



NETWORK
DESIGN &
ADMINISTRATION
(NDA) - LAB

NOTTINGHAM
TRENT UNIVERSITY 

Network Design and Administration Lab Book.

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Part 2:

Managing the Network

Lab 5: Managing Computers, Shares, Permissions and Quotas

5.1 Creating computer accounts using active directory

1. Start the “Windows Server 2008 R2 AD” virtual machine.
2. Type the password into the “password” box and press enter or click on the round blue arrow button. The password should be **P@ssword**. If you have previously received a message prompt that says “Your password has expired and must be changed” then following the instruction given in Lab1, you must have changed the password to P@ssword1. However, use whichever one is the case based on action you have previously performed.
3. Open “Active Directory Users and Computers”.
4. Locate the “Computers” container. Right-click on it and select the “New” option and then click on “Computer”.
5. In the “Computer Name” text box, type **Workstation01**
6. Explain what the purpose of the “Change” button and check box are for.

7. Leave the remaining fields with their default values and click on “Ok”.

5.2 Creating computer accounts using DSADD.EXE and new- adcomputer

1. Open PowerShell and enter:

dsadd computer "cn=Workstation03, cn=Computers, dc=dailyplanet, dc=com"

Note: You could alternatively use the "New-ADComputer" cmdlet.

2. Type help **new-adcomputer** within PowerShell to find out what parameters to use.
3. Use the **cmdlet** to create a new computer called **Workstation04**.
4. Now switch back to the "Computers" container in the "Active Directory Users and Computers" window to see what changes have been made.

5.3 Disabling and resetting computer accounts

1. Start the "Windows 7 Client" virtual machine and join the client to the AD network (as covered in the integrating client lab). **Leave the Windows 7 virtual machine running.**
2. In the "Computers" container on the Server, right-click on "**WIN7-CLIENT-2**" in the details pane and select "Disable Account".
3. **Explain what the AD DS warning means and what the outcome of this action would be.**

4. Click on “Yes”. Windows Server will notify you that the account has now been disabled.
5. Click on “OK”. Notice that the icon for “**WIN7-CLIENT-2**” has now got a downward facing arrow.
6. Leave the Windows Server virtual machine running and switch back to the Windows 7 virtual machine.
7. On the log on screen, click on the “Switch User” button.
8. Click on the “Other User” option.
9. In the “Username” box, type **dailyplanet\administrator**
10. In the “Password” box, type “**P@ssword**” (or the password you are using)
11. Explain why you have encountered this message and how this would be a useful tool in a networked environment.
12. Switch back to the Windows Server virtual machine and right-click on “WIN7-CLIENT-2” in the “Active Directory Users and Computers” window and select “Enable Account”.
13. Click on “OK”.
14. Now try logging in to Windows 7 again to verify that you can now log in successfully.

Note: Leave the Windows 7 virtual machine running.

5.4 Creating a shared folder

1. Switch back to the Windows Server virtual machine and open Windows Explorer. Browse to the “C” drive.
2. Right-click on a blank area in the file view, select “New” and “Folder”. A new folder is created with the default name “New Folder”.
3. Create nested folders as “**C:\Network\User Data**”.
4. Right-click on the both folders in succession and select “Share with” and then select “Specific people...” to open the “File Sharing” dialogue box.
5. Click on the pull-down box and select “**Everyone**” and then click on the “Add” button.
6. Click on the “Share” button.
7. Click on “Done”.

Note: You can share a directory by choosing the directory properties and clicking on the “Sharing” tab and “Advanced Sharing”.

Create another folder called spool using this alternative method.

5.5 Viewing the NTFS and share permissions on a directory

1. Right-click on the **“User Data”** folder in Windows Explorer and select “Properties”.
2. Click on the “Security” tab,
3. **List the groups or users that have permissions to access this directory. What standard permissions does each group or user have?**

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4. Switch to the “Sharing” tab and click on “Advanced Sharing”.
5. Click on the “Permissions” button.
6. **Make a note of what the default share permissions are. Explain who would be able to access that share and what you think they would be able to do.**

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7. Click on “OK” in both windows.
8. Click on “Close” in the “User Data Properties” window.
9. Close Windows Explorer.

5.6 Connecting to and mapping a drive to the share

1. Switch back to the Windows 7 virtual machine.
2. Click on “Start” type in **\\DailyPlanetServer** into the “search” box and press enter.

Note: Windows will open and display all the shares on DailyPlanetServer. You have just created the “User Data” share but make a note that there are additional shares available from the server. You can explore their contents by double-clicking on them (e.g look in the SYSVOL share).

3. Explain what you think the purpose of the NETLOGON and SYSVOL shares are for.

4. Right-click on the **“User Data”** share folder that you created in the network folder. Then obtain and copy the path as: **\\DailyPlanetServer\Network\User Data**
5. Click on the “Computer” icon on the left pane. Then click on **“Map Network Drive”** from the top bar menu items.
6. In the “Drive” drop-down list select **X:**, then paste the copied path or click on “Browse” to the required path.
7. Click on “Finish”.
8. Close the **“X”** window and then close the **\\DailyPlanetServer** window.

5.7 Setting NTFS permissions

1. Switch back to the server virtual machine.
2. Open “Active Directory Users and Computers” if it is not already open.

If not already created, you need to do the following:

3. Create a new “**Reporters**” organisational unit and create a new user called Clark Kent.
4. Now create a new group called Reporters Group within the “Reporters” OU using the default options.
5. Right-click on “Clark Kent” and select the “Add to a group...” option.
6. Type in Reporters Group into the “Enter the object names to select” box. Click on “Check Names” to verify that it is correct.
7. Click on “OK”.
8. Open “Windows Explorer” and locate the “User Data” folder.
9. Access the properties for “User Data”.
10. Click on the “Security” tab and then click on the “Edit” button.
11. Now click on “Add”. The “Select Users, Computers or Groups” dialogue box will open.
12. In the “Enter the object names to select” text box, type **Reporters Group**
13. Click on “OK”
14. Explain whether this group will be able to create files?

Note: If you would like to test whether a user account has permission to create files on the network share, you can log into the Windows 7 virtual machine with the “ckent” account. You will have to enter “\\DailyPlanetServer\network\user data” into the “Run” option to access the network share.

Once you have finished, leave the Windows 7 virtual machine running and logged into the “ckent” user account.

15. Work out what changes need to be made to the **NTFS** permissions to allow “Reporters Group” to create and write files to the share.

16. Explain what you had to do.

5.8 Assigning disk quotas

1. Switch back to the server virtual machine.
2. Double click on the “Server Manager” icon on the desktop.
3. If this particular step is not yet already installed, in the “Roles Summary” section, click on the “Add Roles” option and install the File Services role. When you get to the screen which shows what roles of file services are required, select the “File Server Resource Manager” option and then continue proceeding with installation. You do not need to set any of the storage management options as you will be doing this over the next few steps.
4. In the “Roles Summary” section, click on the “File Services” role.
5. Scroll down the “File Services” pane until you find the “Add Role Services” option. Click on it.
6. Tick the “File Server Resource Manager” option and click on “Next”.
7. Tick the “Local Disk (C:)” option and click on “Next”.
8. Click on “Next”.
9. Click on “Install”.

10. Click on "Close" once it has been installed.
11. Start the "File Server Resource Manager" from the "Administrative Tools" menu. The "File Server Resource manager" window will open.
12. Expand the "Quota Management" option and then double-click on "Quotas".
13. Click on the "Create Quota" action. The "Create Quota" window will open.
14. Click on the "Browse" button for the "Quota path".
15. Expand "Local Disk (C:)" and click on "User Data" within the "Network" directory.
16. Click on "OK".
17. Select "Define custom quota properties" and then click on the "Custom Properties" button.
18. Within the "Space Limit" section of the window adjusts the "Limit" to 50 MB.
19. **Explain why you would choose to customize your quota limit rather than going with the default limit.**

20. Within the "Notification thresholds" section of the window clicks on "Add".
21. Type 90 in to the "Generate notification when usage reaches (%)" text box.
22. Tick the "Send e-mail to the following administrators" check box and enter ***administrator@dailyplanet.com*** into the email text box.
23. Tick the "Send e-mail to the user who exceeded the threshold" check box.
24. **Explain why you would want to alert the administrator and user when the user is close to their quota limit and how this would aid you as an administrator.**

25. Click on “OK” and then “Yes” on the warning message about the lack of an SMTP email server.

26. Click on “OK” on the “Quota Properties of C:\Network\user data” window.

27. Explain why you would need to enable quota management for users.

28. Click on “Create”.

29. Within the “Save Custom Properties as a Template” window, type 50 MB quota within the “**Template Name**” field and then click on “OK”.

30. Explain what has changed / happened within the “File Server Resource Manager” window.

31. Switch back to the Windows 7 virtual machine. You should still be logged in as “ckent” at this point.

32. Open the “Computer” icon and map the **\\DailyPlanetServer\network\user data** network share to drive X: using the instructions from before.

33. Once the “**User Data on DailyPlanetServer**’ (X:);” window opens, right-click on the “X:” drive and view its properties. Make a note of the “Free Space” and “Used Space” details.