# Lab Manual- SysOps with Azure CLI

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# 1 OBJECTIVE

Azure CLI is a cross-platform command line tool, that is used to manage and administrate Microsoft Azure. It doesn't replace PowerShell but provides an alternative to using managing Azure from the command line. You can still continue using PowerShell, the APIs and the Azure Portal just like before. Azure CLI provides some tangible benefits over these, especially over PowerShell in that it's very nimble and can be quickly installed on almost any platform.This Lab will cover the basics of configuring Azure cli.

Actually an Azure CLI command has the following structure:

- **a command group** which represents an Azure service and which can be the composition of subgroups
- **a command** which is the action you want to do on the group / Azure service
- arguments optionally which are a list of parameter names and values

# 2 PRE-REQUISISTE

- Accounts in Azure
- A local Computer with 4 CPU, 16 GB RAM, 200 GB disk space

# 3 Setup Up Azure CLI

## 3.1 Download Azure CLI

Click on below link to downkload the Azure CLI

https://aka.ms/installazurecliwindows

or https://docs.microsoft.com/en-in/cli/azure/?view=azure-cli-latest


Microsoft Azure CLI Setup
Microsoft Azure
Please read the Microsoft Azure CLI License Agreement
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Microsoft Azure CLI
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. They apply to the software named above. The terms also apply to any Microsoft services or updates for the software, except to the extent those have different terms.
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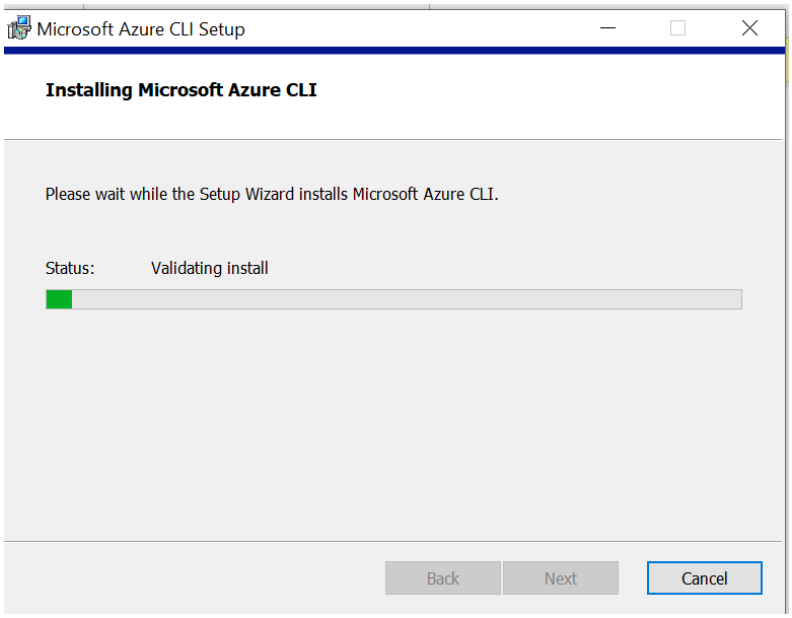
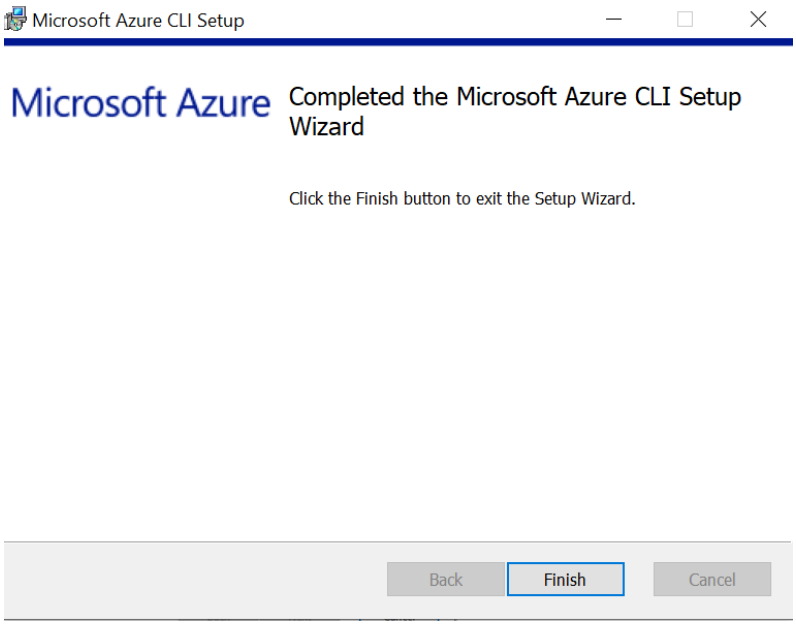
Install
Cancel

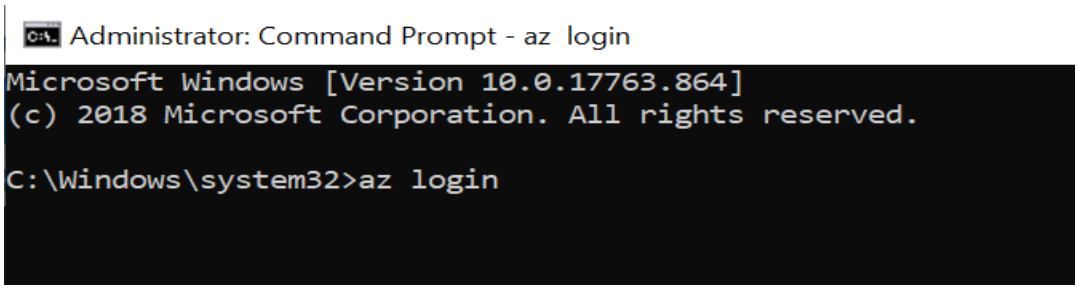

Microsoft Azure CLI Setup
Installing Microsoft Azure CLI
Please wait while the Setup Wizard installs Microsoft Azure CLI.
Status: Validating install
Back
Next
Cancel



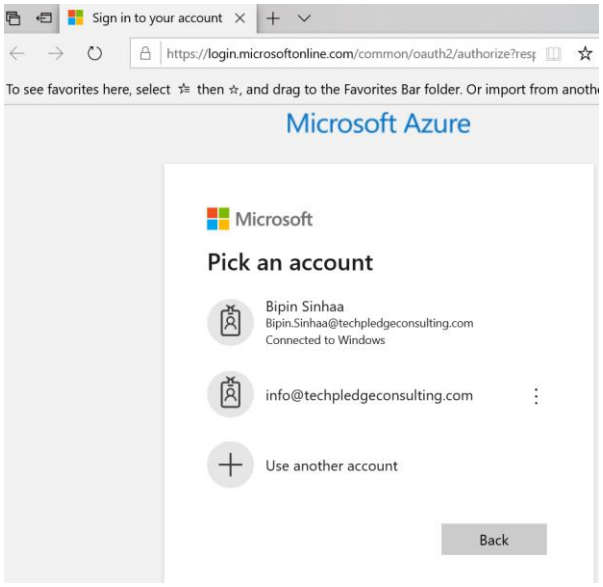

## 3.2 Connect to Azure Cli

Open command prompt in Admin Mode and type below command

az login




It open the login screen in browser and just type your username password




Once you get successfully authenticate you get this message on command

```
C:\Windows\system32>az login
You have logged in. Now let us find all the subscriptions to which you have access...
[
  {
    "cloudName": "AzureCloud",
    "id": "28020c11-a22a-4989-8e60-706f0ce22e0f",
    "isDefault": true,
    "name": "Free Trial",
    "state": "Enabled",
    "tenantId": "687e543f-3a32-40cd-9590-e7c0a8b55002",
    "user": {
      "name": "mudiupoovandhava@gmail.com",
      "type": "user"
    }
  }
]

C:\Windows\system32>
```

You can also login using belocw command

```
az login -u johndoe@contoso.com -p VerySecret
```

Type below command to check the current kloggin user ( Notice the output format it is called **Jason** format which is default)

az account list –all

```
C:\Windows\system32>az account list --all
[
  {
    "cloudName": "AzureCloud",
    "id": "28020c11-a22a-4989-8e60-706f0ce22e0f",
    "isDefault": true,
    "name": "Free Trial",
    "state": "Enabled",
    "tenantId": "687e543f-3a32-40cd-9590-e7c0a8b55002",
    "user": {
      "name": "mudiupoovandhava@gmail.com",
      "type": "user"
    }
  }
]
```

Now type the same command with different output format **table**

az account list --all --output table

```
C:\Windows\system32>az account list --all --output table
Name        CloudName    SubscriptionId                        State    IsDefault
----------  -----------  ------------------------------------  -------  ----------
Free Trial  AzureCloud   28020c11-a22a-4989-8e60-706f0ce22e0f  Enabled  True
```

You can change the default setting like output format like table type below command and press **Y ,** press **3** when asking outperformat

az configure

```
C:\Windows\system32>az configure

Welcome to the Azure CLI! This command will guide you through logging in and setting some default values.

Your settings can be found at C:\Users\SHRUTI\.azure\config
Your current configuration is as follows:

[cloud]
name = AzureCloud

Do you wish to change your settings? (y/N): y

What default output format would you like?
 [1] json - JSON formatted output that most closely matches API responses.
 [2] jsonc - Colored JSON formatted output that most closely matches API responses.
 [3] table - Human-readable output format.
 [4] tsv - Tab- and Newline-delimited. Great for GREP, AWK, etc.
 [5] yaml - YAML formatted output. An alternative to JSON. Great for configuration files.
 [6] none - No output, except for errors and warnings.
Please enter a choice [Default choice(1)]: 3

Would you like to enable logging to file? (y/N): n

Microsoft would like to collect anonymous Azure CLI usage data to improve our CLI.  Participation is volunt
 sends information to Microsoft about how you use Azure CLI.  To update your choice, run "az configure" aga
Select y to enable data collection. (Y/n): n

CLI object cache time-to-live (TTL) in minutes [Default: 10]:

You're all set! Here are some commands to try:
 $ az login
 $ az vm create --help
 $ az feedback


C:\Windows\system32>
```

## 3.3 Azure Resource Group

To list all Resource Groups, use:

az group list

```
C:\Windows\system32>az group list
Name                                Location      Status
----------------------------------  ------------  ---------
cloud-shell-storage-centralindia    centralindia  Succeeded
NetworkWatcherRG                    westindia     Succeeded
sqldmES                             eastus        Succeeded
sqlmngdins                          westindia     Succeeded
stretchgroup-desktop-3lo2l3v-eastus  eastus       Succeeded
```

To create a new Resource Group Name **Azclidemo** at **eastuse** region , type:

az group create --name  azcclidemo --location eastus

```
C:\Windows\system32>az group create --name  azcclidemo --location eastus
Location    Name
----------  ----------
eastus      azcclidemo
```

Now list the resources group again to see your created Resources group **Azclidemo**

az group list

```
C:\Windows\system32>az group list
Name                                Location      Status
----------------------------------  ------------  ---------
azcclidemo                          eastus        Succeeded
cloud-shell-storage-centralindia    centralindia  Succeeded
NetworkWatcherRG                    westindia     Succeeded
sqldmES                             eastus        Succeeded
sqlmngdins                          westindia     Succeeded
stretchgroup-desktop-3lo2l3v-eastus  eastus       Succeeded
```

Now to delete  Resources group **Azclidemo** type below command and type list command to verify

az group delete --resource-group azcclidemo --yes --no-wait

az group list

```
C:\Windows\system32>az group delete --resource-group azcclidemo --yes --no-wait

C:\Windows\system32>az group list
Name                                Location      Status
----------------------------------  ------------  ---------
azcclidemo                          eastus        Deleting
cloud-shell-storage-centralindia    centralindia  Succeeded
NetworkWatcherRG                    westindia     Succeeded
sqldmES                             eastus        Succeeded
sqlmngdins                          westindia     Succeeded
stretchgroup-desktop-3lo2l3v-eastus  eastus       Succeeded
```

## 3.4 Azure VM Comamnd

Type below command to create a vm name **myVM** in resource group **sqldmES** resource group with default user **demouser**

```
az vm create  --resource-group "sqldmES" --name "myVM" --image "Win2016Datacenter"  --admin-username "Demouser"--admin-password "Demouser@123" --location eastus
```

```
C:\Windows\system32>az vm create  --resource-group "sqldmES" --name "myVM" --image "Win2016Datacenter"  --admin-username "Demouser" --admin-password "Demouser@123" --locati
on eastus
ResourceGroup   PowerState   PublicIpAddress   Fqdns   PrivateIpAddress   MacAddress         Location   Zones
--------------  -----------  ----------------  ------  -----------------  -----------------  ---------  -------
sqldmES         VM running   40.121.23.93              10.0.0.4           00-0D-3A-8B-44-6D  eastus
```

To list all vm type below command

```
az vm list
```

```
C:\Windows\system32>az vm list
Name         ResourceGroup    Location    Zones
-----------  ---------------  ----------  -------
myVM         SQLDMES          eastus
newtesting   SQLMNGDINS       centralus
```

To stop vm type below command

```
az vm stop --resource-group sqldmES --name myVM
```

```
C:\Windows\system32>az vm stop --resource-group sqldmES --name myVM
About to power off the specified VM...
It will continue to be billed. To deallocate a VM, run: az vm deallocate.
```

```
az vm start --resource-group sqldmES --name myVM
```

```
C:\Windows\system32>az vm start --resource-group sqldmES --name myVM
```

az vm delete --resource-group sqldmES --name myVM

```
C:\Windows\system32>az vm delete --resource-group sqldmES --name myVM
Are you sure you want to perform this operation? (y/n): y
 - Running ..
```