**Module 4: Azure Storage types and capabilities**

**Lab A: Configure Azure Storage**

**Exercise 1: Create a blob storage account**

* 1. Sign in to the [Azure portal](https://portal.azure.com/).
  2. In the Azure portal, in the Hub menu, and choose **Storage Accounts**, and in the **Storage Accounts** blade, choose **+ Add**.
  3. In the **Create storage account** blade, in the Name text box, type **newwingovbstoreXX** for your storage account.   
     **Note:** Storage account names must be between 3 and 24 characters in length and may contain numbers and lowercase letters only. Your storage account name must be unique within Azure. The Azure portal will indicate if the storage account name you select is already in use.
  4. Deployment model: **Resource Manager**.
  5. Select Account kind: **Blob storage**.
  6. Performance: Standard
  7. Replication: **LRS**.
  8. Select your subscription.
  9. Specify a new resource group. Use **StoreXXRG**.
  10. Select the geographic location for your storage account. Use **USGovVirginia**
  11. Click **Create** to create the storage account.

**Exercise 2:**  **Create File Storage**

1. In the Azure portal, in the Hub menu, and choose **Storage Accounts**, and in the **Storage Accounts** blade, choose **+ Add**.
2. In the **Create storage account** blade, in the Name text box, type **newwingovfstoreXX** for your storage account.
3. Deployment model: **Resource Manager**.
4. Select Account kind: **Storage (general purpose v1)**.
5. Performance: **Standard**
6. Replication: **LRS**.
7. Select your subscription.
8. Resource group. Use **StoreXXRG**.
9. Select the geographic location for your storage account. Use **USGovVirginia.**
10. Click **Create** to create the storage account.

**Exercise 3: Install Storage Explorer**

**Task 1: Download and install Azure Storage Explorer**

1. In the browser, open a new tab and type in the following URL: <https://azure.microsoft.com/en-us/features/storage-explorer/>
2. Double click the large blue button that says **Download Storage Explorer free**.
3. At the bottom of the screen, right above the **Taskbar**, click **Save** and when finished downloading click **Run**.
4. Click **Yes** in the **User Account Control** window.
5. In the **License Agreement** page select the **I accept the agreement**, and then click **Install**.
6. In the **Select Destination Location** page, click **Next**.
7. In the **Select Start Menu Folder** page, click **Next**.
8. When the setup is complete, click **Finish**.

**Task 2: Configure the Storage Explorer**

1. Storage Explorer should run automatically when you click **Finish**. If it does not, go to the **Start** menu and you should find it at the top of the list under the **Recently added** group. Double-click it.
2. Note the upper left quadrant of the Storage Explorer screen. There is a console tree of the most use items. Select and right-click the **Storage Accounts** node. In the context menu, click **Connect to Azure storage**.
3. In the **Connect to Azure storage** page, in the **Add an Azure Account** drop-down, select **Azure US Government**, and then select the **Use a storage account name and key** radio button.
4. Return to the **Azure Government** portal.
5. In the **Hub menu**, click **Storage accounts**. In the **Storage accounts** blade, double-click the storage account that is **BlobStorage** in the **Kind** column.
6. In the **newwingovbstoreXX** blade, in the console tree, click **Access keys**. You should note at least two keys available for the account. Note the blue square **Copy** button to the right of each item.
7. Click the **Copy** button next to the Storage account name entry. Return to the **Connect to Azure storage** page you left in step three.
8. In the **Display** name, type **WinGov Blob Storage**.
9. Click in the **Account name** text box, and on the keyboard, press **Ctrl-V**.
10. Return to the Azure Portal, and in the **Key 1** area, click the Copy button beside the Key value.
11. Return to **Storage Explorer**, and click in the **Account Key** text box, and on the keyboard, press **Ctrl-V**.
12. in the **Storage domain** pulldown, select **US Government**, and then click **Next**.
13. In the **Connection Summary** page, click **Connect**.
14. The console tree of the Storage Explorer should now have a node for **WinGov Blob Storage (Key)**. Expand and then select **Blob Containers**.
15. In the **Actions and Properties** quadrant below the console tree, in the **Actions** tab, click the **Create Blob container**. In the console tree, type **myblob**, and press **Enter**.
16. In the upper-right details quadrant, you’ll see a new entry named **myblob** with a menu bar with a number of actions on it, as well as other controls.
17. In the menu bar, click the **Upload** action and then select **Upload Files**.
18. In the **Upload files** page, in the **Files** area, click the three ellipses (**…**).
19. In the **Select folder to upload** window, navigate to the location where you had previously saved any file (the course Labfiles are great for this). Select the file and then click **Open**. Now in the **Upload files** page, click **Upload**.
20. After a moment, the selected file should appear in the **myblob** quadrant.
21. Return to the Azure portal.
22. In the **newwingovbstoreXX** blade, in the console tree, click **Blobs**.
23. In the **newwingovbstoreXX – Blobs** blade, in the console tree, click **myblob**.
24. You should see your uploaded file. Double-click the file name and explore the various items and methods you can use for that particular file. If you selected a Word document, and click the **Edit blob** tab, you’ll see that the file does not render correctly but this is normal.

**Exercise 3: Create a file share**

**Task 1: Create an Azure File Share and map a network drive to it.**

1. in the Azure portal, in the **Hub menu**, click **Storage accounts**. In the **Storage accounts** blade, double-click **newwingovfstoreXX**.
2. In the **newwingovfstoreXX** blade, click the **Files** tile.
3. In the **newwingovfstoreXX-Files** blade, click the **+ File share**.
4. In the **File share** blade, in the **Name** text box, type **myshare**, and in the **Quota**, type **1**. Now click the **Create** button.
5. Note the menu bar the top of the **myshare** blade. Click the **Connect** item.
6. The **Connect** blade opens and note the P**owerShell** and Command Prompt text (and also notice text for connecting in Linux). You can copy these commands and run them on your local machine. In the **PowerShell** command, click the **Copy** button.
7. On the **Taskbar** of your host computer, in the **Search** text box, type **PowerShell**, and in the best match area, right-click **Windows PowerShell** and select **Run as administrator**.
8. In the **User Account Control** window, click **Yes**.
9. In the **Windows PowerShell** console, right-click and the text should appear in the console. Press the **Enter** key.
10. You should get information saying the **Z Drive was created**.
11. If you receive an error, go to **Task 2** below.
12. On the taskbar, click **File Explorer**. On the **C:\** drive, create a new folder named **Test**. Put some files in it. Any of the course Labfiles would be ideal.
13. In the PowerShell console, type the following cmdlet

Copy C:\test\\*.\* Z:

1. In the PowerShell console, type **Z:**
2. Now type **Dir**. Are the files there?
3. Return to the Azure portal. Close the **Connect** blade.
4. In the **myshare** blade, in the menu bar, click **Refresh**. You should see the files you copied onto the **Z:** drive on the host computer, here in the **myshare** blade.

**Note:** Performing this exercise requires port 445 to be open and available on the perimeter firewall. You can test for this by doing the following:

**Task 2: Check the Firewall setting**

1. Install the Microsoft SysInternals tool **PortQry Command Line Port Scanner Version 2.0** from the Microsoft Download Center: <https://www.microsoft.com/en-us/download/details.aspx?id=17148&ranMID=24542&ranEAID=TnL5HPStwNw&ranSiteID=TnL5HPStwNw-UX2aNbxCr.U3eyEpytYwpA&epi=TnL5HPStwNw-UX2aNbxCr.U3eyEpytYwpA&irgwc=1&OCID=AID681541_aff_7593_1243925&tduid=(ir_44cfb0a9Ncd8ef4a01cb0630c723c4001)(7593)(1243925)(TnL5HPStwNw-UX2aNbxCr.U3eyEpytYwpA)()&irclickid=44cfb0a9Ncd8ef4a01cb0630c723c4001>
2. Click the **Download** button on the web page.
3. To start the installation immediately, click **Run**.
4. Agree to the license agreement.
5. Unzip the file to the default location (**C:\PortqryV2**).
6. In the **Search** box on the **Taskbar**, type **Command Prompt**, and then from the returned list, right-click **Command Prompt** and select **Run as Administrator**.
7. In the **User Account Control** window, click **Yes**.
8. Change the directory to the portqry location from step 4 (**C:\PortqryV2**).
9. Type the following in the **Command Prompt** window, and then press **Enter**:

PortQry.exe -n [storage account name].file.core.windows.net -p TCP -e 445

1. If TCP port 445 is blocked by a rule along the network path, you will see the following output:

TCP port 445 (microsoft-ds service): FILTERED

1. This means the port is blocked, and Task 1 cannot be finished.
2. Close all open windows.