



Disk Quotas

Introduction and/or Background

An administrator at Tx-Rig noticed that the size of the company backup jumped up very suddenly. After investigating, it was discovered that an employee had brought their entire iTunes music library - totalling over 150 GB - and copied it to their domain user profile. Enabling disk quotas will prevent incidents like this in the future.

Objectives

In this project/lab the student will:

- Utilize disk quotas

Equipment/Supplies Needed

- VMWare Workstation Pro
- Windows Server 2019 Virtual Machine

Assessment Criteria

- Take a screenshot of the Quota Entries window (PrtScr#1)

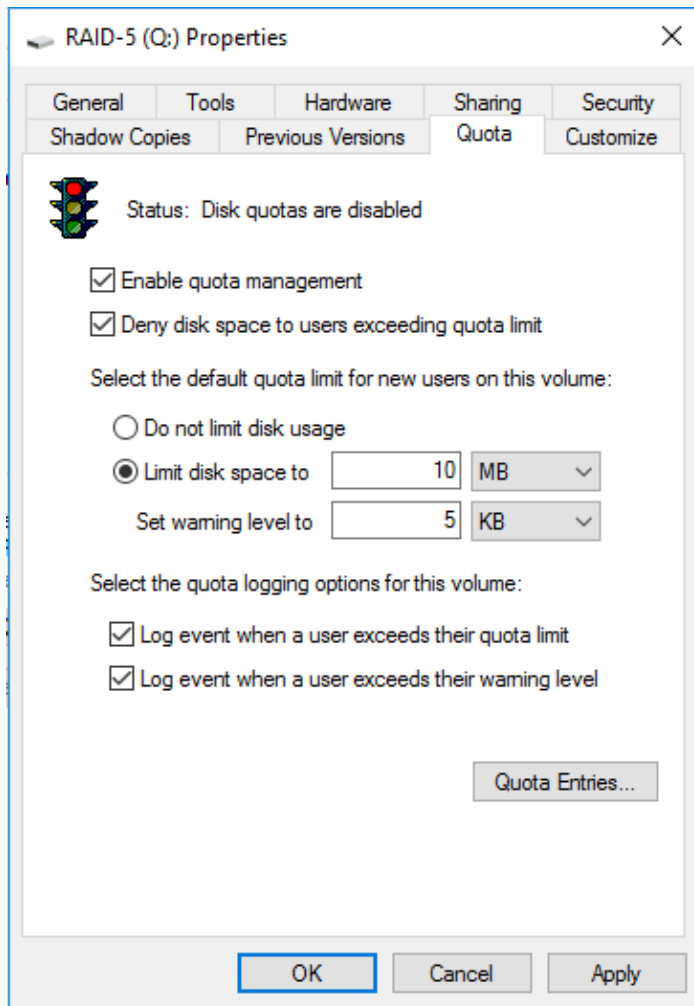
Assignment

Purpose of Activity: In this activity, you will use the GUI to enable and configure Disk Quotas on the Windows Server operating system.

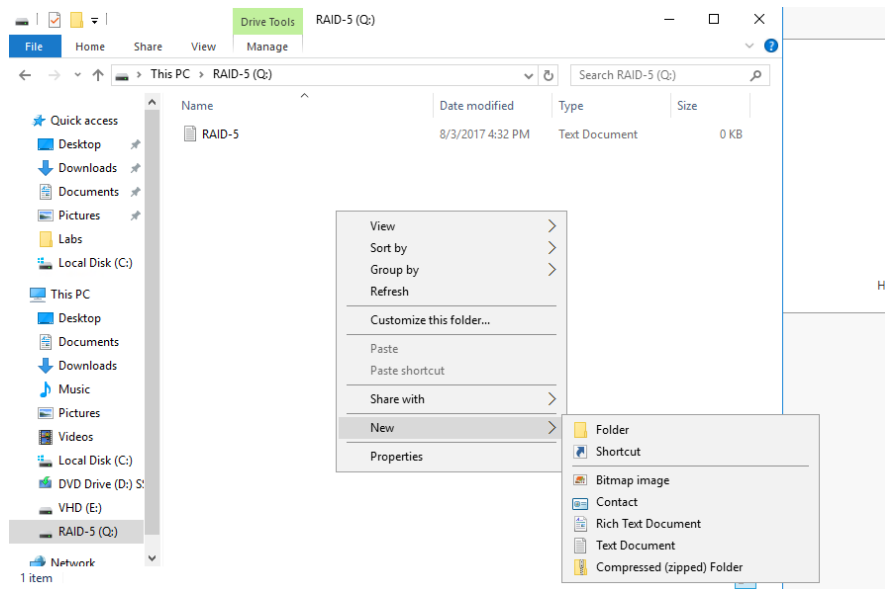
Exercise 1: Enabling Quotas:

1. Log on to your server as **Administrator**.
2. Open **File Explorer** and click on **This PC** in the left pane.
3. Right-click the **RAID-5** volume you just previously created and click **Properties**.
4. Click the **Quota** tab, and then click the **Enable quota management** and **Deny disk space to users exceeding quota limit** check boxes.

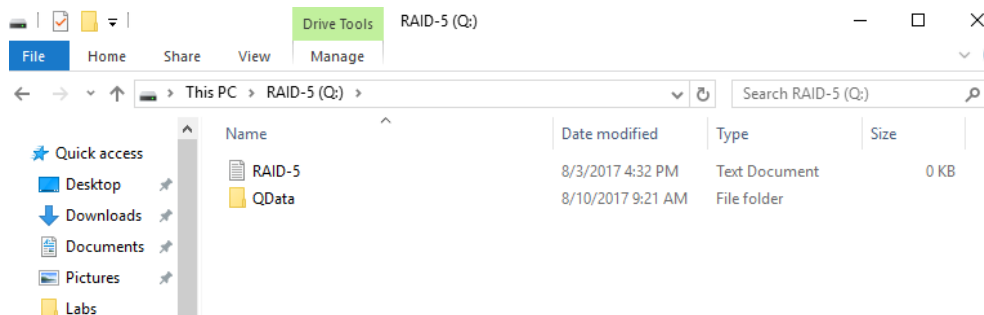
- Click the **Limit disk space to** option button. Type **10** and click **MB**. In the **Set warning level to** text box, type **5** and click **KB**. These numbers are set very low just for demonstration purposes. Typically, quota limits and warning levels are set much higher.
- Click both checkboxes starting with **Log event when a user exceeds . . .**



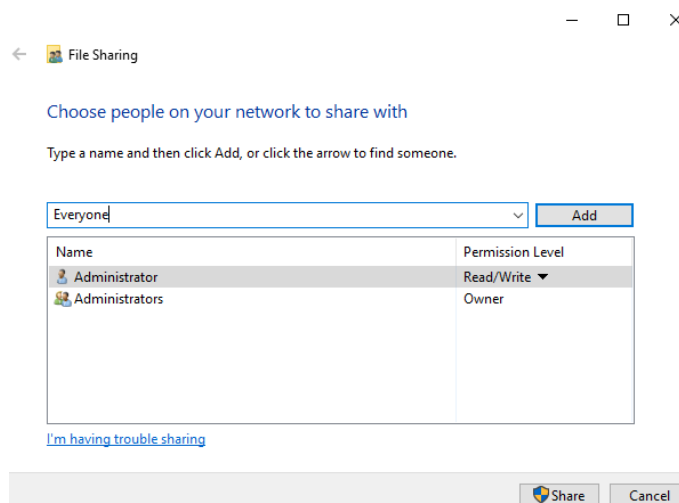
- Click **Apply**, then **OK**.
- Read the Disk Quota dialog box and click **OK**.
- Double-click the RAID-5 (Q:) volume, right-click in the right pane and select **New Folder**.



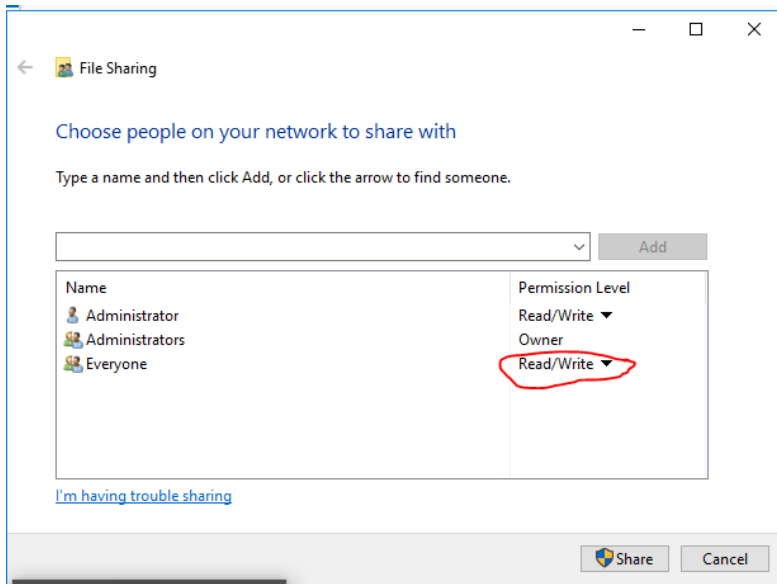
10. Name the new folder **QData**.



11. Right-click the **QData** folder you just created and click **Share** and select **Share with specific people**. In the drop down list box, click **Everyone**, and then click the **Add** button.

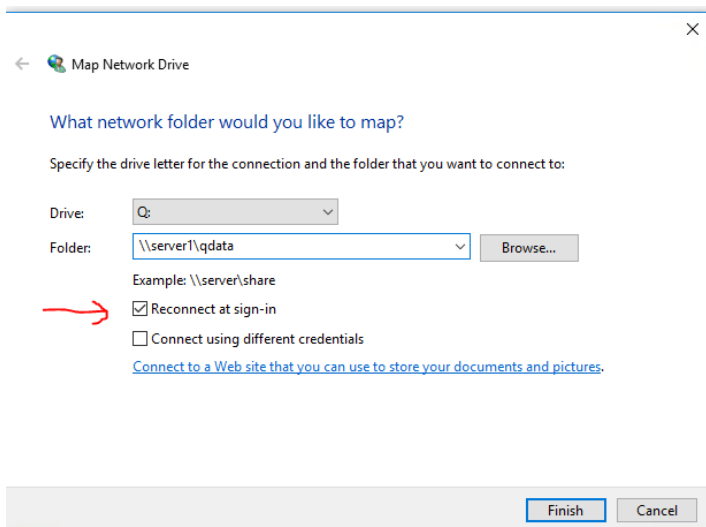


- Click the **Everyone** entry in the list box at the bottom. Click the list arrow in the Permission Level column, and then click **Read/Write** in the list. Click the **Share** button, and then click **Done**.

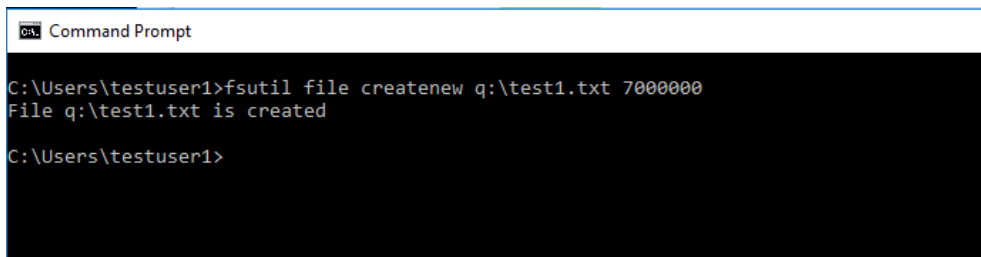


Exercise 2: Working with Quotas:

- Press **Ctrl+Alt+Delete** to log onto your Windows 10 VM (**Win10-XX**).
- Log on as **sguthridge** with a password of **Itnw1354**.
- Open File Explorer, right-click on This PC, and then click **Map network drive**.
- Pick drive letter **Q** from the drop down menu and type **\\Srv19-XX\qdata**.
Make sure the **Reconnect at sign-in** is checked. Click **Finish**. The mapped folder will appear.

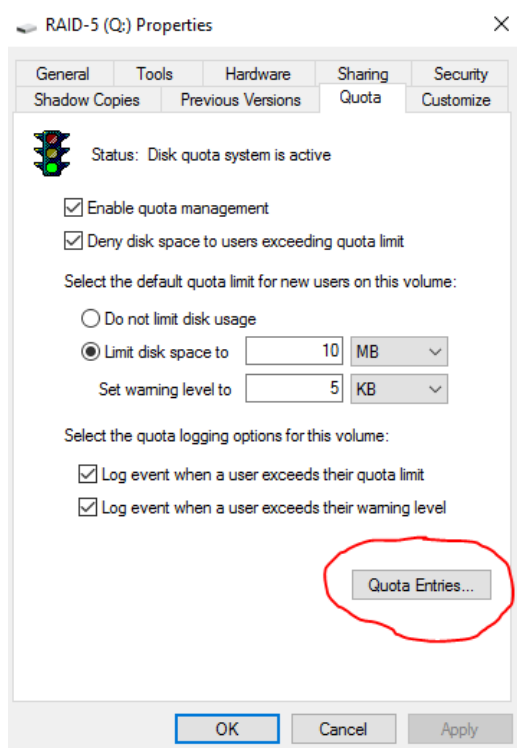


5. Click **Start**, type **cmd** and press **Enter** to open a command prompt.
6. At the command prompt, type **fsutil file createnew q:\test1.txt 7000000** (That's 6 zero's!). You're using this file because its size is larger than the warning level and smaller than the quota limit.



```
Command Prompt
C:\Users\testuser1>fsutil file createnew q:\test1.txt 7000000
File q:\test1.txt is created
C:\Users\testuser1>
```

7. Log onto your server and open File Explorer by clicking the folder icon on the Taskbar, click on This PC, then click the **RAID-5 (Q:)** volume and click **Properties**. Click the **Quota** tab. Click **Quota Entries**. You should see a new quota entry for sguthridge with a Warning icon in the Status column. You may have to refresh a few times. Double-click the **sguthridge** entry. If necessary, you could assign a different quota limit and warning level for this user or choose not to limit disk space.



The screenshot shows the 'Quota Entries for RAID-5 (Q:)' window. It contains a table with the following data:

Status	Na...	Logon Name	Amount Used	Quota Limit	Warning Level	Percent Used
Warning	Test...	testuser1@domain01.local	6.67 MB	10 MB	5 KB	66
OK		BUILTIN\Administrators	74 KB	No Limit	No Limit	N/A
OK		NT AUTHORITY\SYSTEM	20 MB	No Limit	No Limit	N/A

8. Click **Cancel**. Close the Quota Entries window.
9. Switch back to the Windows 10 virtual machine and at the **command prompt** window and type **fsutil file createnew q:\test2.txt 7000000** (That's 6 zero's!). You should get a message indicating that there's not enough space to copy the file.

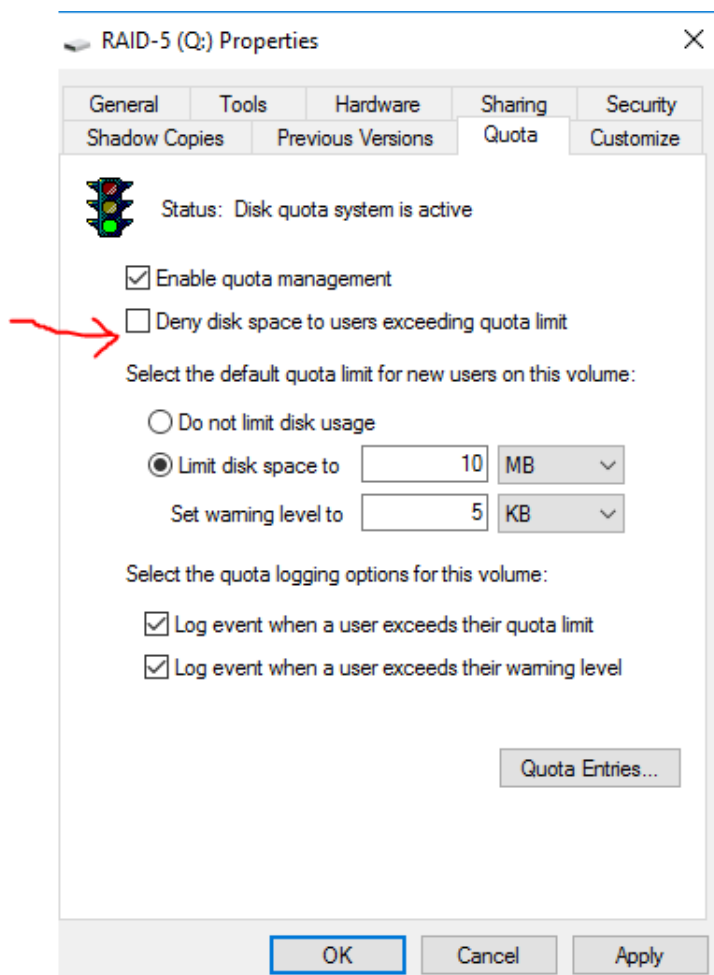
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C:\Users\testuser1>fsutil file createnew q:\test2.txt 7000000
Error: There is not enough space on the disk.

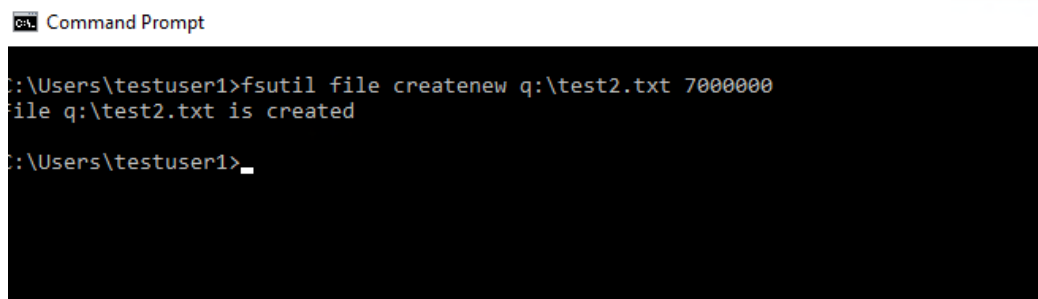
C:\Users\testuser1>

```

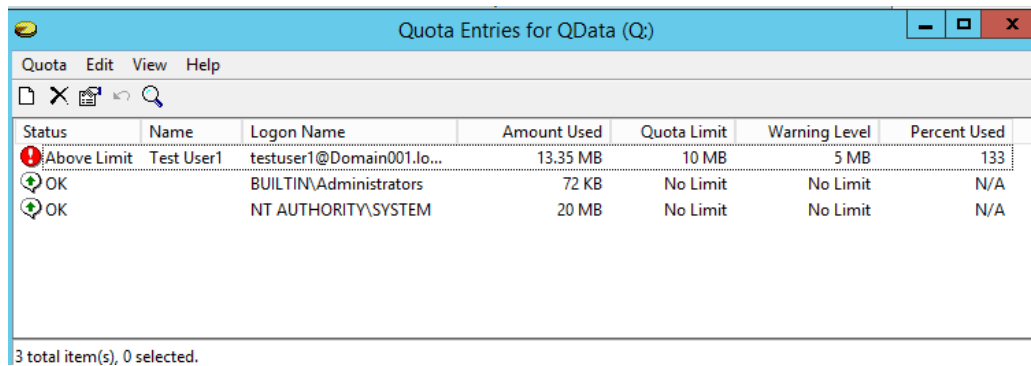
10. Switch back to your server VM and the **Quota Settings** for RAID-5 (Q:) window.
11. Click to clear the **Deny disk space to users exceeding quota limit** check box, and then click **Apply**.



12. Switch back to the **Windows 10** virtual machine's **command prompt** window and type **fsutil file createnew q:\test2.txt 7000000** (That's 6 zero's!). You should be successful again this time.



13. Switch back to your server and open the **Quota Entries** window again. **Sguthridge** should now have an **Above Limit** icon in the Status column.



Status	Name	Logon Name	Amount Used	Quota Limit	Warning Level	Percent Used
Above Limit	Test User1	testuser1@Domain001.lo...	13.35 MB	10 MB	5 MB	133
OK		BUILTIN\Administrators	72 KB	No Limit	No Limit	N/A
OK		NT AUTHORITY\SYSTEM	20 MB	No Limit	No Limit	N/A

3 total item(s), 0 selected.

14. Take a screenshot of the Quota Entries window (PrtScr#1).
15. Close the Quota Entries window. In the Quota tab of the volume's Properties dialog box, click to **clear** the **Enable quota management** check box to disable quotas on the volume. Click **Apply**.
16. Close all open windows but stay logged on for the next activity.

Rubric

Checklist/Single Point Mastery

<u>Concerns</u> Working Towards Proficiency	<u>Criteria</u> Standards for This Competency	<u>Accomplished</u> Evidence of Mastering Competency
	Criteria #1: Take a screenshot of the Quota Entries window (PrtScr#1) (100 points)	