An Azure storage account is an Azure cloud service that contains all of your Azure storage data objects: blobs, file shares, queues, tables, and disks. You can host files, including images, videos, music, and binary, as well as NoSQL data and messages in the cloud using this service.

In this lab you will learn about soft delete for Azure storage blobs.

Learning Objective
In this lab, you will learn how to do the following:

Log into the Azure CLI
Understand soft delete for Azure storage blobs
Enable soft delete for Azure storage blobs using CLI
Confirm the soft delete setting using Azure CLI
Check the soft delete settings in the portal
Clean up

az login -u $username -p $password

To create a new Azure storage account:
az storage account create -n $storageAccountName --resource-group $resource --sku Standard_LRS

To create a new blob container under the above storage account:
az storage container create --name myfiles --account-name $storageAccountName --account-key $storageKey

To upload a sample text file to the above container:
az storage blob upload --account-name $storageAccountName --account-key $storageKey --container-name myfiles --file blob.txt --name blob.txt

Understand Azure Storage Soft Delete for Blobs
You can store different file types in Azure storage blobs. You need a way to protect these files against accidental deletion, so that the deleted files can be recovered if needed.

In this lab you will learn about soft delete for Azure storage blobs. This feature, if enabled, allows you to recover (undelete) deleted blob files within the configured retention period.

We already created a new storage account and uploaded a text file to a blob container. Use the following command to confirm that the account is present:

```
$ az storage blob list --account-name $storageAccountName --account-key $storageKey --container-name myfiles --query [].name
[
  "blob.txt"
$ az storage blob list --account-name $storageAccountName --account-key $storageKey --container-name myfiles
[
  {
    "container": "myfiles",
    "content": "",
    "deleted": null,
    "encryptedMetadata": null,
    "encryptionKeySha256": null,
    "encryptionScope": null,
    "hasLegalHold": null,
    "hasVersionsOnly": null,
    "immutabilityPolicy": {
      "expiryTime": null,
      "policyMode": null
    },
    "isAppendBlobSealed": null,
    "isCurrentVersion": null,
```

In the next step, we will enable soft delete for this storage account and will delete and recover a text file.

Enable Soft Delete for Storage Blobs using Azure CLI
Use the following command to enable the soft delete feature for your storage account:

az storage account blob-service-properties update --account-name $storageAccountName --resource-group $resource --enable-delete-retention true --delete-retention-days 14

Wait for the command to execute. Here are the command parameters:

--resource-group: The parent resource group for the storage account
--account-name: The storage account name
--enable-delete-retention: Enable or disable soft delete
--delete-retention-days: The soft delete retention period in days. The deleted files can be undeleted within this period.

az storage account blob-service-properties update is a command that can be used with the Azure CLI (Command Line Interface) to update the Blob service properties of a storage account in Azure.

Use the following command to confirm that the soft delete is enabled for your storage account blobs:

```
}
$ az storage account blob-service-properties show --account-name $storageAccountName --resource-group $resource --query deleteRetentionPolicy
{
  "allowPermanentDelete": false,
  "days": 14,
  "enabled": true
}
$ az storage account blob-service-properties show --account-name $storageAccountName --resource-group $resource  {
  "automaticSnapshotPolicyEnabled": null,
  "changeFeed": null,
  "containerDeleteRetentionPolicy": null,
  "cors": {
    "corsRules": []
  },
  "defaultServiceVersion": null,
  "deleteRetentionPolicy": {
    "allowPermanentDelete": false,
    "days": 14,
    "enabled": true
  },
  "id": "/subscriptions/7075f968-4ed0-4eda-a971-4afd22b73b63/resourceGroups/user-jxtusihqduqp/providers/Microsoft.Storage/storageAccounts/stora
ult",
  "isVersioningEnabled": null,
  "lastAccessTimeTrackingPolicy": null,
  "name": "default",
  "resourceGroup": "user-jxtusihqduqp",
  "restorePolicy": null,
  "sku": {
    "name": "Standard_LRS",
    "tier": "Standard"
  },
  "type": "Microsoft.Storage/storageAccounts/blobServices"
}
$
```

In the next step you will recover a deleted blob file using the soft delete protection.

Confirm Soft Delete Settings using Azure CLI
Soft delete is enabled for your storage account and the retention period is 14 days. This means you can recover any deleted blob file within 14 days of the deletion time.

Now, let's delete the blob.txt file from our container:

az storage blob delete --account-name $storageAccountName --account-key $storageKey --container-name myfiles --name blob.txt

Now use the following command to confirm that the blob file is deleted:
az storage blob list --account-name $storageAccountName --account-key $storageKey --container-name myfiles --query [].name

Now, use the following command to recover (undelete) your blob file:
az storage blob undelete --account-name $storageAccountName --account-key $storageKey --container-name myfiles --name blob.txt

```
$ az storage blob undelete --account-name $storageAccountName --account-key $storageKey --container-name myfiles --name blob.txt
{
  "undeleted": null
}
$
```

Important: The previous command only succeeds if you are within the configured retention period, in our case 14 days.

Now use the following command again to confirm the blob file is recovered:

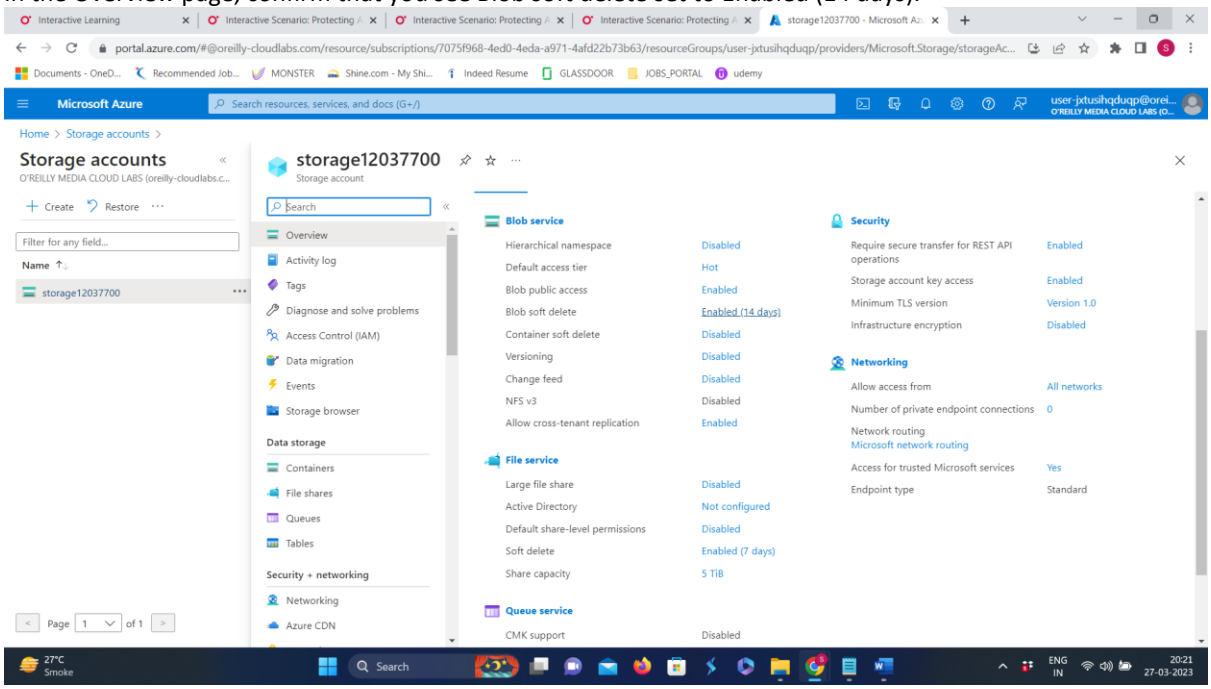
```
$ az storage blob list --account-name $storageAccountName --account-key $storageKey --container-name myfiles --query [].name
[
  "blob.txt"
]
$
```

The command should return blob.txt as the only result.

In the next step, we will check the soft delete setting in the Azure portal.

Check Soft Delete Settings in the Azure Portal

In the Overview page, confirm that you see Blob soft delete set to Enabled (14 days).



Clean Up

Use the following command to clean up the storage accounts from your allocated resource group. Deleting a storage account will delete all the child blob containers, queues, file shares, and tables:

```
$ az storage account delete -g $resource -n $storageAccountName
Are you sure you want to perform this operation? (y/n): y
$
```

Use the following command to list all storage accounts in your allocated resource group:

```
$ az storage account delete -g $resource -n $storageAccountName
Are you sure you want to perform this operation? (y/n): y
$ az storage account list --resource-group $resource
[]
$
```