Cloud and GitHub setup assignment instructions

Saturday, August 13, 2022 12:49 PM

This assignment will explore two core pieces of class infrastructure set up - GitHub and Azure. These tools will be essential for all assignments in the class so take the time to get comfortable with them.

This document provides a detailed walkthrough for the Azure portion of the assignment. If you need more background on Git or GitHub, do the optional assignment in week 2.

The deliverables for the assignment include:

1. A new resource group created in your newly created Azure subscription.
2. A storage account with a blob container containing the CSV file from GitHub. The storage account should be in the new resource group.
3. A key vault with a secret named "MySecret".
4. Screenshots of the following submitted via your GitHub repo for the assignment:
    a. The resource group containing the storage account and key vault.
    b. The storage account showing the blob container with the CSV file in it.
    c. The key vault showing the secret.

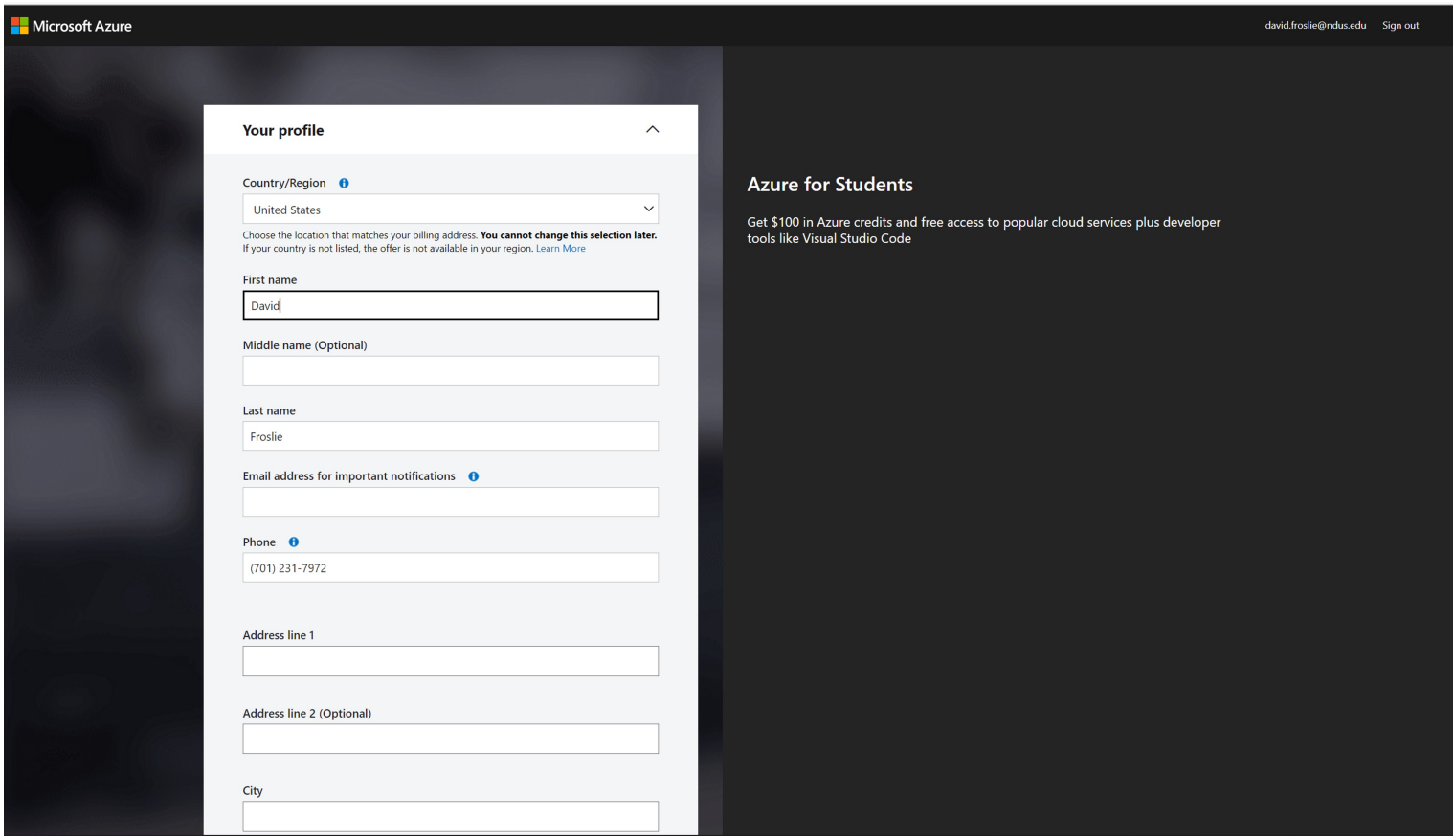
High level steps

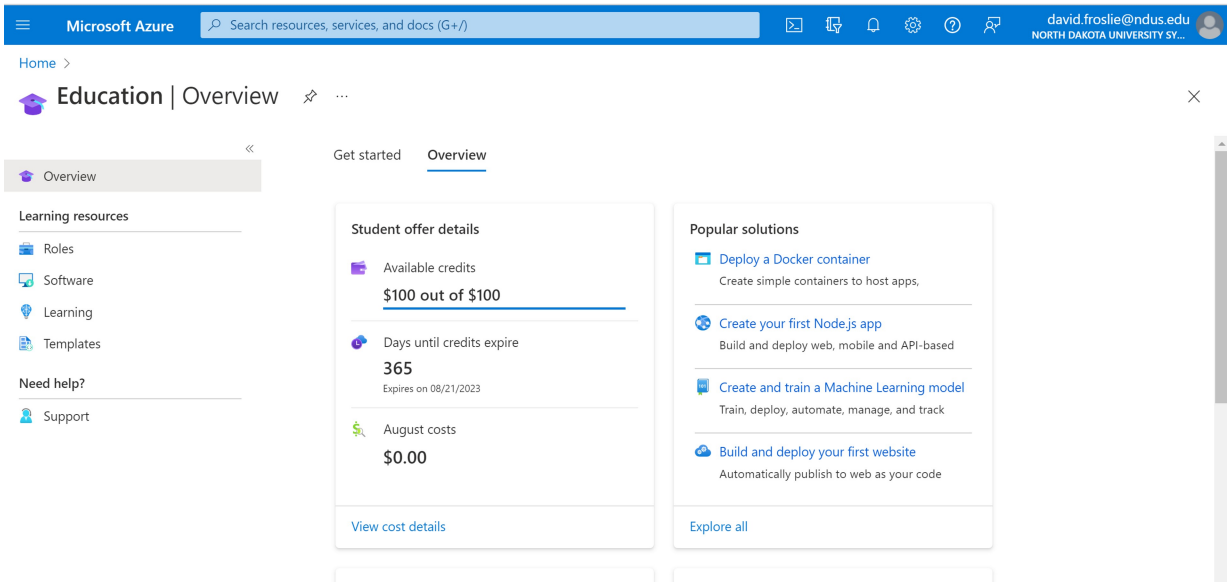
1. Create an Azure subscription (Azure for Students – Free Account Credit | Microsoft Azure)
2. Create a new resource group
    a. Name the resource group 'CSCI422-Assigment1' or 'CSCI622-Assigment1'.
3. Create an Azure Storage Account
4. Create a blob container in the storage account.
5. Upload CSV content from GitHub repo to the blob container.
6. Create a Key Vault.
7. Create a secret named "MySecret" in the key vault.
8. Take the required screenshots, place them in the repo in the AssignmentEvidence folder.
9. Add the files, commit the changes, and push the repo.

Azure Setup

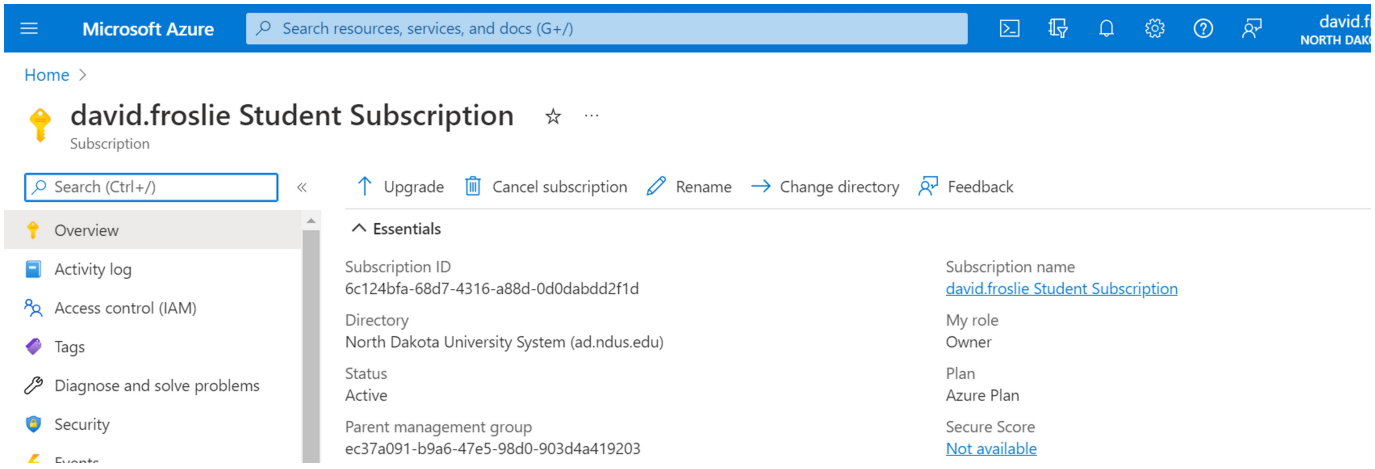
Create subscription (Azure for Students – Free Account Credit | Microsoft Azure)

Use your first.last@ndus.edu account for the subscription.



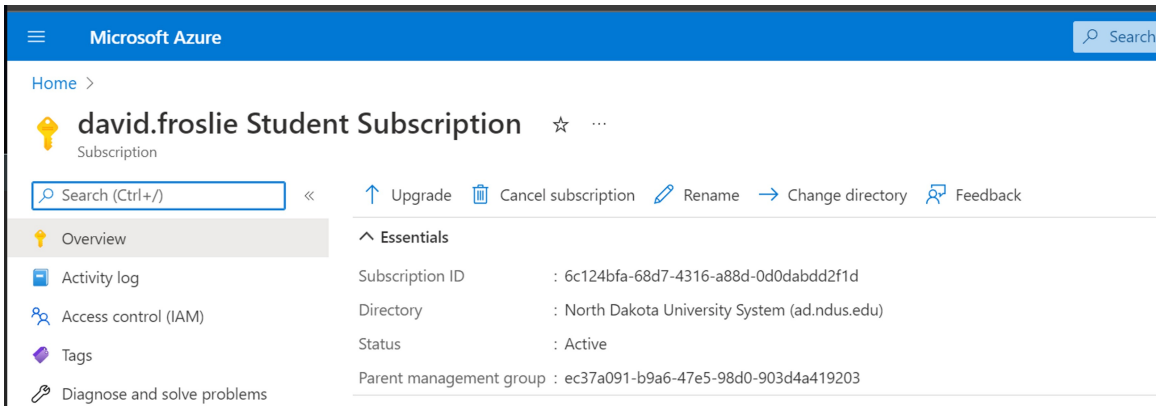


Change subscription name to start with your email alias:

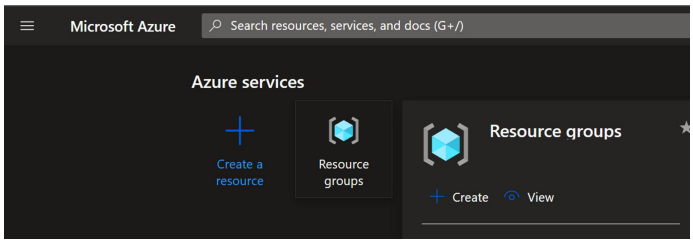


Create a resource group

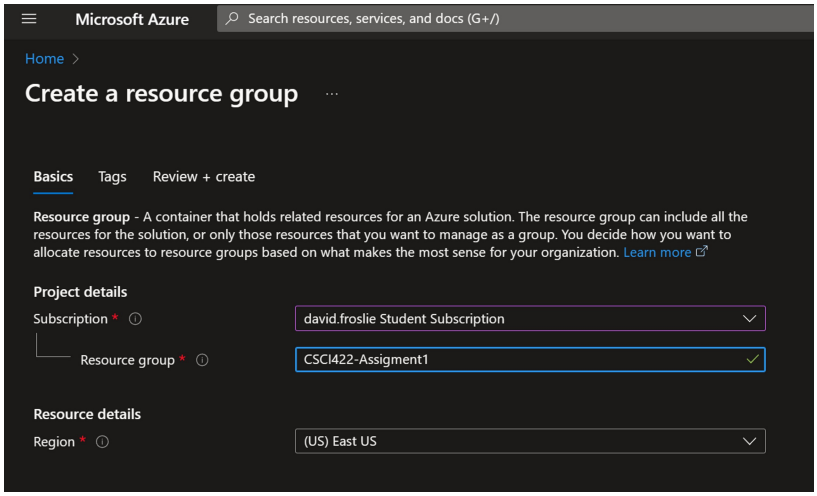
Navigate to Home



Create a resource group. Hover over Resource groups until the popup menu appears and select Create.

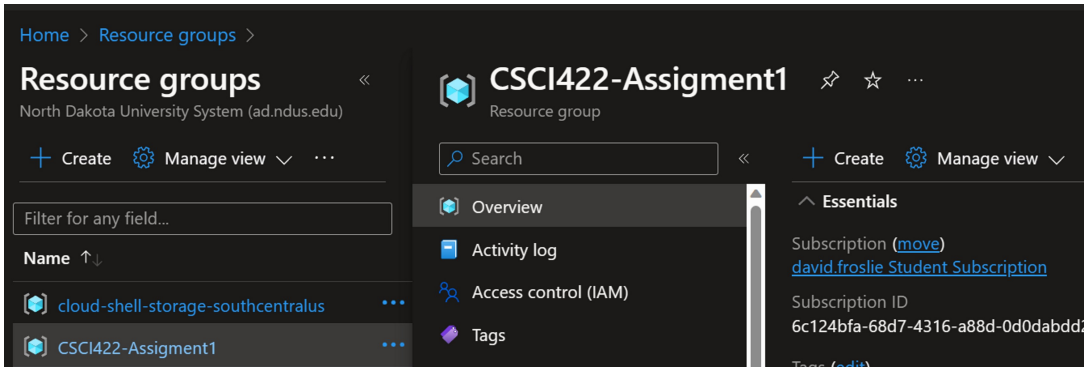


Create the resource group in a US region and name it CSCI422-Assignment1 (or CSCI622-Assignment1).

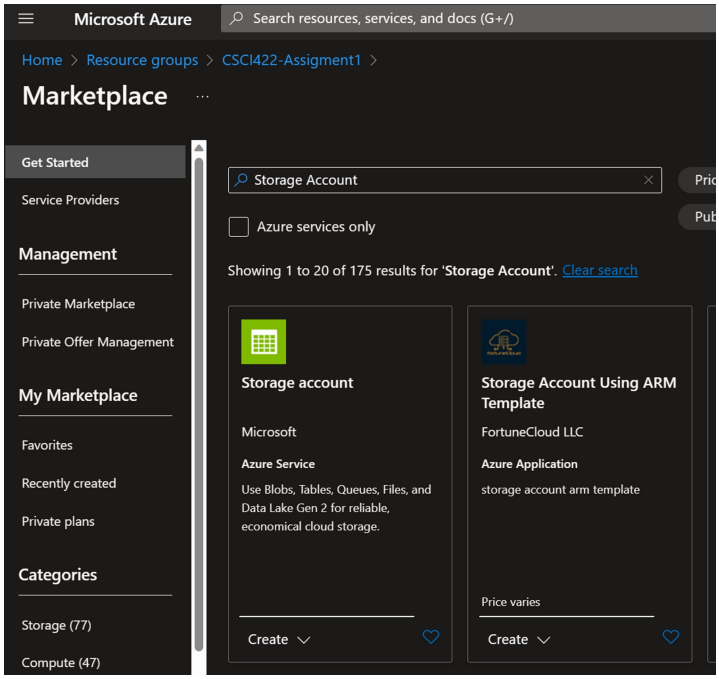


Create a storage account, blob container, and upload CSV

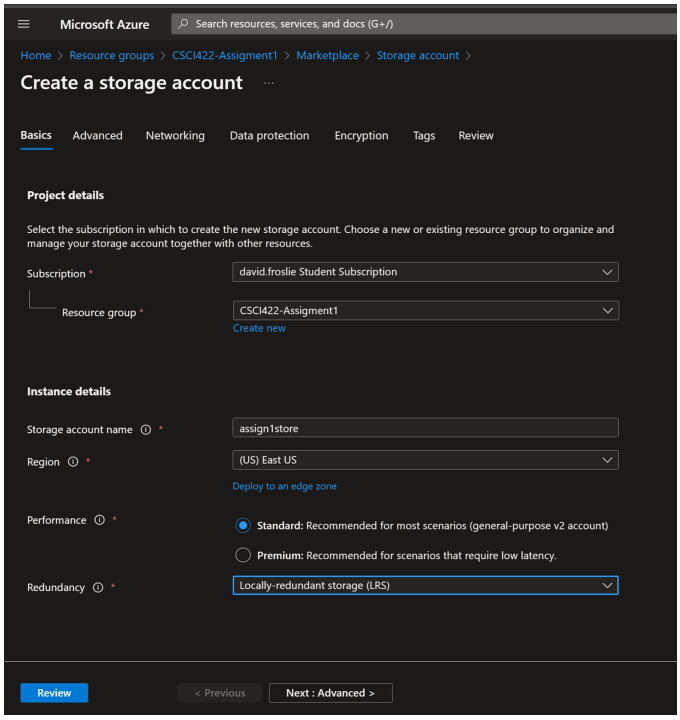
Navigate to the Resource Group you just created. Click on '+ Create'.



Search the Marketplace for Storage Account. Find the Storage Account from Microsoft and click Create.

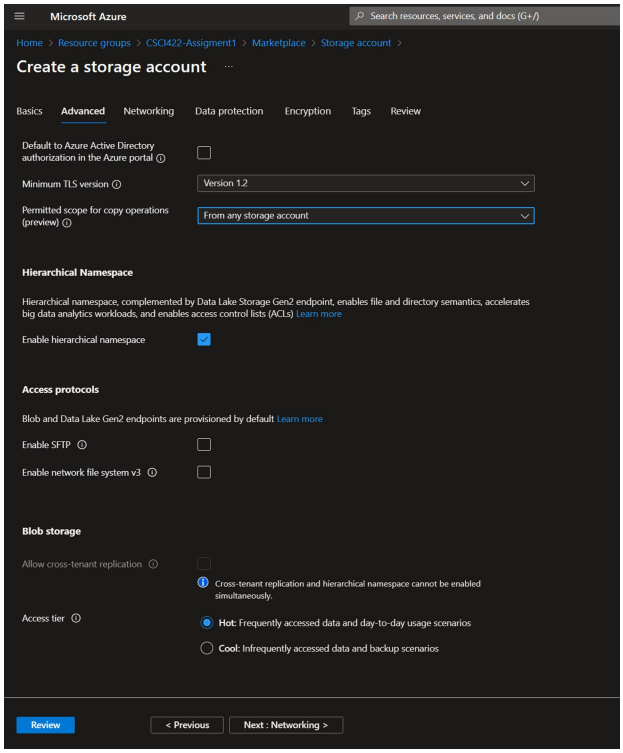


Create the storage account in the same region as the resource group. Use Standard performance and Locally-redundant storage (LRS).



On Advanced, Use the defaults with the exception of:

- Enable hierarchical namespace - this is a good default as it helps with big data processing
- Access tier - Hot. We'll reuse the storage account for future assignments where frequent access will be required.



Networking - take defaults

Data protection - take defaults

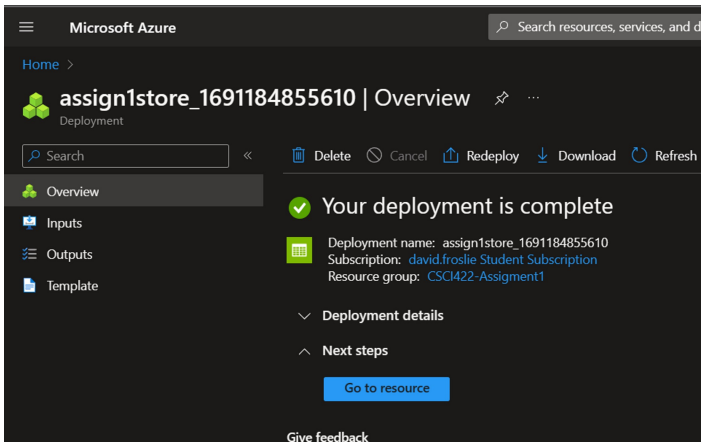
Encryption - take defaults

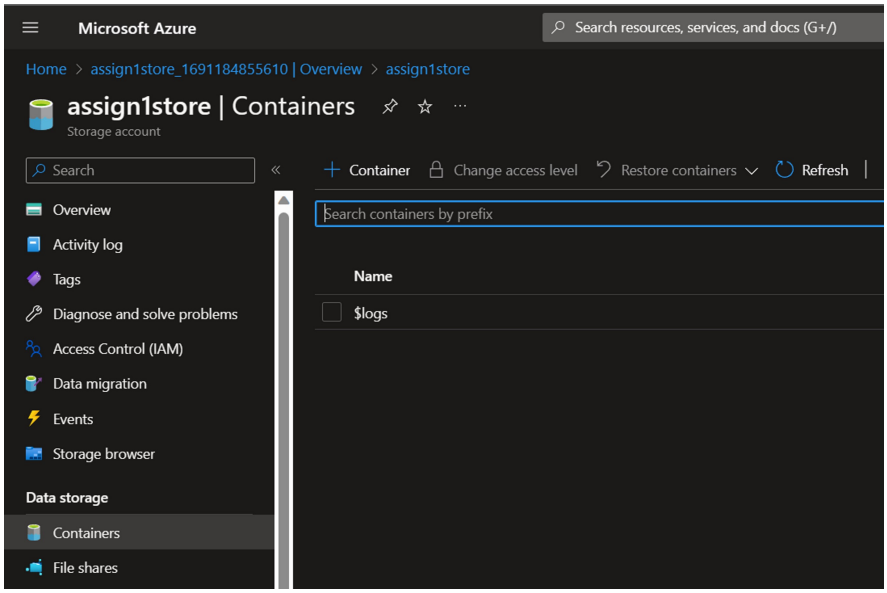
Tags - None

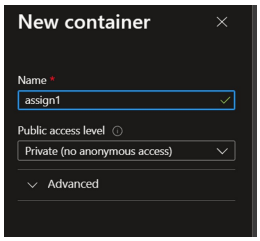
Review

Create

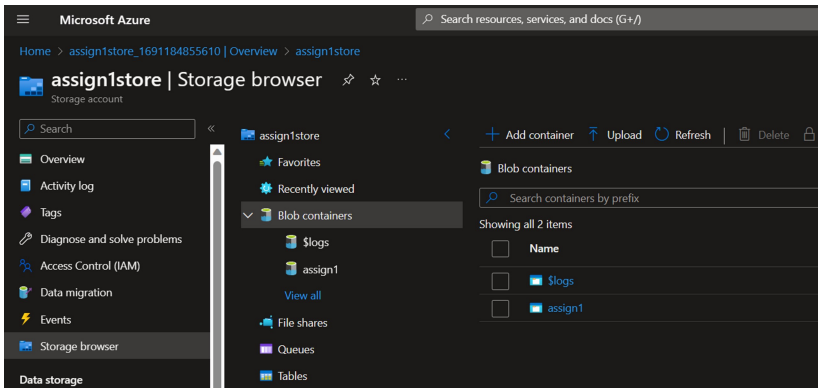
After creation, go to resource. Select containers, then '+ Container'







Go to Storage browser, Blob Containers.



Navigate to the blob you just created. Upload the CSV file from the GitHub repo.

Take a screenshot of the uploaded file in the Storage Explorer and save it in the repo.

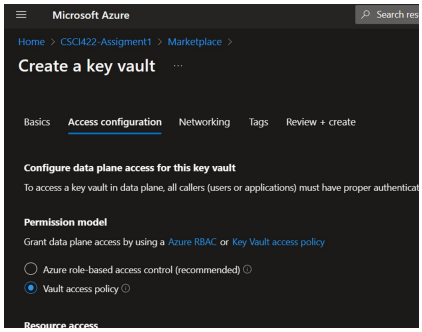
You now have successfully completed the storage account portion of the assignment.

Create a Key Vault

Navigate back to the Resource Group and create a key vault in it by searching in the marketplace for it as you did with the storage account. Select the Key Vault from Microsoft that looks like the following:

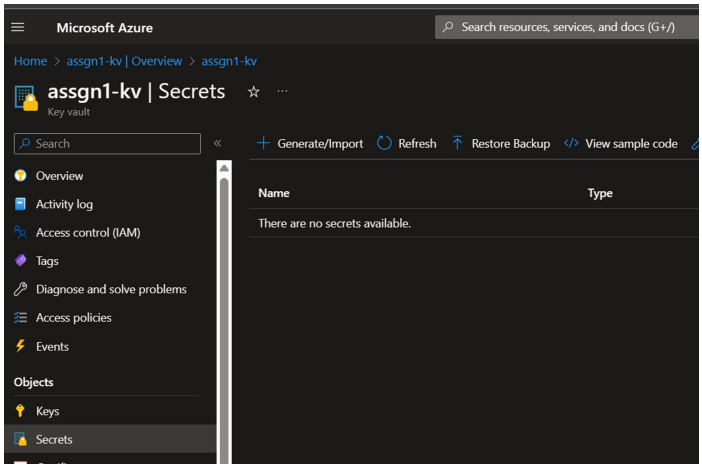
Use the defaults on the Basics page. Select the same region as your storage account.

On the Access configuration page, select Vault access policy.

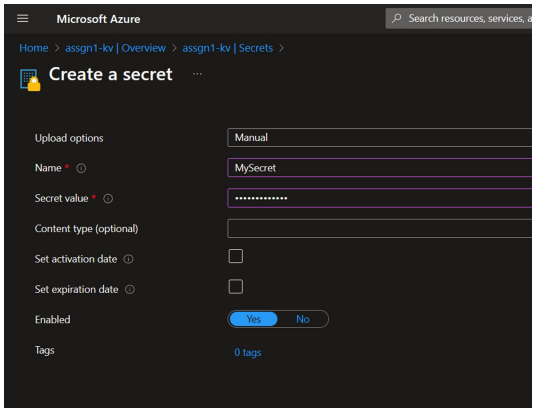


Use the defaults for Networking and Tags, Review, and Create.

After the resource is created, go to it. Next, manually generate a new secret.



Name the secret "MySecret" and put whatever you want into the Secret value.



Once the secret is created, you can navigate to it's current version and show the secret.

Take a screenshot of the created secret in the Secrets listing of the Key Vault and save it in the repo.

You have now completed the key vault portion of the assignment.

Wrap up

Navigate back to the resource group and take a screenshot of the resources in the group and save it in the repo.

You should now have screenshots providing evidence for the storage account, key vault, and resource group. Commit and push your changes in git to complete the assignment.