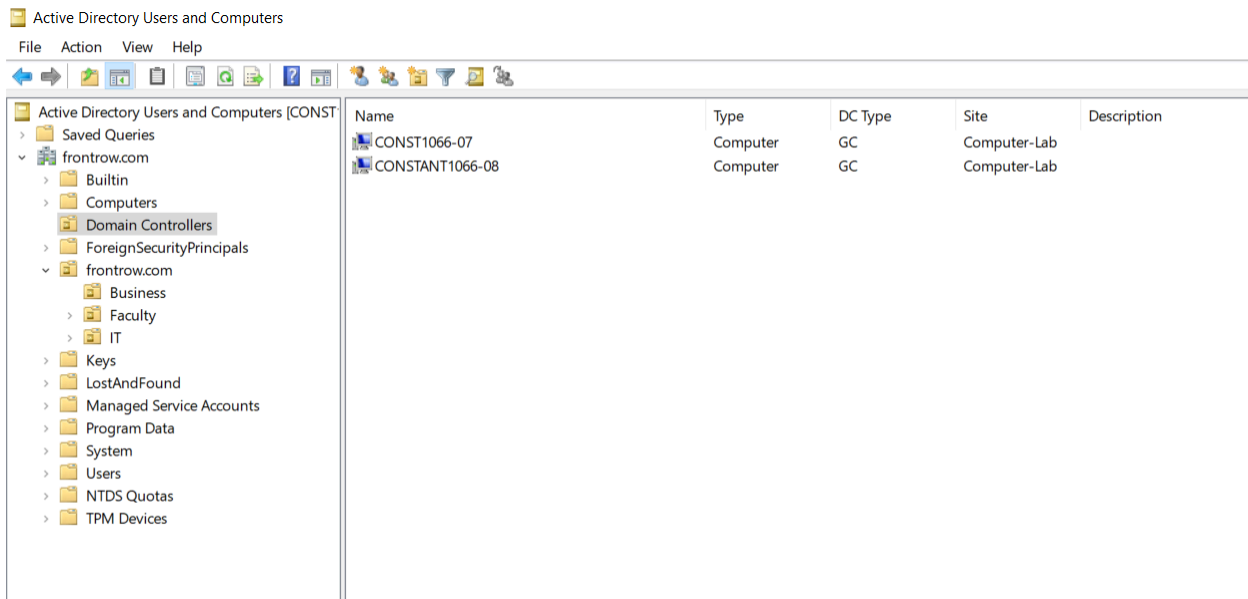
and Administration

202320 IT416 21492

Dr. Vijay Kalburgi

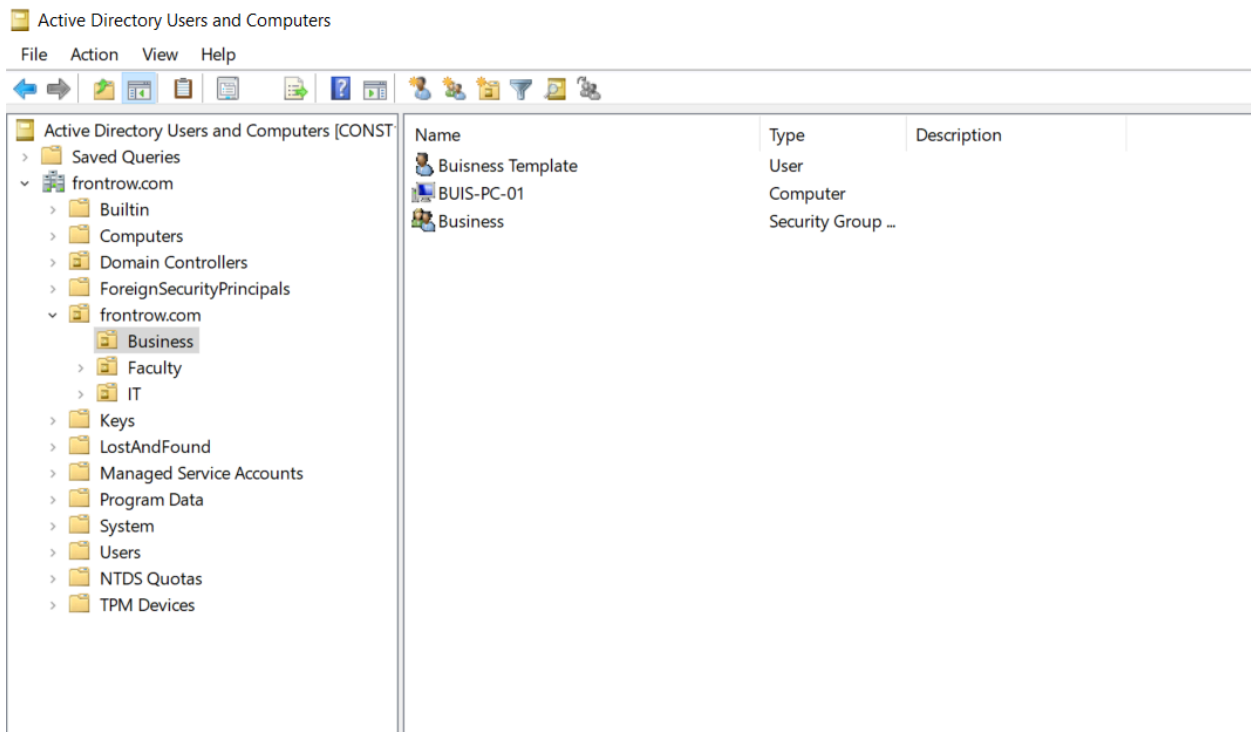
April 24, 2024

1. We installed Windows Server 2019 Datacenter Edition on CONST1066-08 by using an image on a USB. We changed the name of our server to CONSTANT1066-08 and then rebooted the computer. We used the following IP on the primary domain controller:
 - IP 10.1.103.1
 - SM 255.255.255.0
 - DG 127.0.0.1
2. We configured time settings to EST.
3. All firewall settings were disabled to facilitate setup.
4. We went to Server > Local Server > Manager and installed the following roles and features:
 - Active Directory
 - DNS
 - Hyper V
5. Promoted server to domain controller & followed steps in AD DS configuration wizard (see screenshot below).

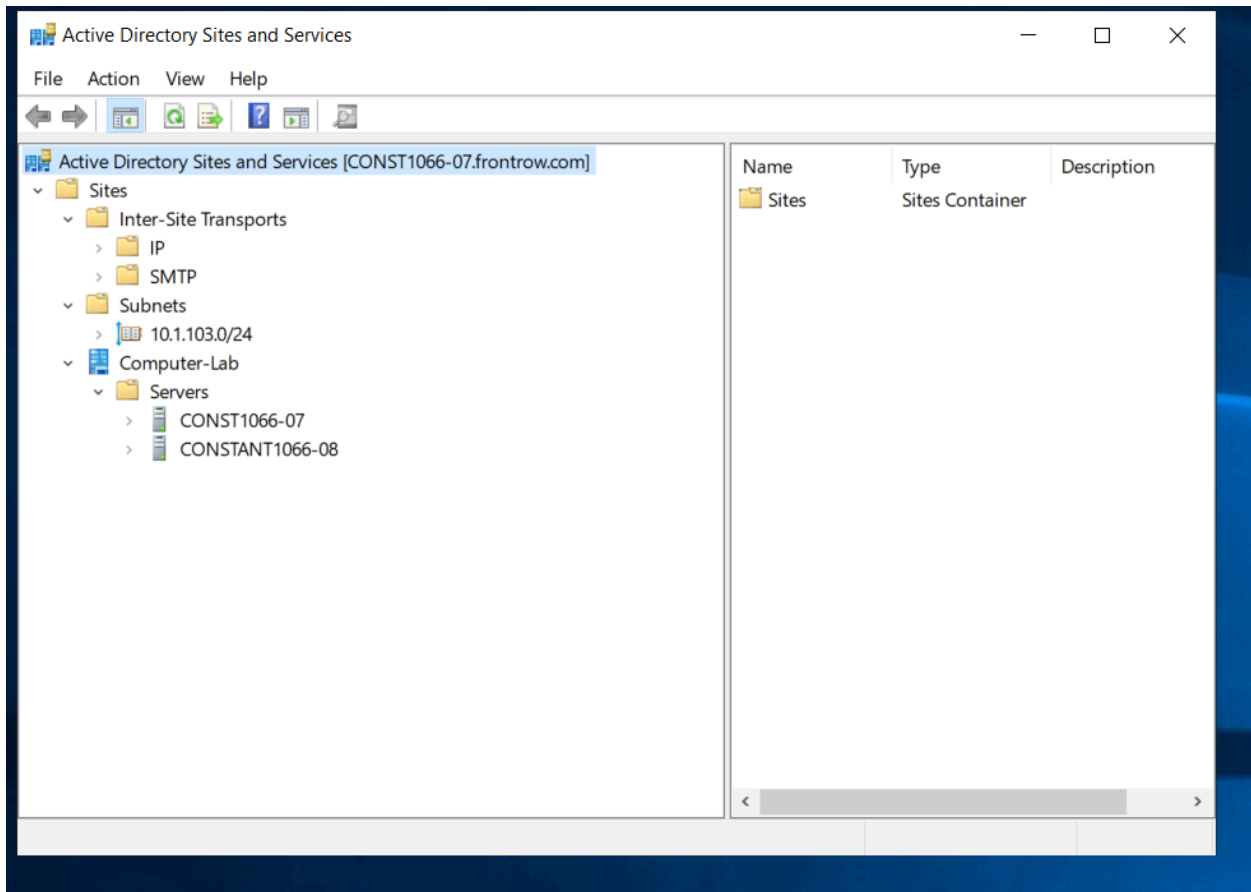


6. *frontrow.com* was created as our new root domain name.
 - NetBIOS domain name is FRONTROW
7. Windows Server 2012 was raised to Server 2016 by using Tools > AD Domains and Trusts.
8. We installed a second Windows Server 2019 Datacenter Edition on CONST1066-07 by using an image on a USB.
9. Configured IP as a second domain controller using the following info:
 - IP 10.1.103.6.
 - SM 255.255.255.0
 - DG 10.1.103.1

- ADNS 127.0.0.1
- 10. Steps were followed to add machine to the forest using frontrow.com domain
- 11. Accessed Server Manager > Local Server > Tools > Active Directory Users and Computers to create three groups under the domain. Those groups are:
 - Business
 - IT
 - Faculty
- 12. Created a .csv file in UTF-8 format for 30 users with the following information:
 - FirstName
 - LastName
 - Username
 - Department
 - OU
 - Password
- 13. Created group folders on C drive of the second domain controller and applied quota limits using File Server Resource Manager. We referenced page 315 in our text to apply permissions to each folder.
- 14. Created 3 Organizational units for the Faculty, Business students, and IT students.
 - A template was created for each user group within the OUs



15. Created the Site “Computer-Lab” (see screenshot below).

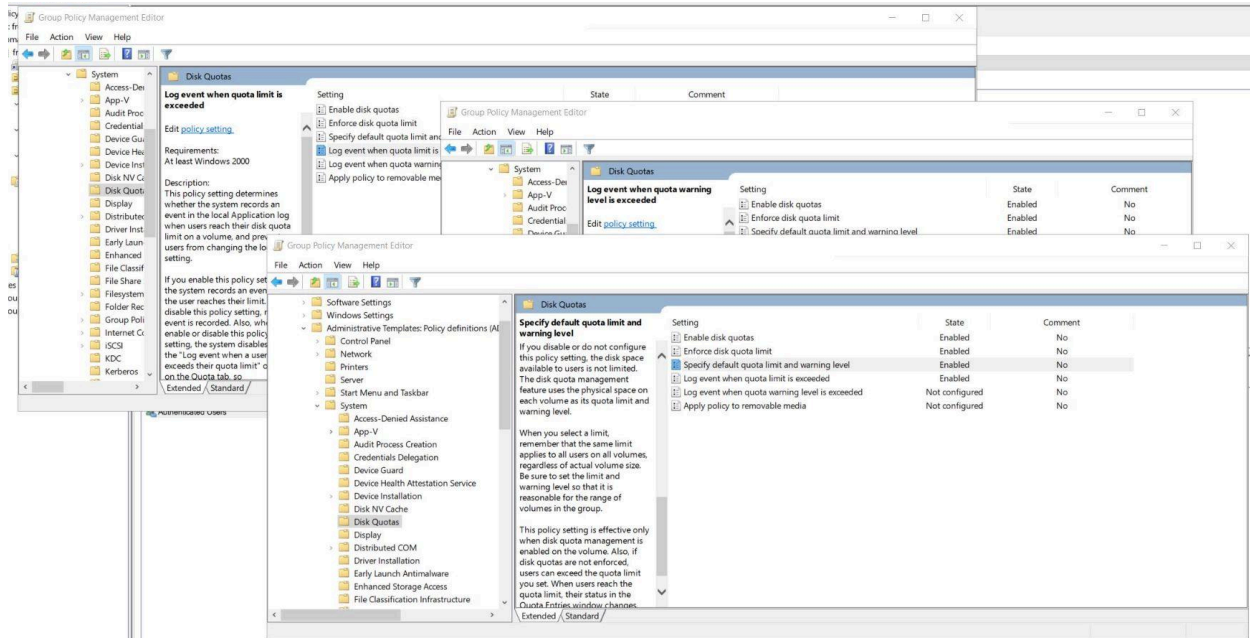


16. Installed file server resource manager on CONST1066-07.

- Create quota templates based on group limits
- Create folders for each unit and make them shared folders
- Created quota for the folders
- Give permission to groups

17. We created a GPO for each organizational unit (see screenshot on next page).

- Enable disk quota
- Enable enforcement quota limit
- Set quota limit based on group
 - i. 1GB for Faculty
 - ii. 100 MB for Business
 - iii. 250 MB for IT
- Enable quota logging when the limit is exceeded
- Enabled “prohibit access to Control Panel and PC settings” for all GPO
- Enable “remove add or remove programs” for business and IT



The following script was used to populate users in Active Directory using a .csv file:

```
foreach ($User in $ADUsers) {
    try {
        # Define the parameters using a hashtable
        $UserParams = @{
            GivenName      = $User.firstname # Correct use of GivenName instead of FirstName
            UserPrincipalName = "$($User.username)@$UPN"
            Name            = "$($User.firstname) $($User.lastname)"
            Surname         = $User.lastname
            Enabled         = $True
            DisplayName     = "$($User.firstname) $($User.lastname)"
            SamAccountName  = $User.username
            AccountPassword = (ConvertTo-SecureString $User.password -AsPlainText -Force)
            Path            = $User.ou
            Department      = $User.department
        }

        # Rest of the script...
    } catch {
        Write-Host "Error processing user $($User.username) - $_" -ForegroundColor Red
    }
}
```

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F33						
	A	B	C	D	E	F
1	username	firstname	lastname	department	password	ou
2	Abby.Antman	Abby	Antman	Faculty	Password01	OU=Faculty,DC=frontrow,DC=local
3	Beth.Batman	Beth	Batman	Faculty	Password01	OU=Faculty,DC=frontrow,DC=local
4	Carlie.Baymax	Carlie	Baymax	Faculty	Password01	OU=Faculty,DC=frontrow,DC=local
5	Deb.Panther	Deb	Panther	Faculty	Password01	OU=Faculty,DC=frontrow,DC=local
6	Elena.Widow	Elena	Widow	Faculty	Password01	OU=Faculty,DC=frontrow,DC=com
7	Fran.America	Fran	America	Faculty	Password01	OU=Faculty,DC=frontrow,DC=com
8	Gretchen.Marvel	Gretchen	Marvel	Faculty	Password01	OU=Faculty,DC=frontrow,DC=com
9	Helen.Catwoman	Helen	Catwoman	Faculty	Password01	OU=Faculty,DC=frontrow,DC=com
10	Ida.Dunn	Ida	Dunn	Faculty	Password01	OU=Faculty,DC=frontrow,DC=com
11	Jane.Deadpool	Jane	Deadpool	Faculty	Password01	OU=Faculty,DC=frontrow,DC=com
12	Albert.Strange	Albert	Strange	Business	Password01	OU=Business,DC=frontrow,DC=com
13	Bob.Flash	Bob	Flash	Business	Password01	OU=Business,DC=frontrow,DC=com
14	Chris.Arrow	Chris	Arrow	Business	Password01	OU=Business,DC=frontrow,DC=com
15	Dave.Lantern	Dave	Lantern	Business	Password01	OU=Business,DC=frontrow,DC=com
16	Ed.Galaxy	Ed	Galaxy	Business	Password01	OU=Business,DC=frontrow,DC=com
17	Frank.Hawkeye	Frank	Hawkeye	Business	Password01	OU=Business,DC=frontrow,DC=com
18	George.Hellboy	George	Hellboy	Business	Password01	OU=Business,DC=frontrow,DC=com
19	Henry.Hulk	Henry	Hulk	Business	Password01	OU=Business,DC=frontrow,DC=com
20	Ian.Torch	Ian	Torch	Business	Password01	OU=Business,DC=frontrow,DC=com
21	Jeremy.Wonderwoman	Jeremy	Wonderwoman	Business	Password01	OU=Business,DC=frontrow,DC=com
22	Ada.Ironman	Ada	Ironman	IT	Password01	OU=IT,DC=frontrow,DC=com
23	Bill.Fantastic	Bill	Fantastic	IT	Password01	OU=IT,DC=frontrow,DC=com
24	Chrissy.Mystique	Chrissy	Mystique	IT	Password01	OU=IT,DC=frontrow,DC=com
25	Dean.Neo	Dean	Neo	IT	Password01	OU=IT,DC=frontrow,DC=com
26	Eddie.Professorx	Eddie	Professorx	IT	Password01	OU=IT,DC=frontrow,DC=com
27	Fred.Pilgrim	Fred	Pilgrim	IT	Password01	OU=IT,DC=frontrow,DC=com
28	Gabbie.Silversurfer	Gabbie	Silversurfer	IT	Password01	OU=IT,DC=frontrow,DC=com
29	Hank.Spiderman	Hank	Spiderman	IT	Password01	OU=IT,DC=frontrow,DC=com
30	Ingrid.Storm	Ingrid	Storm	IT	Password01	OU=IT,DC=frontrow,DC=com
31	John.Supergirl	John	Supergirl	IT	Password01	OU=IT,DC=frontrow,DC=com
32						

Conclusion

We were able to accomplish the following:

- Create two Windows 2019 servers using two physical machines. We did not use any virtualization.
- Domain controllers were created.
 - Both servers were promoted to domain controllers and were added to the same forest and domain.
- We created three organizational units.
 - Business OU was created
 - IT OU was created
 - Faculty OU was created
- We implemented profile size and access restrictions using GPO.
- Group/member list created in .csv format
- PowerShell script created.
- Created Windows-shared folders for each OU

We were unable to figure out how to configure our PowerShell script and possibly our .csv file to populate users in Active Directory as intended. We conducted a lot of testing in PowerShell ISE and were able to clear faults we observed in a few versions of our script. A bulk of our time was spent on trying to overcome this challenge since it didn't seem like it should have been as hard as it was. We had some issues with getting the PowerShell script to work properly but we eventually figured it out through research and some trial and error. Unfortunately, we were never able to get members populated in groups.