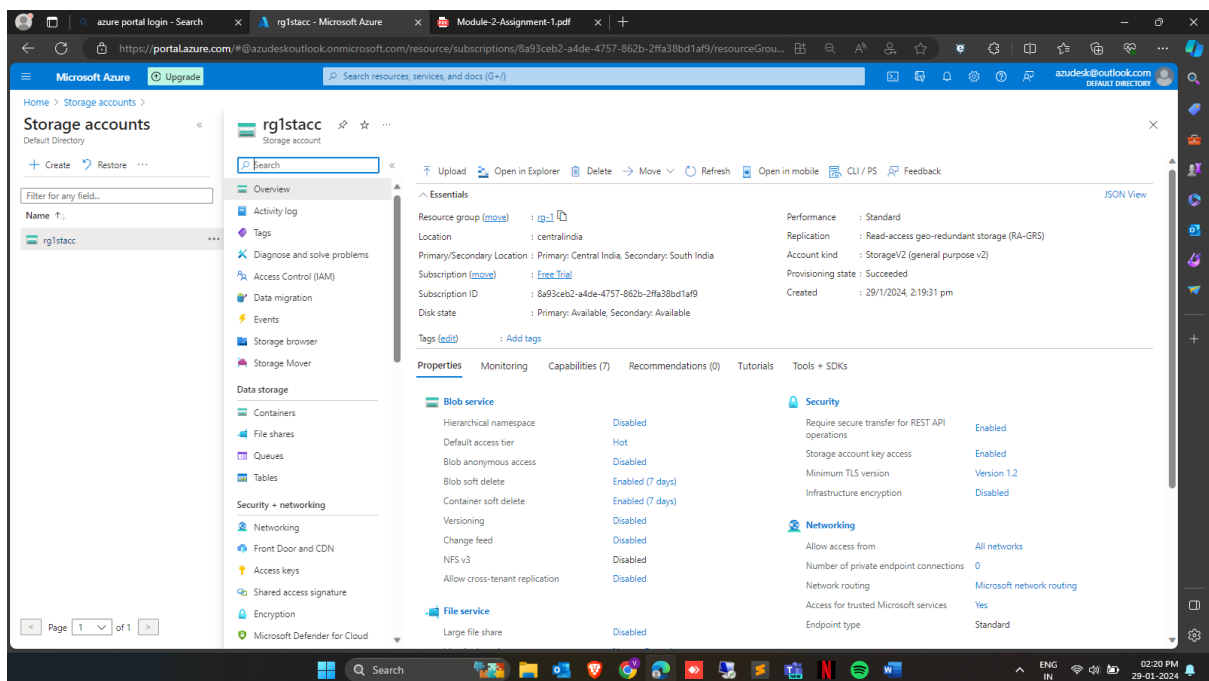
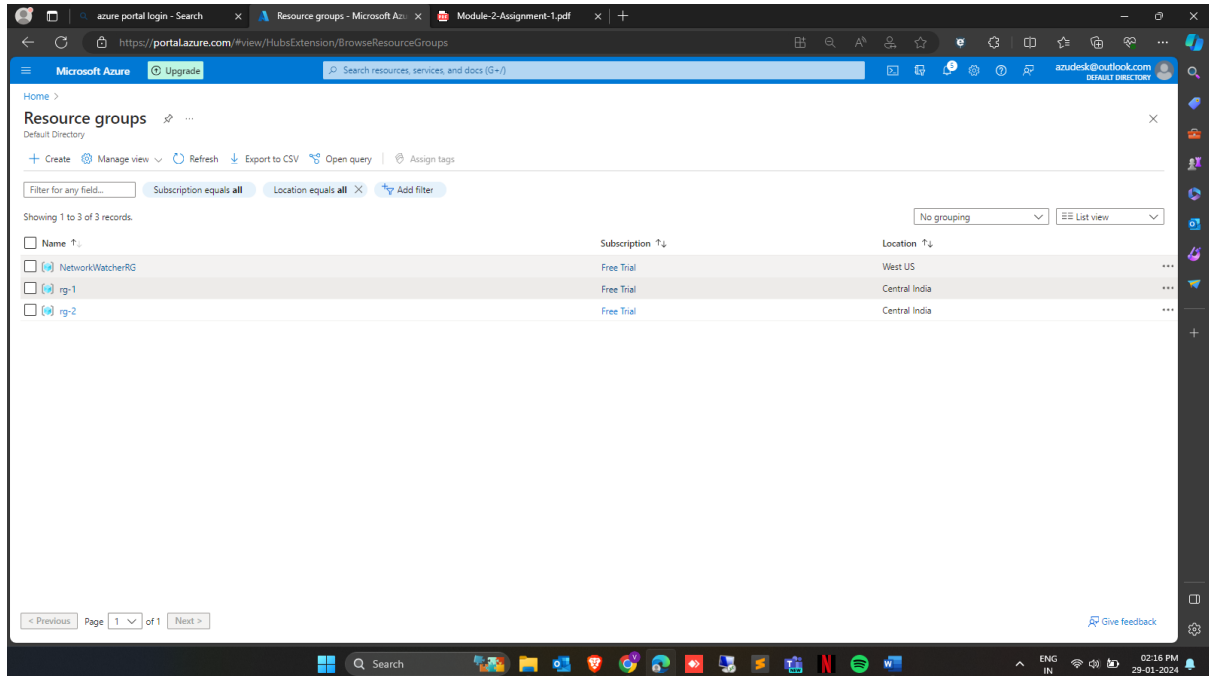


Assignment – Introduction To ARM And Azure Storage

Module 2: Assignment – 1

Tasks To Be Performed:

1. Create 2 resource groups rg-1 and rg-2
2. Add storage account to rg-1
3. Move storage account from rg-1 to rg-2



Assignment – Introduction To ARM And Azure Storage

The screenshot shows the 'Move resources' wizard in the Azure portal. The breadcrumb navigation is 'Home > Storage accounts > rg1stacc'. The page title is 'Move resources' with a sub-header 'rg1stacc'. There are three steps: 1. Source + target, 2. Resources to move, and 3. Review (current step). Under 'Selection summary', the following details are listed:

Property	Value
Source subscription	Free Trial
Source resource group	rg-1
Target subscription	Free Trial
Target resource group	rg-2
Number of resources to move	1

At the bottom, there is a checkbox labeled 'I understand that tools and scripts associated with moved resources will not work until I update them to use new resource IDs'. Below this are 'Previous' and 'Move' buttons.

The screenshot shows the 'rg1stacc' storage account overview page. The breadcrumb navigation is 'Home > Storage accounts > rg1stacc'. The left sidebar shows the 'Overview' tab selected. The main content area displays the 'Essentials' section with the following details:

Property	Value
Resource group	rg-2
Location	centralindia
Primary/Secondary Location	Primary: Central India, Secondary: South India
Subscription	Free Trial
Subscription ID	8a93ceb2-a4de-4757-862b-2fa38bd1af9
Disk state	Primary: Available, Secondary: Available
Tags	None

Below the Essentials section, there are tabs for 'Properties', 'Monitoring', 'Capabilities (7)', 'Recommendations (0)', 'Tutorials', and 'Tools + SDKs'. The 'Properties' tab is selected, showing details for 'Blob service' and 'Security'.

On the right side, there is a 'Notifications' panel with the following events:

- Moving resources complete**: Successfully moved 'rg1stacc' from resource group 'rg-1' in subscription 'Free Trial' to resource group 'rg-2' in subscription 'Free Trial'. 46 minutes ago.
- Deployment succeeded**: Deployment 'rg1stacc_1706518167676' to resource group 'rg-1' was successful. an hour ago.
- Executed delete command on 1 selected items**: Succeeded: 1, Failed: 0, Canceled: 0. an hour ago.
- Deployment failed**: Deployment to resource group 'NetworkWatcherRG' failed. Additional details from the underlying API that might be helpful: At least one resource deployment operation failed. Please list deployment operations for details. Please see https://aka.ms/arm-deployment-operations for usage details. an hour ago.
- Cancel deployment**: Successfully canceled deployment 'rg1stacc_1706518063352' from resource group 'NetworkWatcherRG' and subscription 'Free Trial'. an hour ago.
- Resource group created**: an hour ago.

Assignment – Introduction To ARM And Azure Storage

Module 2: Assignment – 2

Tasks To Be Performed:

1. Create 3 storage accounts with “Team” tags: team1, team2 and team3 respectively
2. Create one more storage account for team2
3. List all resources for team2 using tags

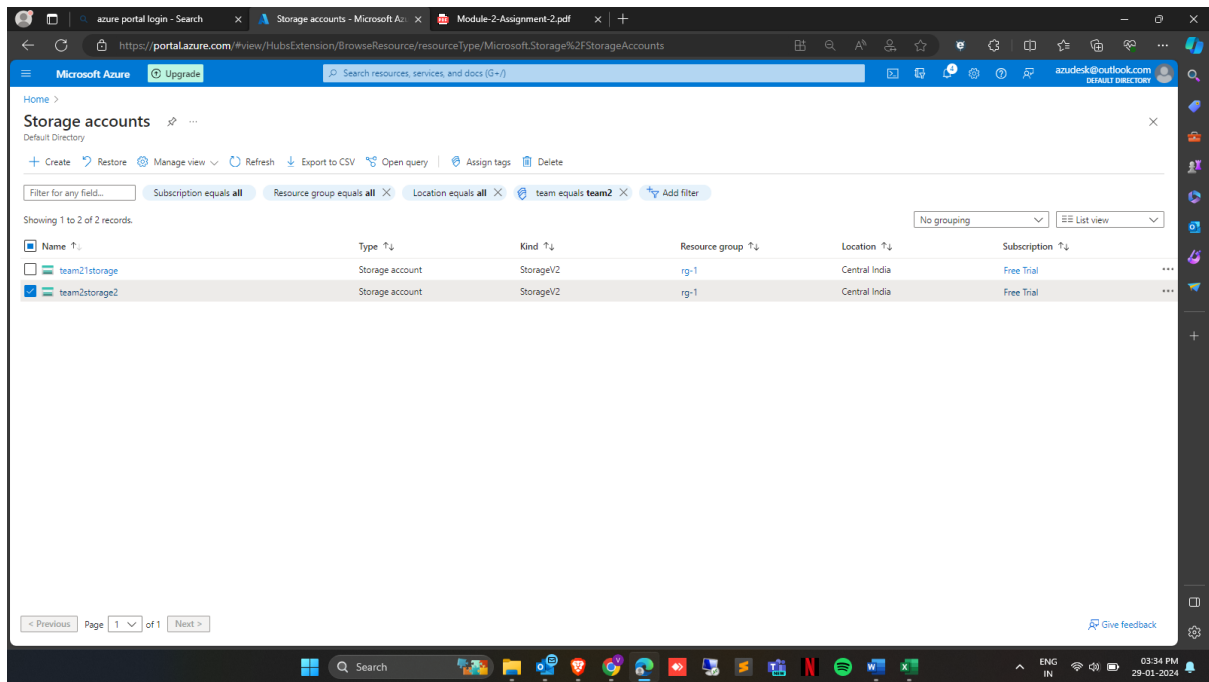
The screenshot shows the Azure Portal interface for 'Storage accounts'. The table lists three storage accounts, all of which are 'Storage account' type, 'StorageV2' kind, located in 'Central India', and are on a 'Free Trial' subscription. The accounts are named 'team1storage', 'team2storage', and 'team3storage', all belonging to resource group 'rg-1'. The filters applied are 'team equals all' and 'team equals all'.

Name	Type	Kind	Resource group	Location	Subscription
team1storage	Storage account	StorageV2	rg-1	Central India	Free Trial
team2storage	Storage account	StorageV2	rg-1	Central India	Free Trial
team3storage	Storage account	StorageV2	rg-1	Central India	Free Trial

The screenshot shows the Azure Portal interface for 'Storage accounts'. The table now lists four storage accounts. The account 'team2storage2' is selected, indicated by a blue checkmark in the selection column. The filters applied are 'team equals all' and 'team equals all'.

Name	Type	Kind	Resource group	Location	Subscription
team1storage	Storage account	StorageV2	rg-1	Central India	Free Trial
team2storage	Storage account	StorageV2	rg-1	Central India	Free Trial
team2storage2	Storage account	StorageV2	rg-1	Central India	Free Trial
team3storage	Storage account	StorageV2	rg-1	Central India	Free Trial

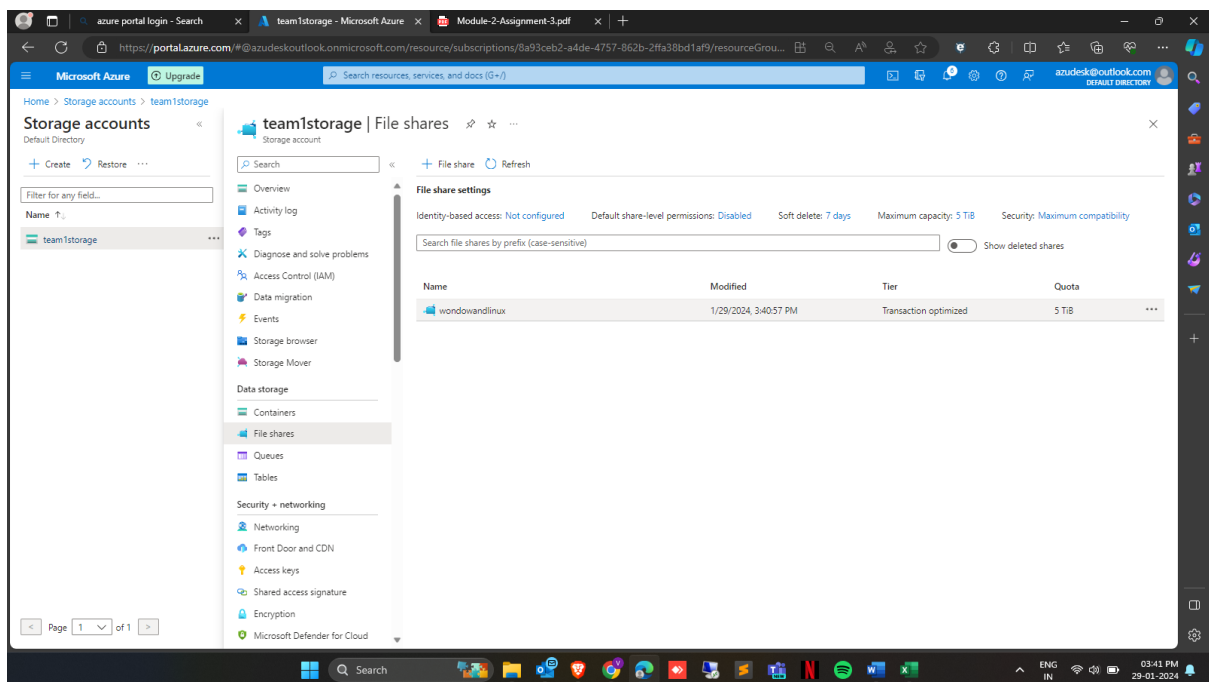
Assignment – Introduction To ARM And Azure Storage



Module 2: Assignment – 3

Tasks To Be Performed:

1. Create a file share in Azure Storage
2. Mount this file share on Windows and Linux



Assignment – Introduction To ARM And Azure Storage

The screenshot shows the Microsoft Azure portal interface. The main pane displays the 'wondowandlinux' File share configuration. The 'Essentials' section shows the storage account 'team1storage', resource group 'rg-1', and location 'Central India'. The 'Properties' section shows a size of 5 TiB and a performance tier of 'Transaction optimized'. The 'Connect' dialog box is open on the right, displaying a PowerShell script to connect to the file share. The script includes a 'Connect-Test' function to verify connectivity and a 'New-PSDrive' command to mount the share as drive Z. A 'Copied' tooltip is visible over the script text.

Connect

wondowandlinux

Connect to a file share using the storage account key is only appropriate for remote access. Mounting the Azure file share with the Active Directory or Microsoft Entra identity of the user is preferred. [Learn more](#)

Hide Script

```
$connectTestResult = Test-NetConnection -ComputerName team1storage.file.core.windows.net -Port 445
if ($connectTestResult.TcpTestSucceeded) {
    # Save the password so the drive will persist on reboot
    cmd.exe /C "cmdkey /add:"team1storage.file.core.windows.net" /user:"localhost\team1storage" /pass:"Bhf5pv0loc5i3lE8yegGZunjNkP8AvzrC6cm20fowP57FNaUtZrI1VEU5G6Eq7Lx
    # Mount the drive
    New-PSDrive -Name Z -PSProvider FileSystem -Root "\\team1storage.file.core.windows.net\wondowandlinux" -Persist
} else {
    Write-Error -Message "Unable to reach the Azure storage account via port 445. Check to make sure your organization or ISP is not blocking port 445, or use Azure P2S VPN, Azure S2S VPN, or Express Route to tunnel SMB traffic over a different port."
}
```

This script will check to see if this storage account is accessible via TCP port 445, which is the port SMB uses. If port 445 is available, your Azure file share will be persistently mounted. Your organization or internet service provider (ISP) may block port 445, however you may use Azure Point-to-Site (P2S) VPN, Azure Site-to-Site (S2S) VPN, or ExpressRoute to tunnel SMB traffic to your Azure file share over a different port.

Note: The script will only work on Windows Server 2012 and above.

[Learn how to circumvent the port 445 problem \(VPN\)](#)

Give feedback

The screenshot shows a Windows PowerShell terminal window. The user has executed the PowerShell script from the previous screenshot. The output shows the connection test result, the password saving process, and the successful mounting of the drive as Z. The terminal also displays the 'CMDKEY: Credential added successfully.' message and a table showing the drive's properties.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

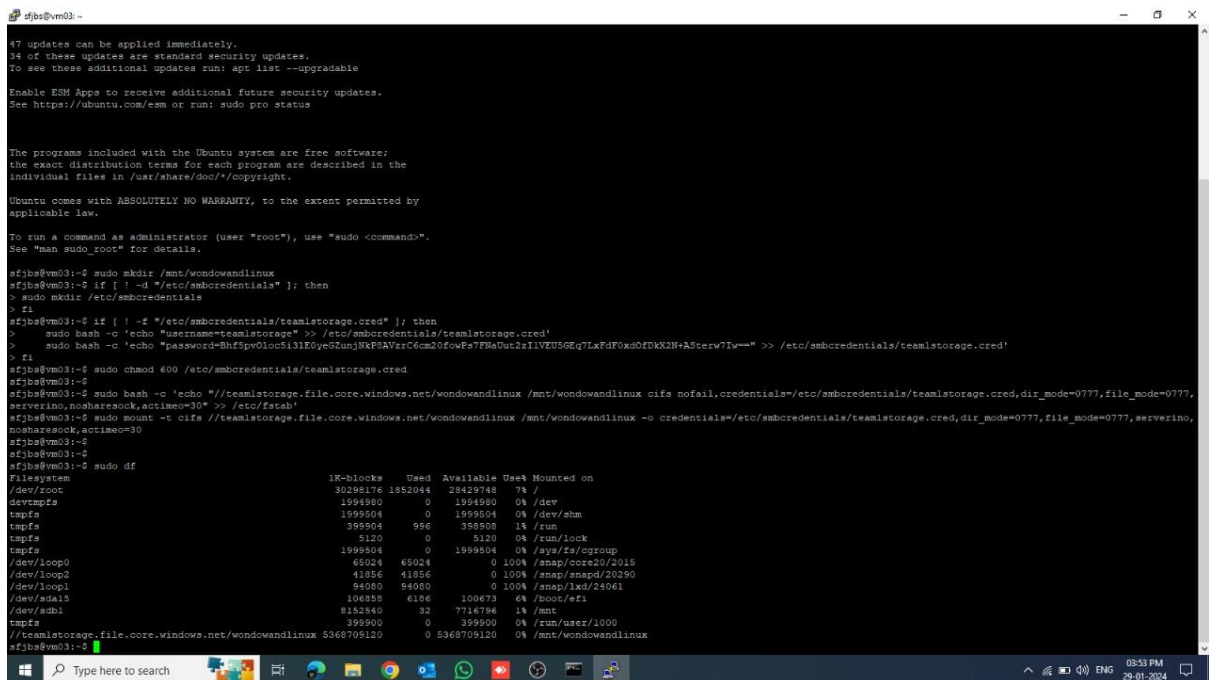
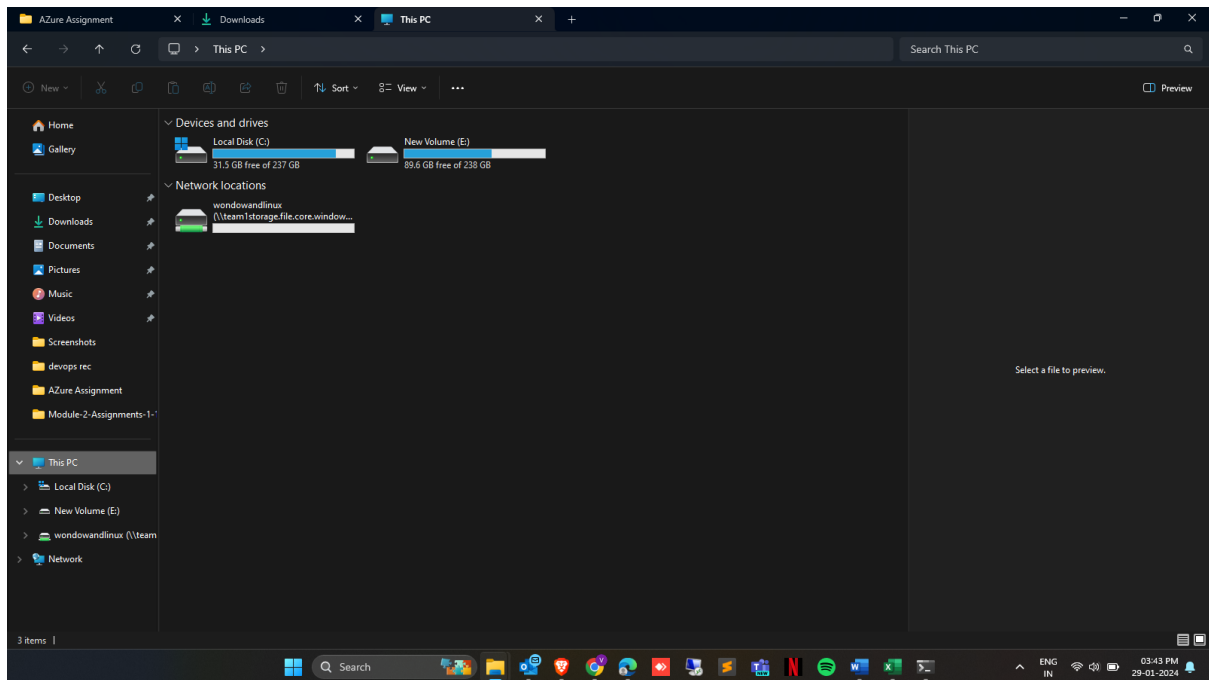
PS C:\Users\sfbjs> $connectTestResult = Test-NetConnection -ComputerName team1storage.file.core.windows.net -Port 445
PS C:\Users\sfbjs> if ($connectTestResult.TcpTestSucceeded) {
>>     # Save the password so the drive will persist on reboot
>>     cmd.exe /C "cmdkey /add:"team1storage.file.core.windows.net" /user:"localhost\team1storage" /pass:"Bhf5pv0loc5i3lE8yegGZunjNkP8AvzrC6cm20fowP57FNaUtZrI1VEU5G6Eq7Lx
>>     # Mount the drive
>>     New-PSDrive -Name Z -PSProvider FileSystem -Root "\\team1storage.file.core.windows.net\wondowandlinux" -Persist
>> } else {
>>     Write-Error -Message "Unable to reach the Azure storage account via port 445. Check to make sure your organization or ISP is not blocking port 445, or use Azure P2S VP
N, Azure S2S VPN, or Express Route to tunnel SMB traffic over a different port."
>> }
```

CMDKEY: Credential added successfully.

Name	Used (GB)	Free (GB)	Provider	Root	CurrentLocation
Z	0.00	5120.00	FileSystem	\\team1storage.file.core.windows...	

```
PS C:\Users\sfbjs>
PS C:\Users\sfbjs>
PS C:\Users\sfbjs> |
```

Assignment – Introduction To ARM And Azure Storage



Assignment – Introduction To ARM And Azure Storage

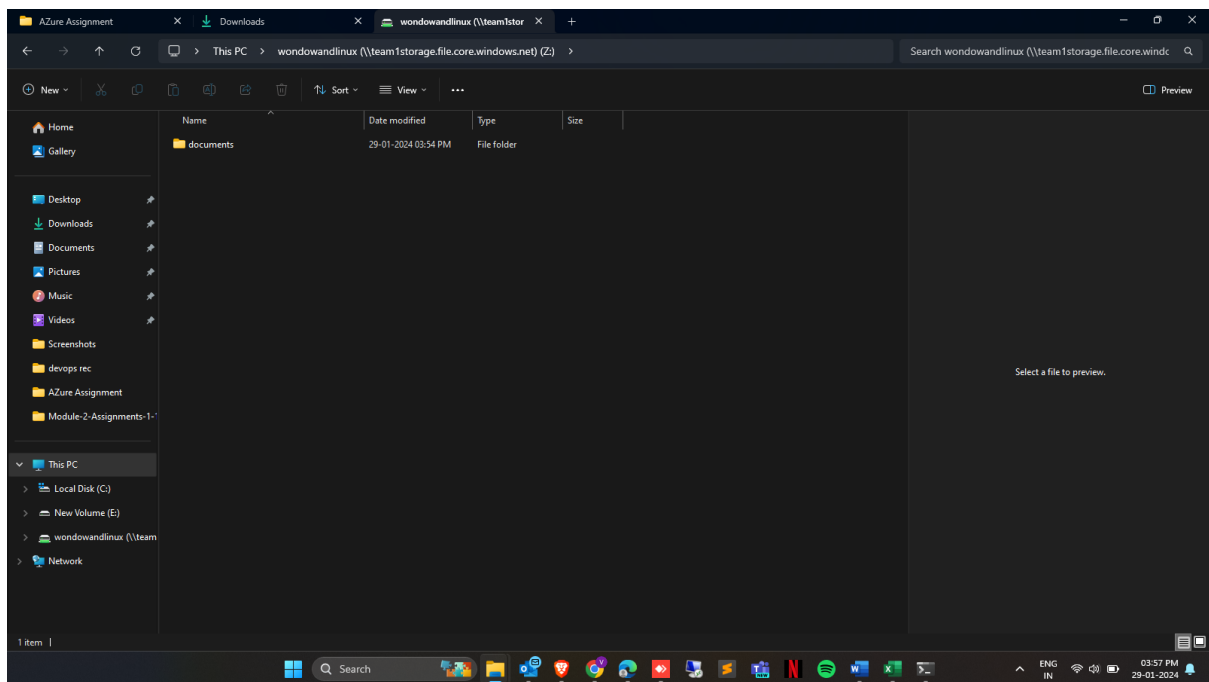
```
djbs@vm03: /mnt/wondowandlinux
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

#fjbs@vm03:~$ sudo mkdir /mnt/wondowandlinux
#fjbs@vm03:~$ if [ ! -d "/etc/smbcredentials" ]; then
> sudo mkdir /etc/smbcredentials
> fi
#fjbs@vm03:~$ if [ ! -f "/etc/smbcredentials/teamstorage.cred" ]; then
> sudo bash -c 'echo "username=teamstorage" >> /etc/smbcredentials/teamstorage.cred'
> sudo bash -c 'echo "password=Bhffpw0loc5131f0yeG2unjNKF8AVrC6cm20fowPa7FHaDut2zIIVeUS6Eq7LxPdF0xk0FDKX2N+ASterw7Iw==" >> /etc/smbcredentials/teamstorage.cred'
> fi
#fjbs@vm03:~$ sudo chmod 400 /etc/smbcredentials/teamstorage.cred
#fjbs@vm03:~$
#fjbs@vm03:~$ sudo bash -c 'echo "//teamstorage.file.core.windows.net/wondowandlinux /mnt/wondowandlinux cifs nofail,credentials=/etc/smbcredentials/teamstorage.cred,dir_mode=0777,file_mode=0777,serverino,noharesock,actimeo=30" >> /etc/fstab'
#fjbs@vm03:~$ sudo mount -t cifs //teamstorage.file.core.windows.net/wondowandlinux /mnt/wondowandlinux -o credentials=/etc/smbcredentials/teamstorage.cred,dir_mode=0777,file_mode=0777,serverino,noharesock,actimeo=30
#fjbs@vm03:~$
#fjbs@vm03:~$ sudo df
Filesystem                                1K-blocks    Used Available Use% Mounted on
/dev/root                                30298176 1852044  28429748   7% /
devtmpfs                                1994960      0   1994960   0% /dev
tmpfs                                    1994960      0   1994960   0% /dev/shm
tmpfs                                    3989904    996   3989908   1% /run
tmpfs                                    5120        0    5120   0% /run/lock
tmpfs                                    1994960      0   1994960   0% /sys/fs/cgroup
/dev/loop0                              65024    65024   0 100% /snap/core20/2015
/dev/loop2                              41856    41856   0 100% /snap/snapd/20290
/dev/loop1                              94060    94060   0 100% /snap/lxd/24061
/dev/sda15                              106673     6186   100673   6% /boot/efi
/dev/sdb1                               8152840     32   7716796   1% /mnt
tmpfs                                    399900      0   399900   0% /run/user/1000
//teamstorage.file.core.windows.net/wondowandlinux 5368709120 0 5368709120  0% /mnt/wondowandlinux
#fjbs@vm03:~$ cd /mnt/wondowandlinux/
#fjbs@vm03:/mnt/wondowandlinux$ ls
#fjbs@vm03:/mnt/wondowandlinux$ mkdir documents
#fjbs@vm03:/mnt/wondowandlinux$ ls
documents
#fjbs@vm03:/mnt/wondowandlinux$
```



Assignment – Introduction To ARM And Azure Storage

Module 2: Assignment – 4

Tasks To Be Performed:

1. Create a Storage account, and upload some files in Blob storage
2. Create a CDN profile
3. Create an endpoint and connect to the Azure Blob to access the files uploaded

The screenshot displays the Microsoft Azure portal interface. The top navigation bar shows the 'Storage accounts' section. The left sidebar contains a list of storage services, including 'Containers', 'File shares', 'Queues', 'Tables', 'Security + networking', 'Networking', 'Front Door and CDN', 'Access keys', 'Shared access signature', 'Encryption', and 'Microsoft Defender for Cloud'. The main content area shows the configuration for the storage account 'mystorageaccount30jan'. The 'Essentials' tab is selected, displaying the following details:

- Resource group: rg-1
- Location: centralindia
- Primary/Secondary Location: Primary: Central India, Secondary: South India
- Subscription: Free Trial
- Subscription ID: 8a93ceb2-a4de-4757-862b-2ffa38bd1af9
- Disk state: Primary: Available, Secondary: Available
- Performance: Standard
- Replication: Read-access geo-redundant storage (RA-GRS)
- Account kind: StorageV2 (general purpose v2)
- Provisioning state: Succeeded
- Created: 30/1/2024, 10:15:41 am

The 'Properties' tab is also visible, showing the 'Blob service' and 'File service' settings. The 'Blob service' settings include:

- Hierarchical namespace: Disabled
- Default access tier: Hot
- Blob anonymous access: Enabled
- Blob soft delete: Enabled (7 days)
- Container soft delete: Enabled (7 days)
- Versioning: Disabled
- Change feed: Disabled
- NFS v3: Disabled
- Allow cross-tenant replication: Disabled
- Large file share: Disabled

The 'File service' settings include:

- Large file share: Disabled

The 'Security' settings include:

- Require secure transfer for REST API operations: Enabled
- Storage account key access: Enabled
- Minimum TLS version: Version 1.2
- Infrastructure encryption: Disabled

The 'Networking' settings include:

- Allow access from: All networks
- Number of private endpoint connections: 0
- Network routing: Microsoft network routing
- Access for trusted Microsoft services: Yes
- Endpoint type: Standard

The bottom screenshot shows the 'Containers' tab for the same storage account. It displays a table of containers with the following columns: Name, Last modified, Anonymous access level, and Lease state. The table contains two containers:

Name	Last modified	Anonymous access level	Lease state
Slogs	1/30/2024, 10:16:10 AM	Private	Available
videcontainer	1/30/2024, 10:16:57 AM	Blob	Available

Assignment – Introduction To ARM And Azure Storage

The image displays two screenshots of the Microsoft Azure portal interface, showing the configuration of Azure Storage and Azure Front Door/CDN services.

Top Screenshot: Azure Storage Container Overview

The top screenshot shows the "videocontainer" container overview page. The left sidebar includes navigation options: Overview, Diagnose and solve problems, Access Control (IAM), Settings, Shared access tokens, Access policy, Properties, and Metadata. The main content area displays the container's authentication method (Access key), location (videocontainer), and a table of blobs.

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
demo.mp4	1/30/2024, 10:29:49 AM	Hot (Inferred)		Block blob	1.01 MiB	Available

Bottom Screenshot: Azure Front Door and CDN Endpoints

The bottom screenshot shows the "mystorageaccount30jan" Front Door and CDN endpoints page. The left sidebar includes navigation options: Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, Data storage, Containers, File shares, Queues, Tables, Security + networking, Networking, Front Door and CDN, Access keys, Shared access signature, Encryption, and Microsoft Defender for Cloud. The main content area displays the "Endpoints" section, showing a table of existing endpoints and a "New Endpoint" form.

Host name	Profile name	Service type	Tier	Status	Custom domain
videocdn12.azureedge.net	videocontainer	Microsoft CDN	Standard Microsoft	Succeeded	View custo...

New Endpoint Form:

- Service type: ☒ Azure Front Door (Recommended), ☐ Azure CDN
- Create new/use existing profile: ☒ Create new, ☐ Use existing
- Profile name:
- Endpoint name:
- Endpoint host name:
- Origin host name:
- Pricing tier: ☒ Azure Front Door Standard

[Create](#)

Assignment – Introduction To ARM And Azure Storage

The image displays two screenshots of the Microsoft Azure portal interface, showing the configuration of an Azure CDN endpoint and its origin.

Top Screenshot: videocontainer Front Door and CDN

- Overview:** Shows the resource group (rg-1), status (Active), subscription (Free Trial), and subscription ID (8a93ceb2-a4de-4757-862b-2fa38bd1af9).
- Endpoints:** A table showing the endpoint configuration.

Hostname	Status	Protocol	Origin type	Custom domains
videocdn12.azureedge.net	Running	HTTP, HTTPS	Storage	

Bottom Screenshot: Update Origin

The "Update Origin" dialog box is shown, allowing configuration of the origin for the endpoint.

Origins: A table showing the origin configuration.

Name	Origin hostname	Origin type	Origin host header	Priority	Weight
default-origin-2fefe29a	mystorageaccount30...	Storage	mystorageaccount30...	1	1000

Origin Groups: A table showing the origin group configuration.

Origin group name	Probe path	Probe interval	Probe method
-------------------	------------	----------------	--------------

Update Origin Form:

- Name: default-origin-2fefe29a
- Origin type: Storage
- Origin hostname: mystorageaccount30jan.blob.core.windows.net
- Origin host header: mystorageaccount30jan.blob.core.windows.net
- HTTP port: 80
- HTTPS port: 443
- Priority: 1
- Weight: 1000
- Enabled: ☒

Buttons: Save, Delete

Assignment – Introduction To ARM And Azure Storage

The image consists of two screenshots from the Azure Portal, demonstrating the setup of an Azure CDN origin.

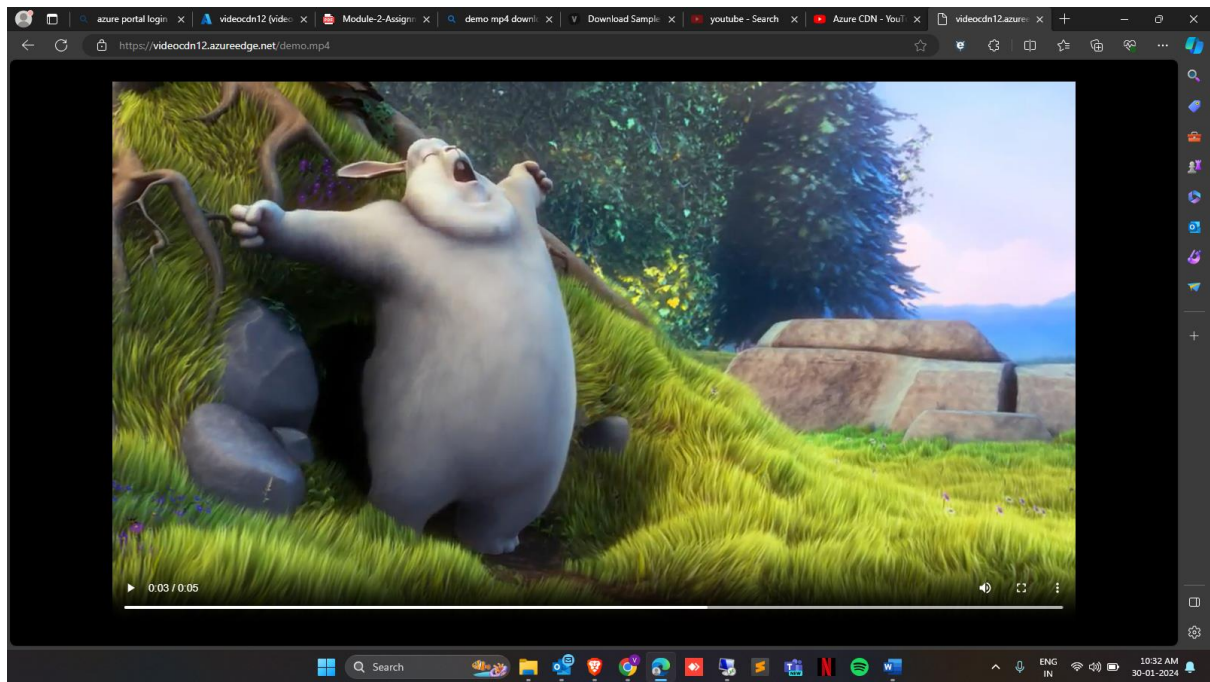
Top Screenshot: Update Origin Dialog

The top screenshot shows the "Update Origin" dialog box for the "videocontainer/videoecdn12" origin. The "Origin path" is set to "/videocontainer". The "Origin type" is "Storage". The "Origin hostname" is "mystorageaccount30jan.blob.core.windows.net". The "Origin host header" is "mystorageaccount30jan.blob.core.windows.net". The "HTTP port" is "80" and the "HTTPS port" is "443". The "Priority" is "1" and the "Weight" is "1000". The "Enabled" checkbox is checked. The "Probe path" is empty and the "Probe interval" is "1000". The "Probe method" is "GET".

Bottom Screenshot: videoecdn12 Overview

The bottom screenshot shows the "videoecdn12 (videocontainer/videoecdn12)" overview page. The "Endpoint hostname" is "https://videoecdn12.azureedge.net". The "Origin hostname" is "https://mystorageaccount30jan.blob.core.windows.net". The "Protocols" are "HTTP, HTTPS". The "Optimization type" is "General web delivery". The "Custom domains" section is empty, showing "There are no custom domains to display".

Assignment – Introduction To ARM And Azure Storage

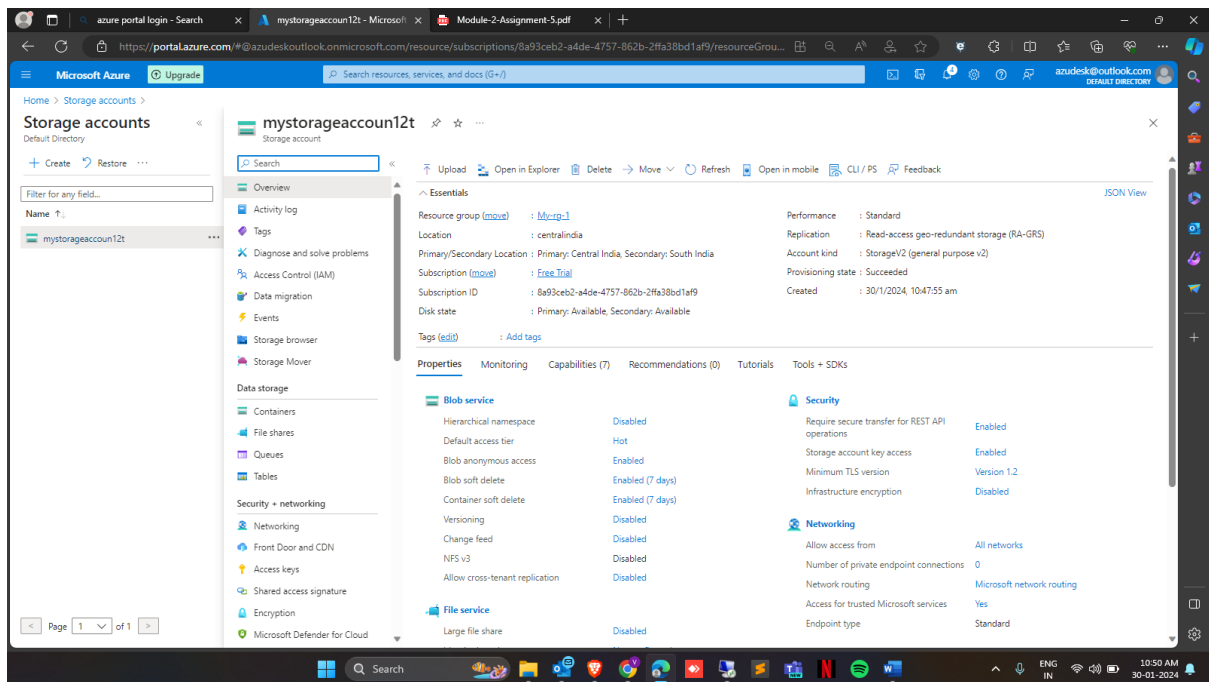


Assignment – Introduction To ARM And Azure Storage

Module 2: Assignment – 5

Tasks To Be Performed:

1. Create a storage account
2. Use the Blob service and upload some files in it
3. Change the access tier to archive



Assignment – Introduction To ARM And Azure Storage

The screenshot displays the Microsoft Azure portal interface. The top navigation bar shows the user is logged in as 'azudek@outlook.com'. The main content area is titled 'newcontainer' and shows the 'Overview' tab for a storage container. The container's location is 'newcontainer' and its authentication method is 'Access key'. A table lists the blobs within the container:

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
ASSET AUDIT FINAL.xlsx	1/30/2024, 10:52:46 AM	Cool		Block blob	47.91 KB	Available
Assets - SFJ Business Solutions Pvt Ltd (5).csv	1/30/2024, 10:52:46 AM	Cool		Block blob	215.56 KB	Available
CASPA (6).xlsx	1/30/2024, 10:52:46 AM	Cool		Block blob	138.27 KB	Available

On the right side, a 'Notifications' panel is open, showing a list of events from the activity log:

- Successfully updated access tier for blob 'CASPA (6).xlsx'.
- Successfully updated access tier for blob 'Assets - SFJ Business Solutions Pvt Ltd (5).csv'.
- Successfully updated access tier for blob 'ASSET AUDIT FINAL.xlsx'.
- Successfully deleted blob(s).
- Successfully uploaded blob(s).
- Successfully uploaded blob(s).
- Successfully created storage container 'newcontainer'.