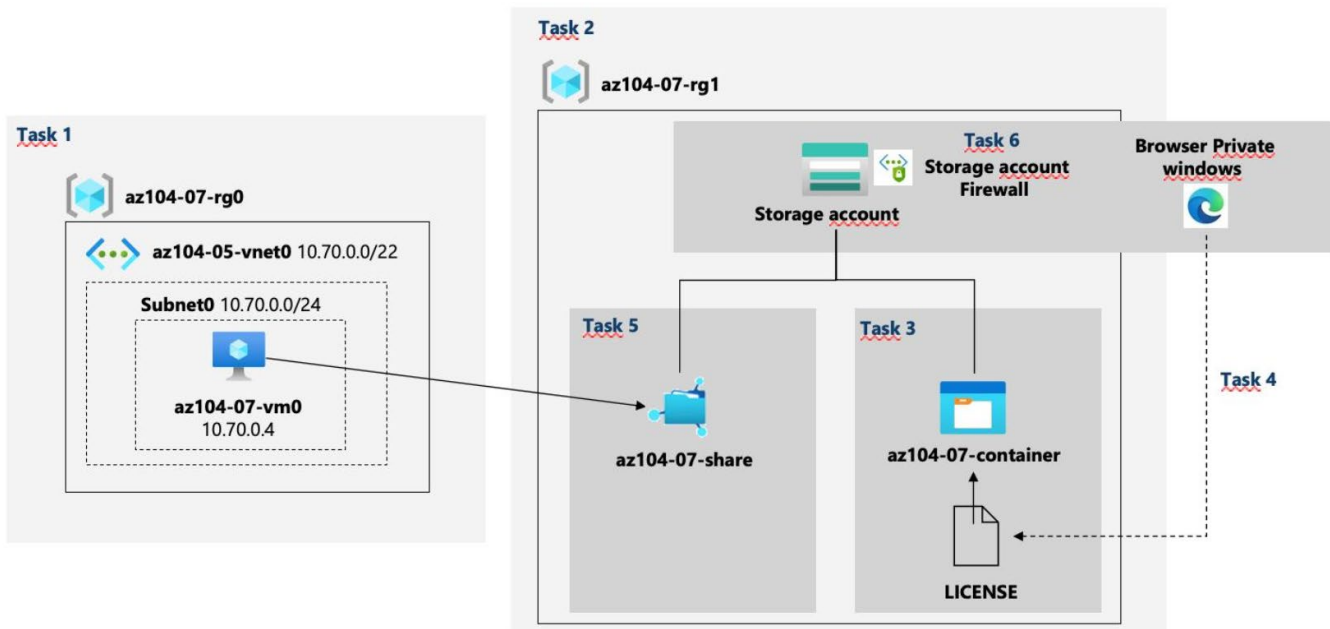


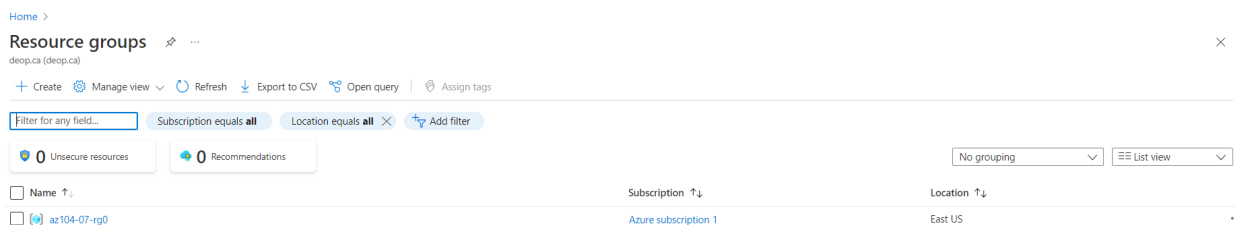
Azure Storage Account (Azure Project)

1. Provision the lab environment
2. Create and configure Azure storage accounts
3. Manage blob storage
4. Manage authentication and authorization for Azure Storage
5. Create and configure an Azure Files shares
6. Manage network access for Azure Storage



1. **Provision the lab environment:**
 - As a lab environment in the first step Azure VM will deploy.
 - Before creating VM we will create a storage account named cloudshellakin123
 - First rg0 is created on the eastus (picture1)
 - And then vm0 with subnet0 and vnet0 (picture2)

Picture 1.



Picture 2.

az104-07-rg0
Resource group

Search

Overview

- Activity log
- Access control (IAM)
- Tags
- Resource visualizer
- Events

Settings

- Deployments
- Security
- Policies
- Properties
- Locks

Cost Management

- Cost analysis
- Cost alerts (preview)
- Budgets
- Advisor recommendations

Essentials

Subscription (move) : [Azure subscription 1](#)

Subscription ID : 658b7aa8-6d79-4894-a694-a6e0220fdcae

Deployments : 1 [Succeeded](#)

Location : East US

Tags (edit) : [Click here to add tags](#)

Resources Recommendations

Filter for any field...

Type equals all X Location equals all X Add filter

Showing 1 to 7 of 7 records. ☐ Show hidden types ⓘ

No grouping List view

<input type="checkbox"/> Name ↑↓	Type ↑↓	Location ↑↓	
<input type="checkbox"/> az104-07-nic0	Network Interface	East US	...
<input type="checkbox"/> az104-07-nsg0	Network security group	East US	...
<input type="checkbox"/> az104-07-pip0	Public IP address	East US	...
<input type="checkbox"/> az104-07-vm0	Virtual machine	East US	...
<input type="checkbox"/> az104-07-vm0_disk1_7bb716fae9e046d1bc9989905e473acc	Disk	East US	...
<input type="checkbox"/> az104-07-vnet0	Virtual network	East US	...
<input type="checkbox"/> cloudshellakin123	Storage account	East US	...

2. Create and configure Azure storage accounts

- In this step we will create a storage account in the rg1 from the Azure portal.
- Storage account name is storageaccountakin104
- All settings will be selected as default.
- In the redundancy setting scope we will select the Blob access tier as cool and LRS (picture 3 and Picture 4)

Picture 3.

Home > storageaccountakin104_1668103573664 | Overview > storageaccountakin104

storageaccountakin104 | Redundancy

Storage account

Search Save Discard Prepare for failover Refresh

Data management

- Redundancy
- Data protection
- Object replication
- Blob inventory
- Static website
- Lifecycle management
- Azure search

Settings

- Configuration
- Data Lake Gen2 upgrade
- Resource sharing (CORS)
- Advisor recommendations
- Endpoints
- Locks

Monitoring

Azure Storage replication copies your data so that it is protected from transient hardware failures, network or power outages, and natural disasters. [Learn more about storage account failover](#)

Redundancy Locally-redundant storage (LRS)

Last failover time -

Storage endpoints [View all](#)

Location	Data center type	Status
East US	Primary	Available

Picture 4.

Home > storageaccountakin104_1668103573664 | Overview > storageaccountakin104

storageaccountakin104 | Configuration

Storage account

Search Save Discard Refresh

Data management

- Redundancy
- Data protection
- Object replication
- Blob inventory
- Static website
- Lifecycle management
- Azure search

Settings

- Configuration
- Data Lake Gen2 upgrade
- Resource sharing (CORS)
- Advisor recommendations
- Endpoints
- Locks

Secure transfer required ☐ Disabled ☒ Enabled

Allow Blob public access ☐ Disabled ☒ Enabled

Allow storage account key access ☐ Disabled ☒ Enabled

Allow recommended upper limit for shared access signature (SAS) expiry interval ☒ Disabled ☐ Enabled

Default to Azure Active Directory authorization in the Azure portal ☒ Disabled ☐ Enabled

Minimum TLS version

Permitted scope for copy operations (preview)

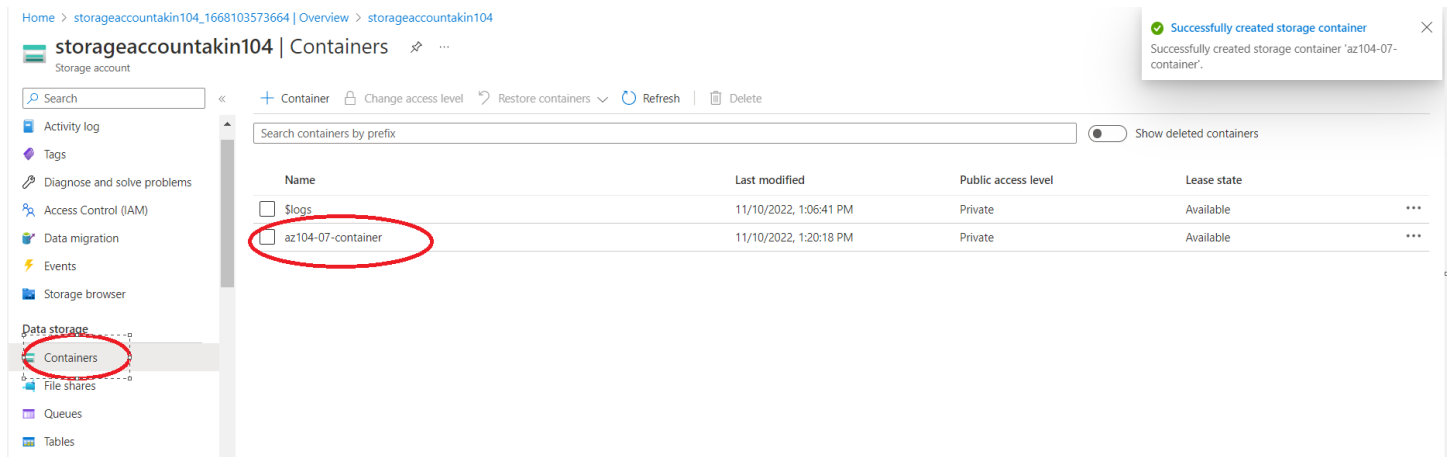
Blob access tier (default) ☒ Cool ☐ Hot

Large file shares

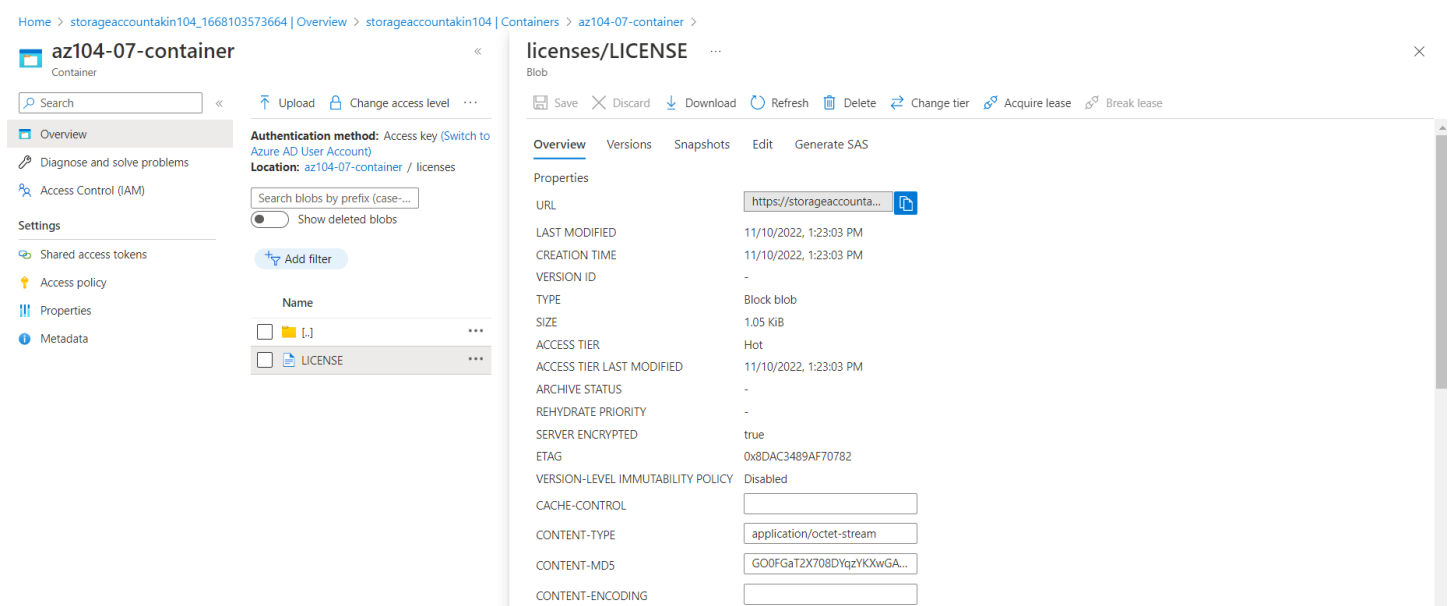
3. Manage blob storage

- From the azure portal select storage account and then select containers on the left pane and create the name az104-07-container (picture 5)
- After creating the container, we will add the licence (picture 6)

Picture 5.



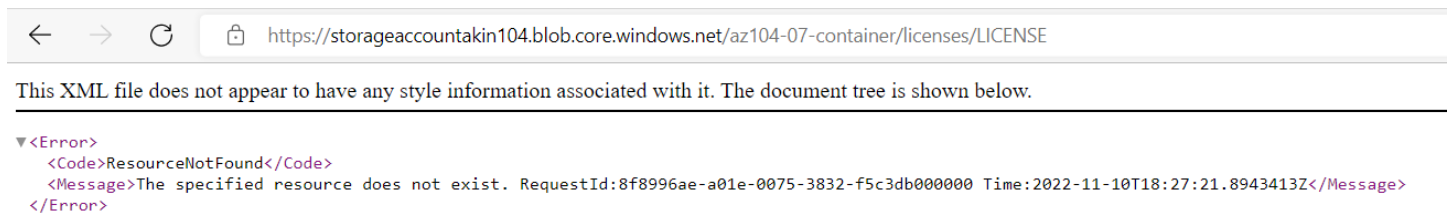
Picture 6.



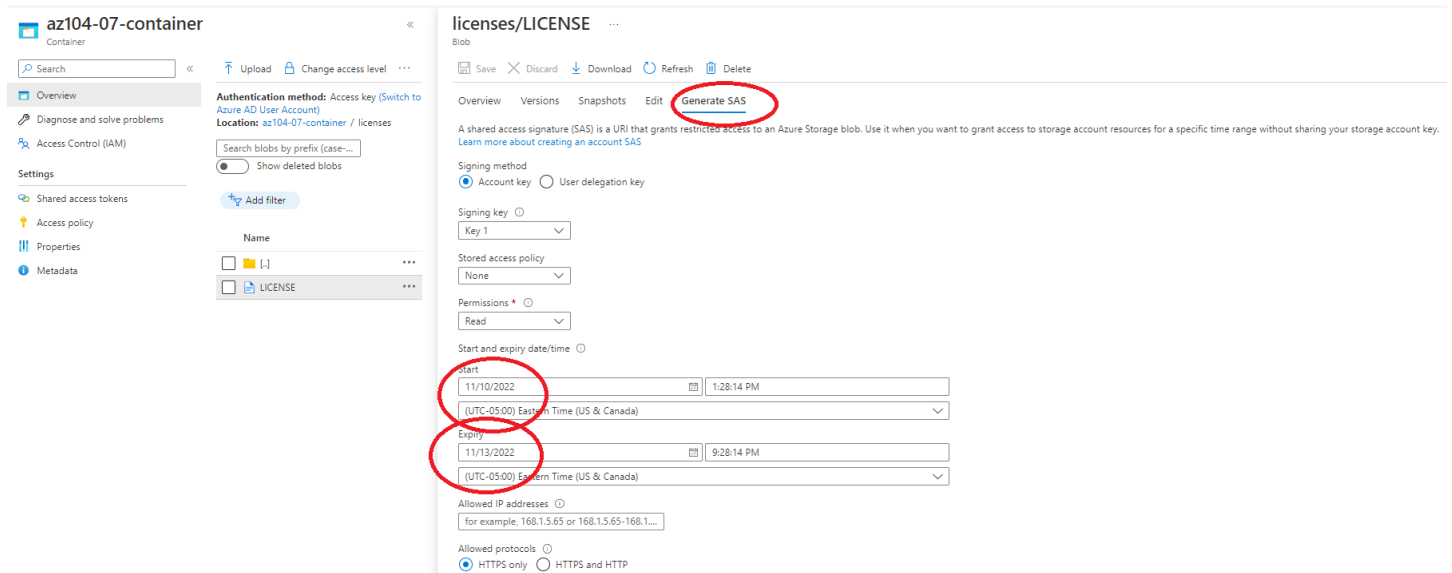
4. Manage authentication and authorization for Azure Storage

- Copy the blob url to IE and click enter, the result is on picture 7
- After generating SAS with value date, try the above step again with the newly generated url (pictures 8-9)
- As a next step we will assign a new role (Storage Blob Data Owner) for the container from IAM
- Setting configuration can be seen in pictures 10-13.

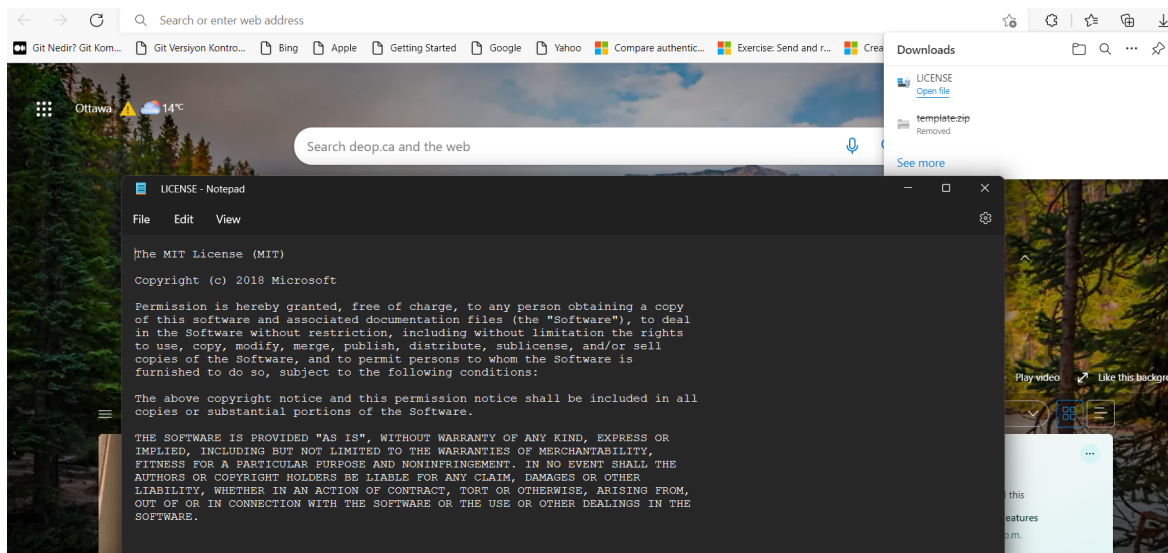
Picture 7.



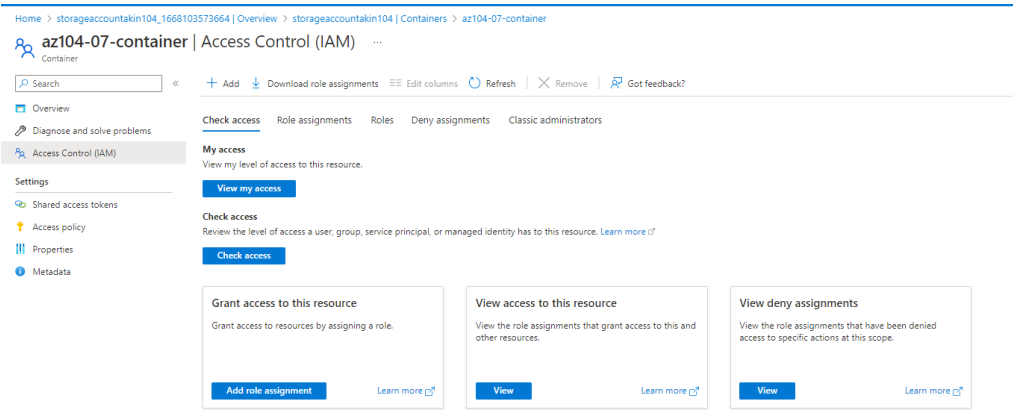
Picture 8.



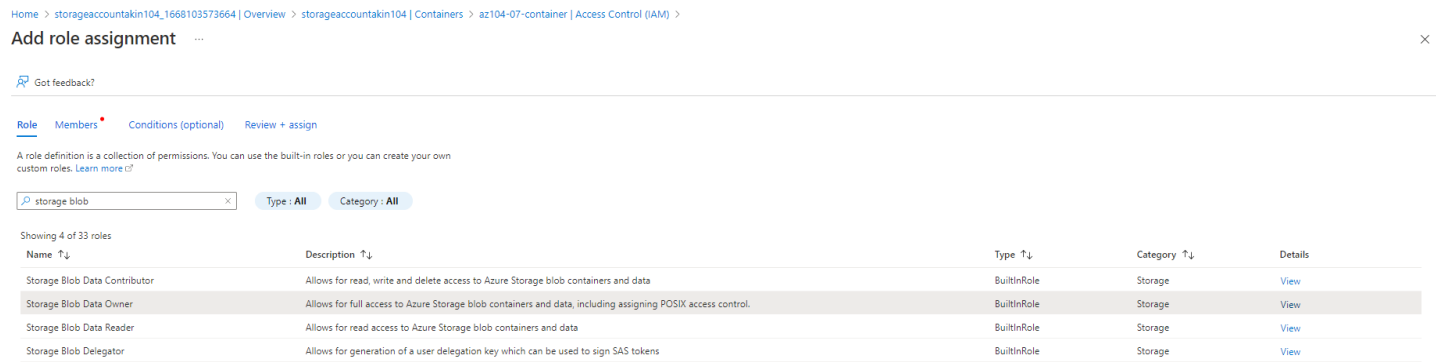
Picture 9.



Picture 10.




Picture 11.



Picture 12.

Add role assignment ...

 Got feedback?

Role Members Conditions (optional) Review + assign

Selected role

Storage Blob Data Owner

Assign access to

☒ User, group, or service principal

☐ Managed identity

Members

+ Select members

Name	Object ID	Type	
Akin Kuyga	a2465932-6f59-4786-8b2d-1c9ef6824a1a	User	

Description

Optional

Picture 13.

az104-07-container

Container

Search

Upload Change access level Refresh Delete Change tier Acquire lease Break lease View snapshots Create snapshot

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

Authentication method: Access key (Switch to Azure AD User Account)

Location: az104-07-container

Search blobs by prefix (case-sensitive)

Add filter

Name	Modified	Access tier
licenses		

5. Create and configure an Azure Files shares

- From the azure portal left pane on the storage account page, select file shares and create new named az104-07-share (picture 14)
- After creating click the file and connect it via VM with the PowerShell script. (picture 15-17)

Picture 14.

Home > Storage accounts > storageaccountakin104

Storage accounts

storageaccountakin104 | File shares

File share settings

Active Directory: Not configured Default share-level permissions: Disabled Soft delete: 7 days Maximum capacity: 5 TiB

Search file shares by prefix (case-sensitive)

Name	Modified
You don't have any file shares yet. Click '+ File share' to get started.	

New file share

Name * az104-07-share

Tier Transaction optimized

Performance

Maximum IO/s 1000

Egress Rate 60 MiB / s

Ingress Rate 60 MiB / s

Maximum capacity 5 TiB

Large file shares Disabled

You can improve performance and maximum share capacity by enabling large file shares for this storage account. [Learn more](#)

To use the SMB protocol with this share, check if you can communicate over port 445. These scripts for [Windows clients](#) and [Linux clients](#) can help. Learn how to [circumvent port 445 issues](#).

Create Cancel

Picture 15.

Home > Virtual machines > az104-07-vm0

Virtual machines

deop.ca (deop.ca)

+ Create Switch to classic

Filter for any field...

Name

az104-07-vm0

Page 1 of 1

az104-07-vm0 | Run command

Virtual machine

Run command

Monitoring

Alerts

Metrics

Diagnostic settings

Logs

Connection monitor (classic)

Workbooks

Automation

Tasks (preview)

Export template

Help

Resource health

Boot diagnostics

Performance diagnostics

VM Inspector (Preview)

Reset password

Redeploy + reapply

Serial console

Connection troubleshoot

Support + Troubleshooting

Run Command uses the VM agent to let you run a script inside this virtual machine. This can maintenance. Select a command below to see details.

Name	Description
RunPowerShellScript	Executes a PowerShell script
DisableNLA	Disable Network Local Authentication
DisableWindowsUpdate	Disable Windows Update
EnableAdminAccount	Enable Administrator account
EnableEMS	Enable Event Monitoring Service
EnableRemotePS	Enable Remote PowerShell
EnableWindowsUpdate	Enable Windows Update
IPConfig	List IP configuration
RDPSettings	Verify RDP Settings
ResetRDPcert	Restore RDP Certificate
SetRDPport	Set Remote Desktop port

Run Command Script

RunPowerShellScript

Script execution complete

```
4 cmd.exe /C "cmdkey /add:"storageaccountin104.file.core.windows.net"/user:"localhost\administrator" /pass:"P@ssw0rd123!" /u /add
5 # Mount the drive
6 New-PSDrive -Name Z -PSProvider FileSystem -Root "\\storageaccountin104.file.core.windows.net\Z"
7 } else {
8 Write-Error -Message "Unable to reach the Azure storage account via port 445. Check to make sure the storage account is accessible."
9 }
```

Run

Output

```
cmdkey: Credential added successfully.

Name      Used (GB)  Free (GB) Provider  Root
-----
Currentlocation
-----
Z          0.00      5120.00 FileSystem \\storageaccountin104.file.core.windows.net\Z
```

Picture 16.

Home > Virtual machines > az104-07-vm0

Virtual machines

deop.ca (deop.ca)

+ Create Switch to classic

Filter for any field...

Name

az104-07-vm0

Page 1 of 1

az104-07-vm0 | Run command

Virtual machine

Run command

Monitoring

Alerts

Metrics

Diagnostic settings

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EnableWindowsUpdate	Enable Windows Update
IPConfig	List IP configuration
RDPSettings	Verify RDP Settings
ResetRDPcert	Restore RDP Certificate
SetRDPport	Set Remote Desktop port

Run Command Script

RunPowerShellScript

Script execution complete

```
1 New-Item -Type Directory -Path 'Z:\az104-07-folder'
2
3 New-Item -Type File -Path 'Z:\az104-07-folder\az-104-07-file.txt'
```

Run

Output

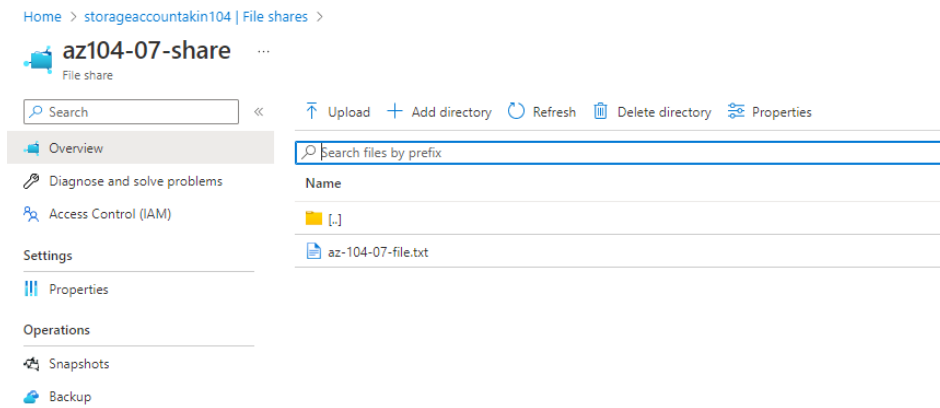
```
Directory: Z:\

Node      LastWriteTime         Length Name
----
d-----  11/18/2022  7:07 PM              az104-07-folder

Directory: Z:\az104-07-folder

Node      LastWriteTime         Length Name
----
-a-----  11/18/2022  7:07 PM              0 az-104-07-file.txt
```

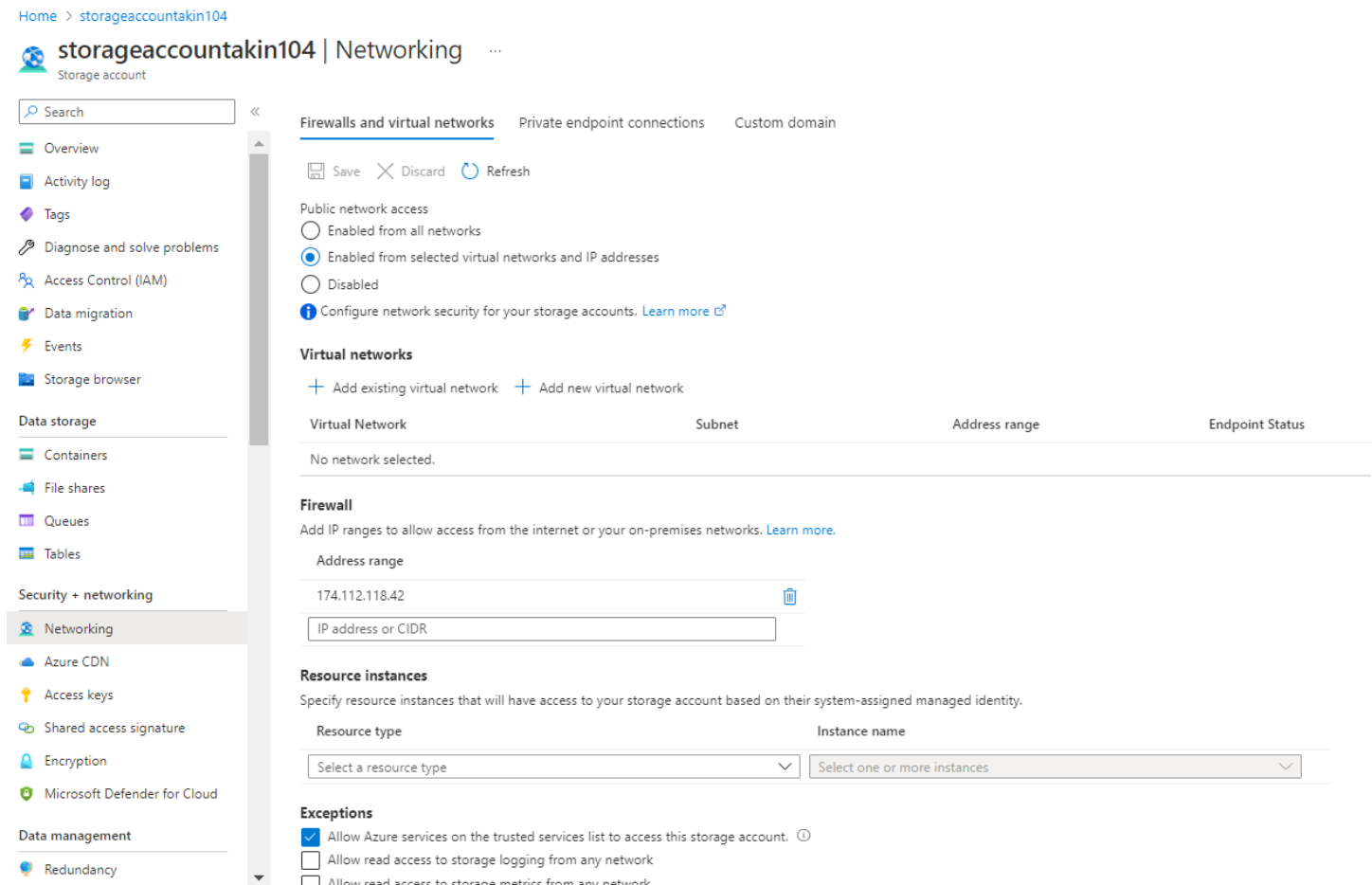
Picture 17.



6. Manage network access for Azure Storage

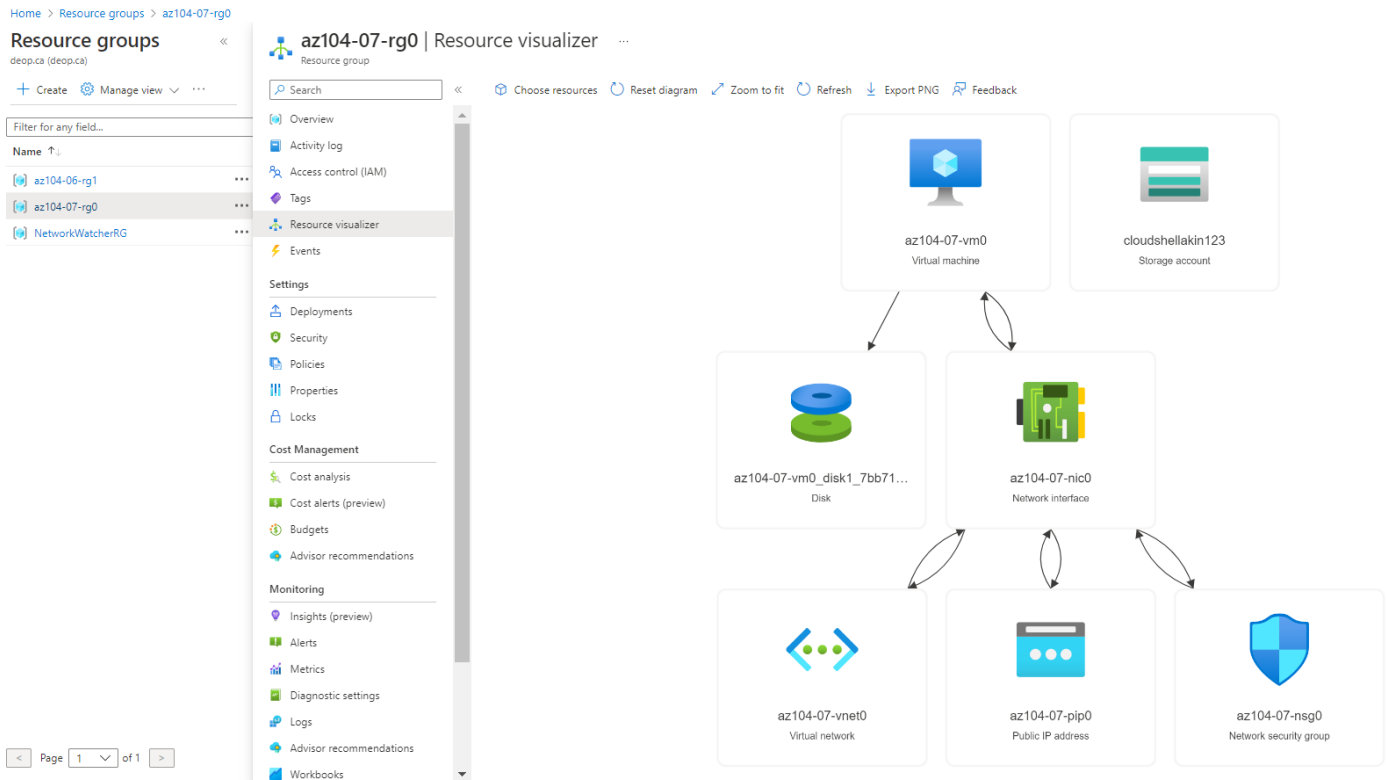
- From the azure portal left pane on the storage account page, select networking and enabled from selected virtual networks and IP address (select your client pip) (picture 18)
- After managing PIP, from IE click previously used url for blob. You can see download file.

Picture 18.

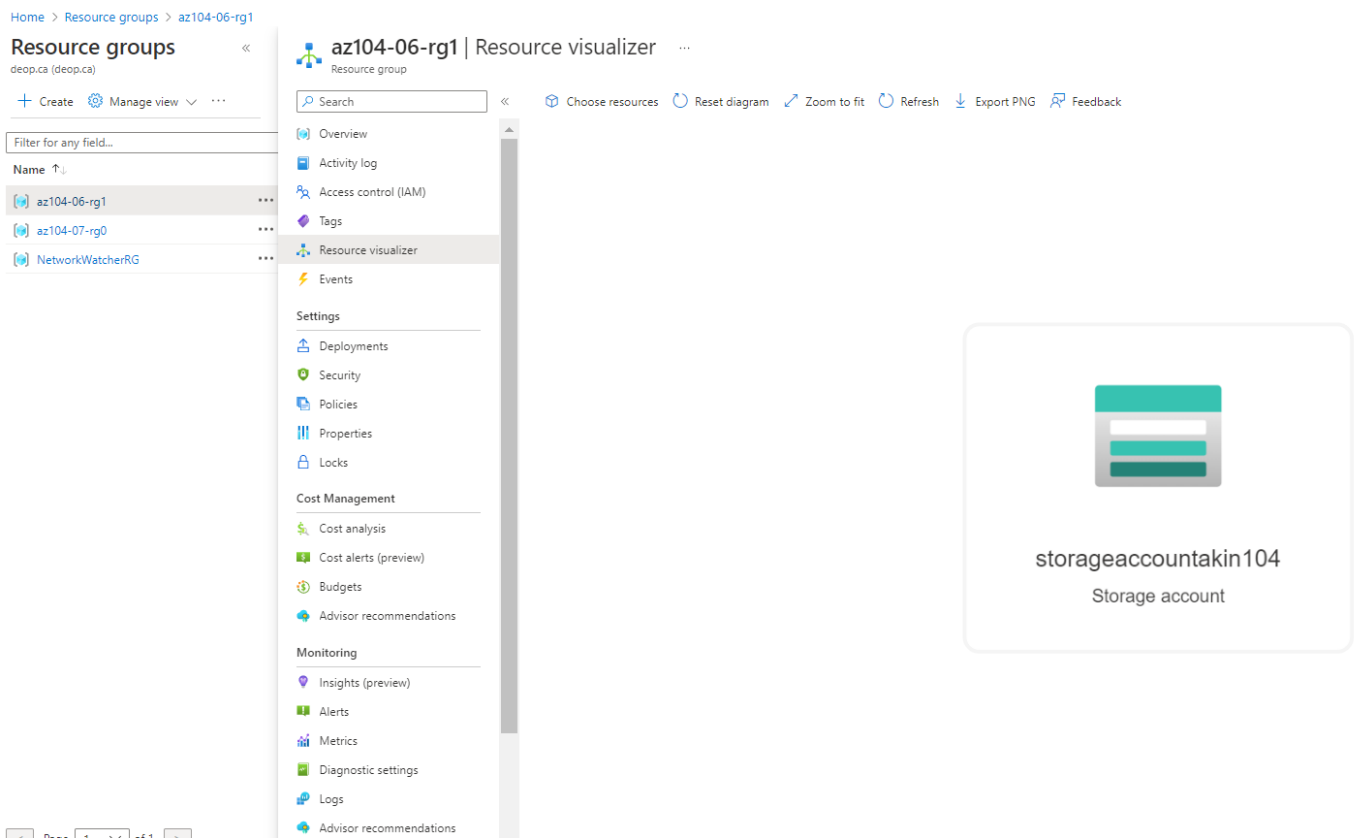


All Configurations:

1.a



1.b



Thanks