Custom Learnings

Day 5

Resource Group

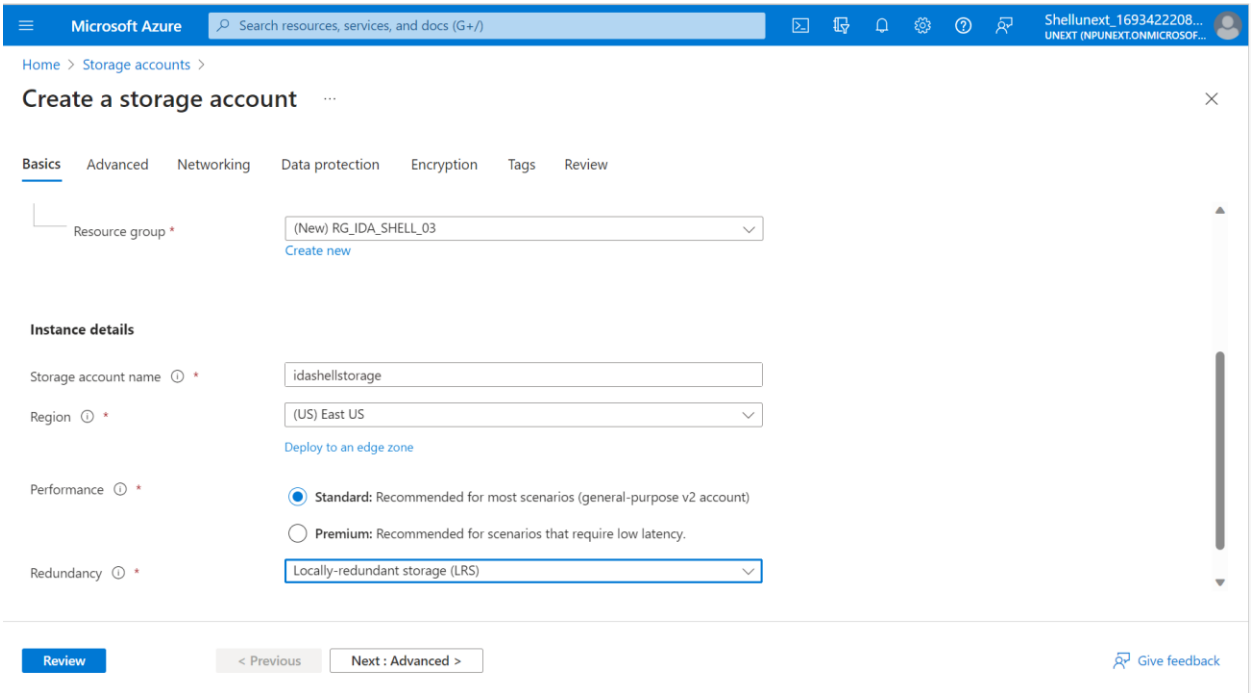
- ⇨ A logical container

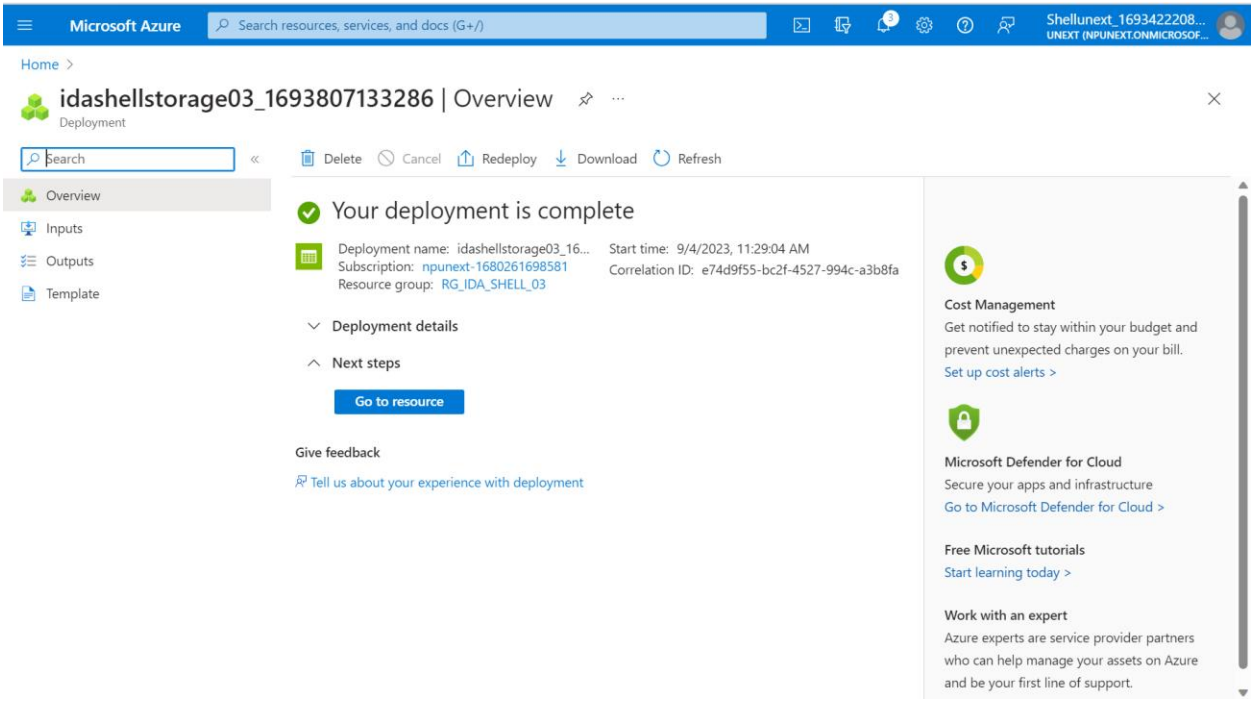
Storage Account Creation in AZURE

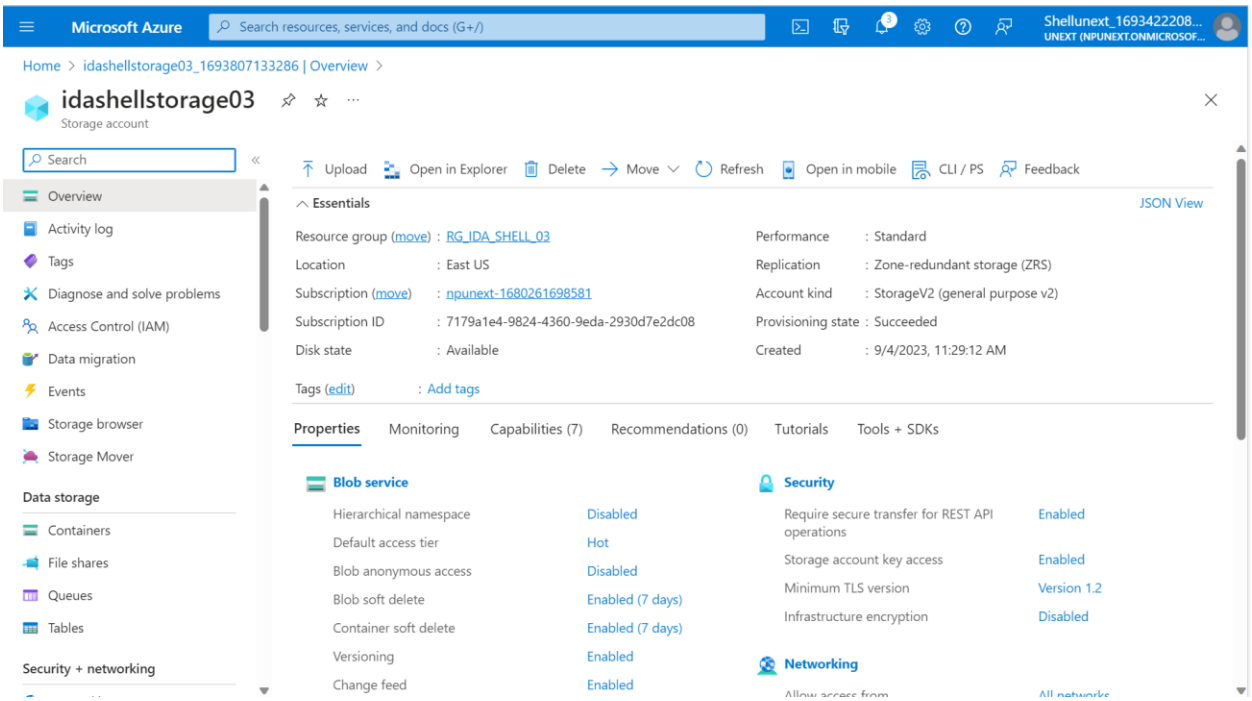
- ⇨ Premium Account
  - Page Blobs
  - File Shares
  - Block Blobs
- ⇨ Locally Redundant Storage (LRS)
  - Within the same data center there are multiple copies of the data
- ⇨ Zone Redundant Storage (ZRS)
  - There are multiple zones within a data center separated by a certain distance.
  - Each zone has a copy of the data.
- ⇨ Geo Redundant Storage (GRS)
  - Within a region pair where the regions are separated by a distance of 300 Km, there are copies of the data.
  - Data duplication happens synchronously 3 times in a date center by default.
- ⇨ Read Access Geo Redundant Storage
  - Users get access to the Secondary storage directly instead of the primary storage.
  - The benefit of this is that the read operation can happen simultaneously.
  - Replication is different from write operation.
  - In case of critical failure in the primary storage, the delay in the switchover from primary to secondary storage can take some time which might result in loss of data.
  - RAGRS prevents this and provides seamless servicing.
- ⇨ SLA
  - Service Level Agreement
    - The type of service the cloud service providers agree to provide.
- ⇨ Depending on the amount paid, different levels of services are provided.
- ⇨ GA: General Availability
- ⇨ Endpoint: the link that connects to a resource
- ⇨ Upstream & Downstream
  - Upstream is where the data comes from
  - Downstream is where the data will be sent after due transformation.
- ⇨ SFTP is not available for BLOB.
  - It is only available for hierarchical namespace.
- ⇨ Subscriber is called tenant.
  - Communication between tenants is called cross-tenant communication.
  - Replication of data from one tenant to another is called cross-tenant replication.
  - Tenant ID is used for cross-tenant replication.

- ⇨ Access Tier
  - Hot: frequently accessed data (frequently)
  - Cool: infrequently accessed data and backup scenarios (min 30 days)
  - Cold: infrequently accessed data for longer period than cool (min 90 days)
  - Archive: long-term storage of data (min 180 days)
  - In hot more is paid for storage so less is incurred on accessing the data
  - In cold less is paid for storage so more is incurred on accessing the data
  - Purging of data(deleting)/Archiving happens to release storage.
- ⇨ Soft delete
  - If something is delete using soft delete, the files can be retrieved within the next 7 days.
- ⇨ BLOB change feed
  - The number of days for which the data is maintained. Before that threshold the data is deleted
- ⇨ Azure CosmosDB is used for all kinds of data storage.

Creation of Storage Account:







- ⇨ In Big Data processing, the data is present in multiple subfolders.
  - To allow the creation of subfolders, ADLS Gen2 need to be used
  - Azure Data Lake Storage Gen2(ADLS Gen2)

- To create a Gen2, go to storage account, create, Advanced tab, enable hierarchical namespace.
- The above will cause the creation of Gen2 storage.
- Sub folders are not available in BLOB storage that is why ADLS Gen2 is used

⇨ A container can also be created to store this ADLS Gen2 instance.

⇨ Access permissions in ADLS Gen2

- Read
- Write
- Execute

Creation of BLOB, Files, Tables, and Queues

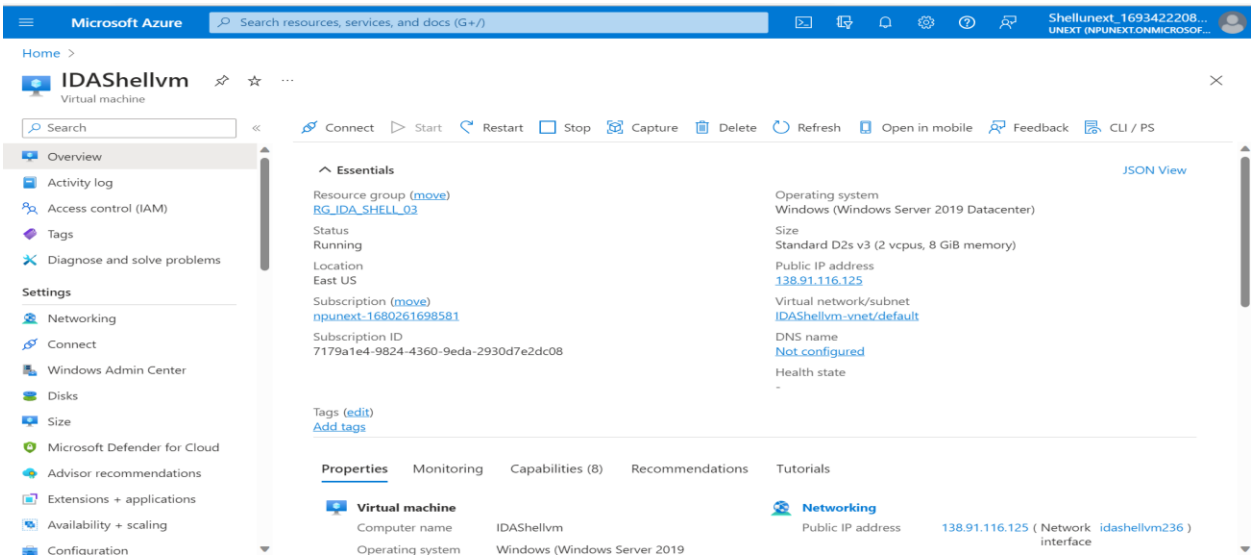
To report any issues:

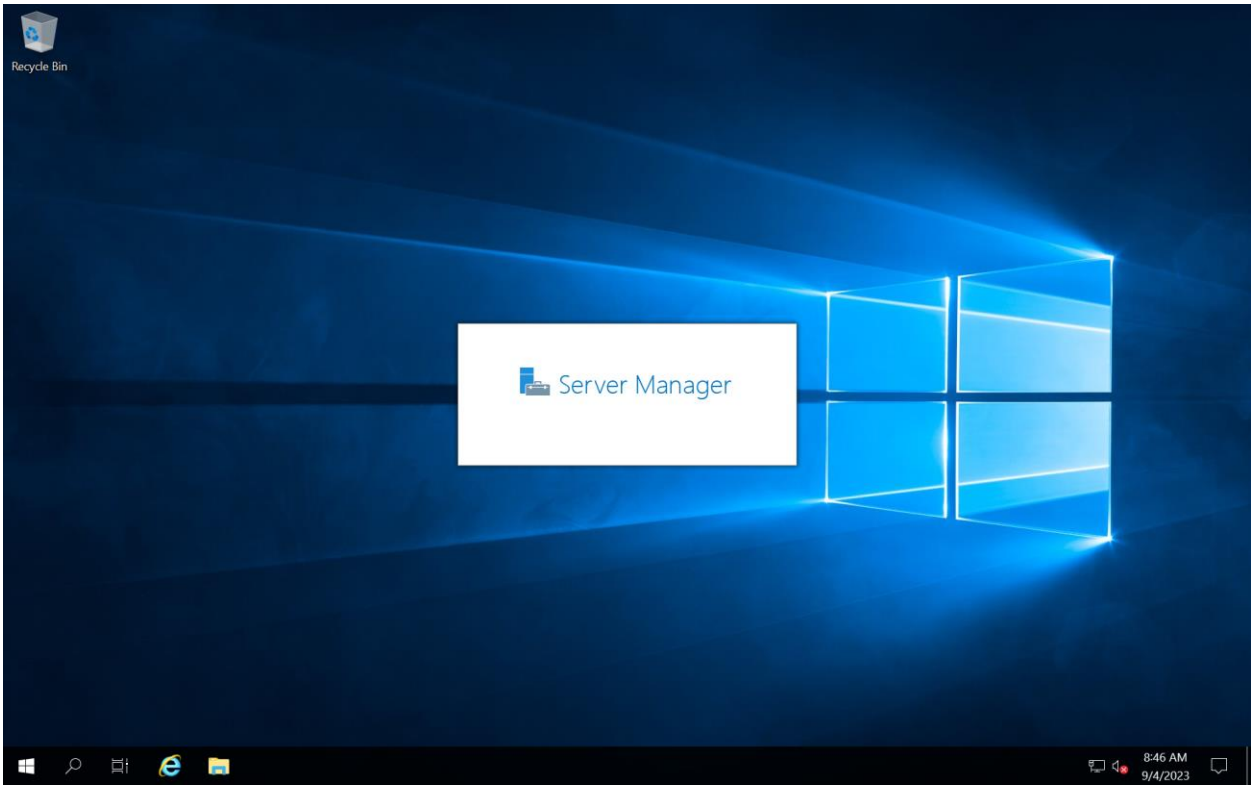
⇨ support@nuvepro.freshdesk.com

For file share:

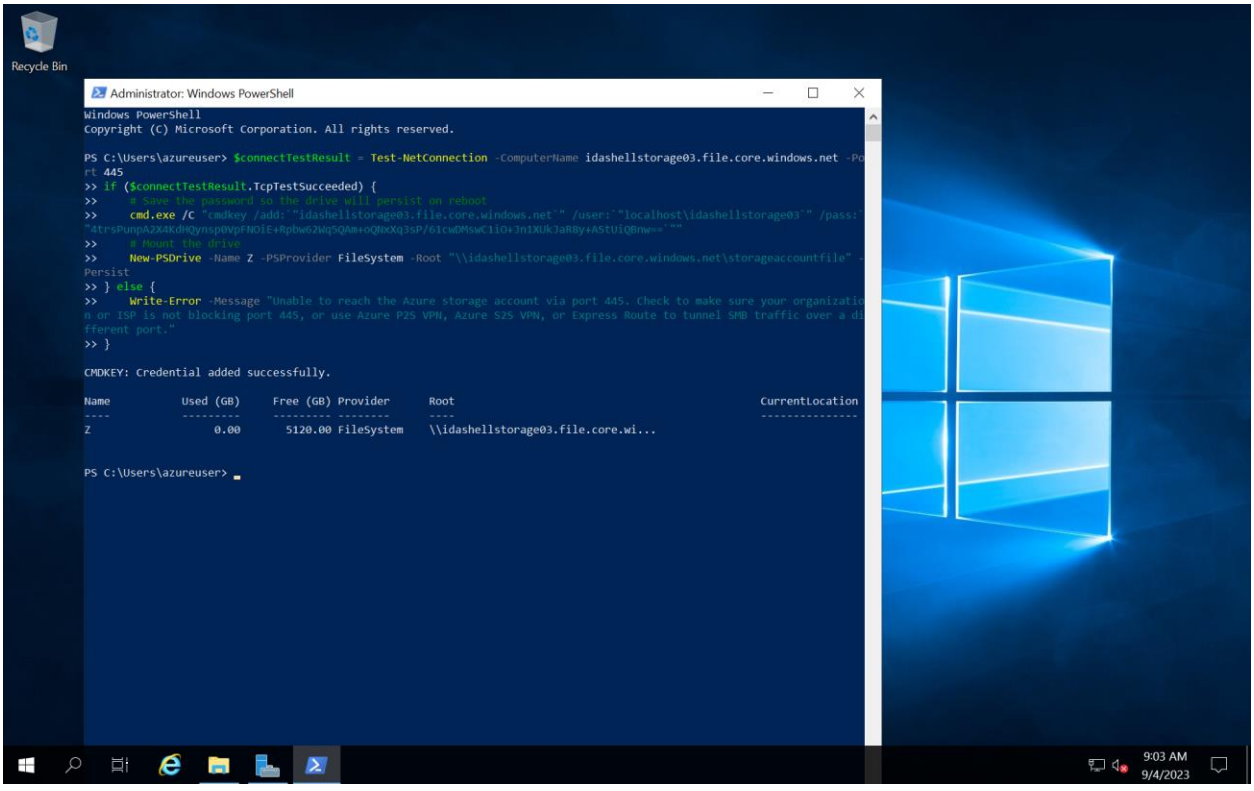
⇨ Create an Azure Data Lake Storage Gen2
⇨ Create a file share
⇨ Click on connect
⇨ Copy the script generated
⇨ Upload a demo file in the file share
⇨ Create a VM with windows 2019 image
⇨ Connect to the VM using Remote Desktop Connection
⇨ There run the script in windows PowerShell
⇨ The file share is reflected in the VM, containing the demo file inside

Creation of Virtual Machine:

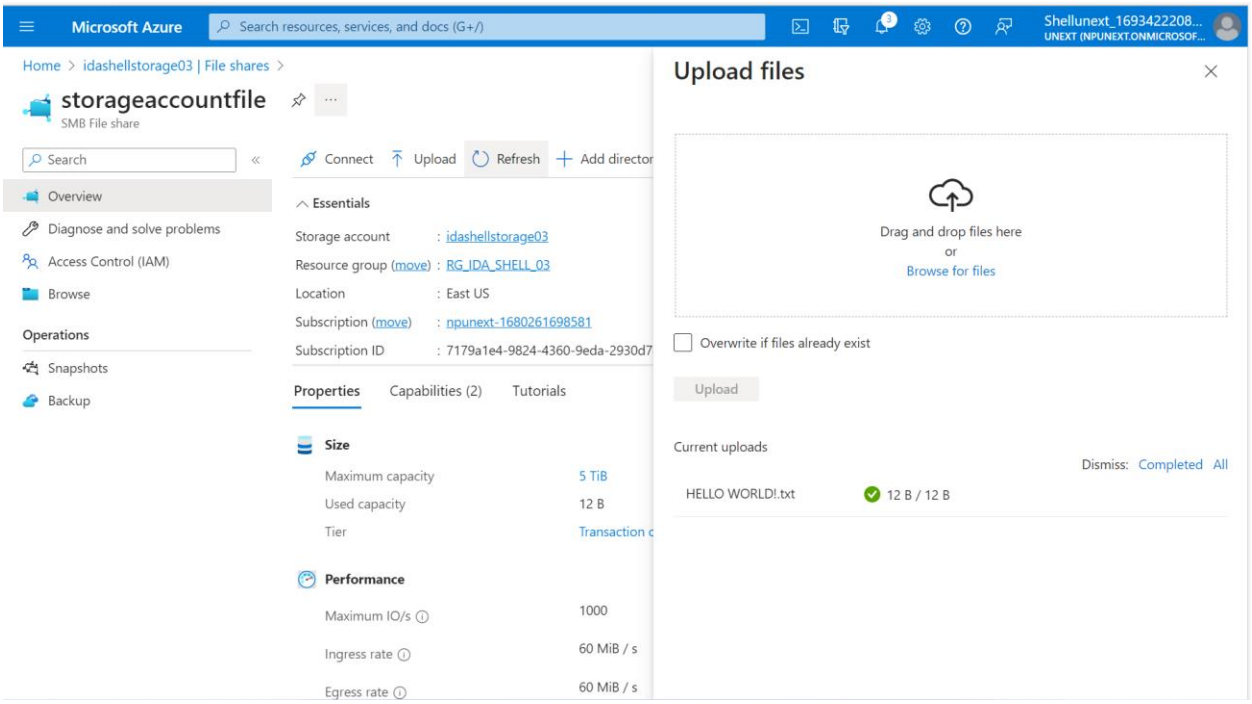


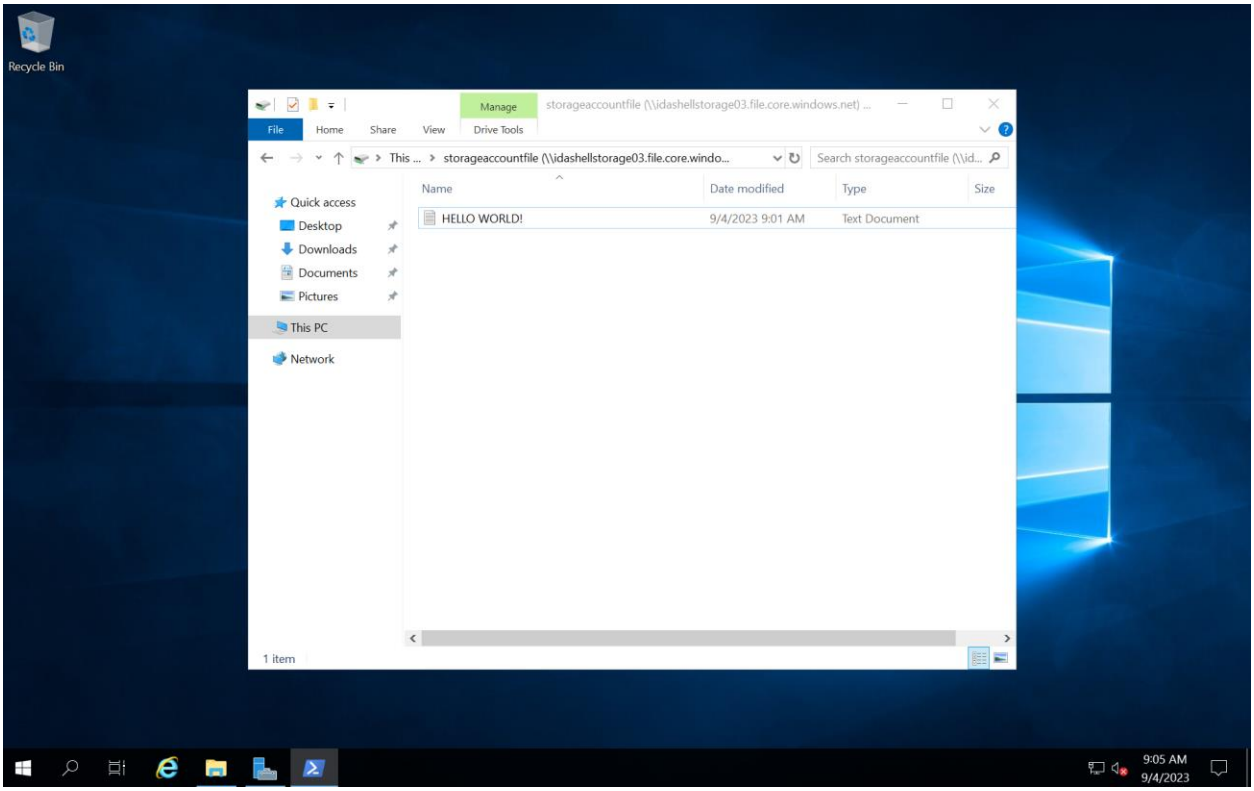


Connecting to the virtual machine:

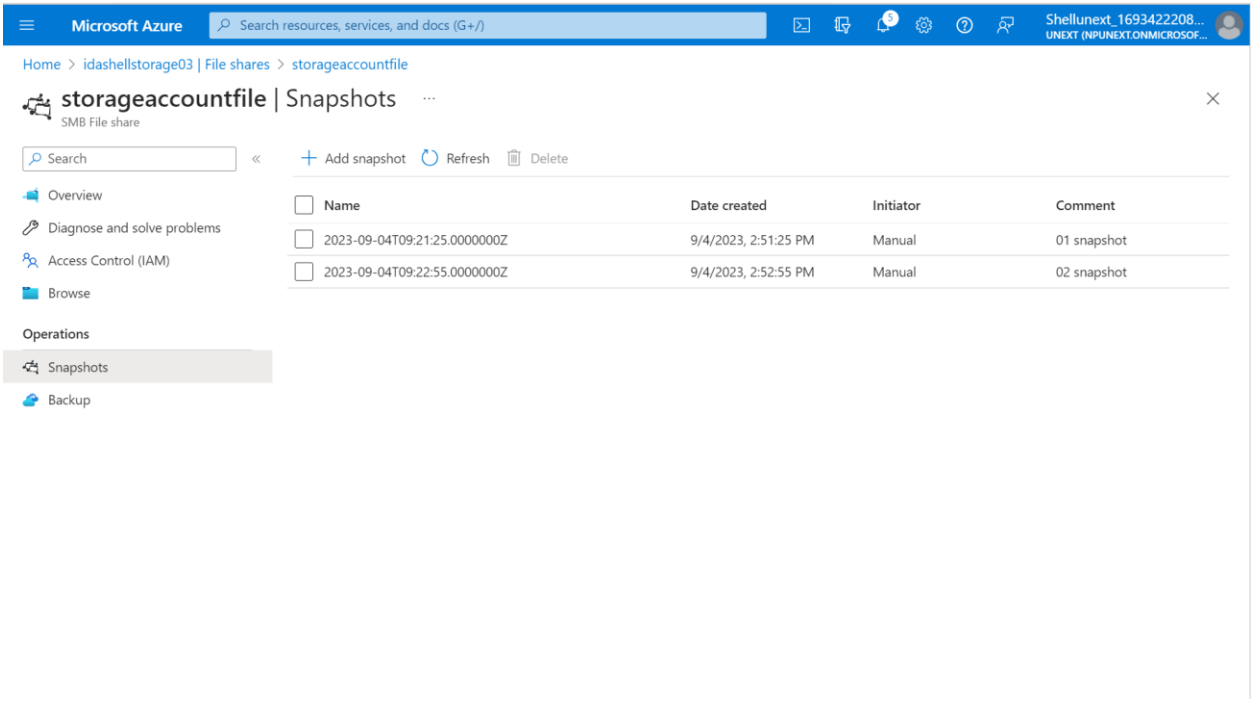


Uploading a file in the storage account:

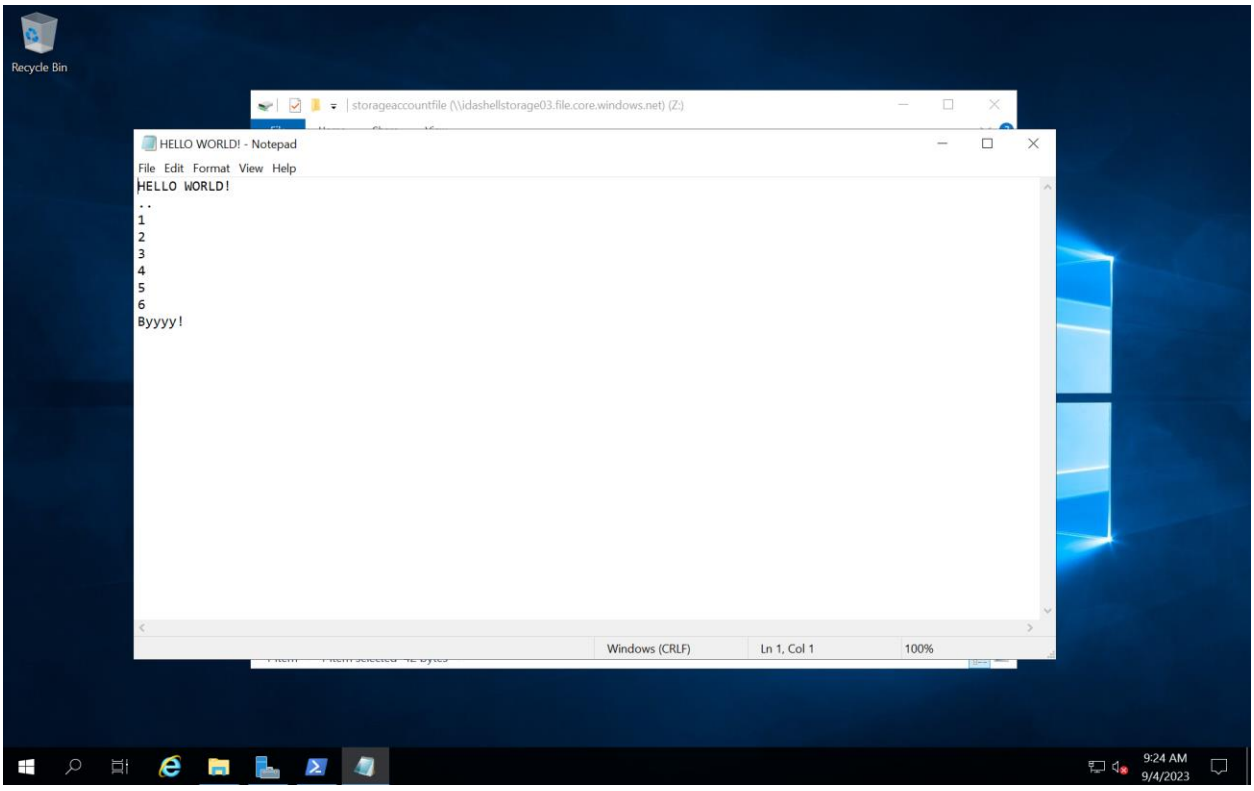




Adding Snapshots:



Changes are showing in the stored file:



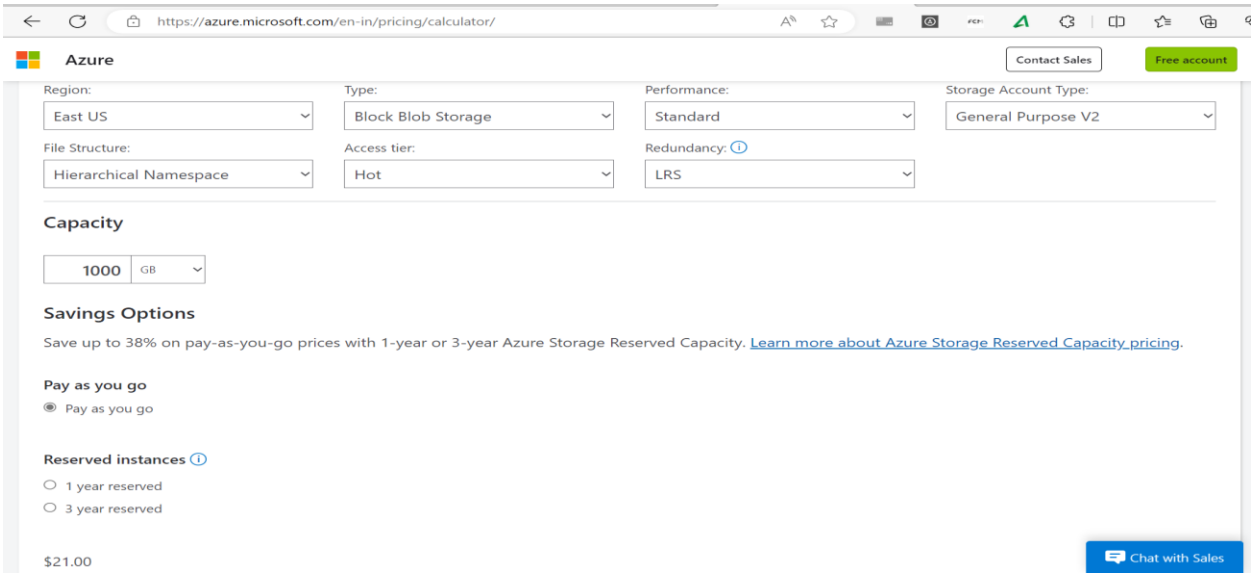
Azure Pricing Calculator

- ⇨ To check the cost of different services
- ⇨ Based on the region and other configurations the costs will change

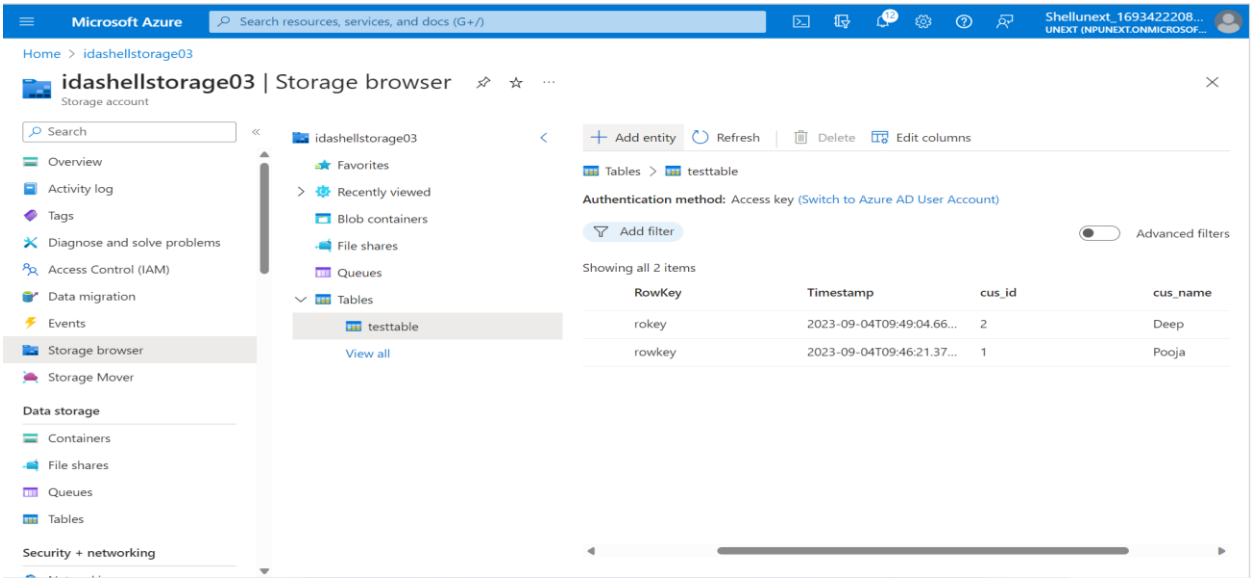
Azure Total Cost of Ownership(TCO)

- ⇨ Define your workloads
- ⇨ A report will be generated detailing the billing amount of the Azure Services

It also generates a report comparing the use of on-premises services and the services provided by Azure



Creation of table and insertion of data:



Static Website

- ⇨ Create html file
- ⇨ Index.html
- ⇨ Go inside storage account
- ⇨ Inside container
- ⇨ Disabled to enabled
- ⇨ Index.html put the file name(index document name)
- ⇨ Copy primary endpoint
- ⇨ Paste the copied endpoint in the browser

***Note:

- ⇨ Multiple static web applications can be created but only one can be executed at a time
- ⇨ This is because there is only one endpoint that corresponds to one static application
- ⇨ To run multiple web applications, they need to be linked such that running one on the browser causes other applications to run consecutively
- ⇨ Example:
    - Multiple html files are uploaded in the container
    - Since only one can be run at a time, if the html file that is running calls the other html files in the form of different pages, multiple static applications execution can be achieved