Modul 9- 10

Oppgave1:

Opprett management Groups til en bedrift som har geografisk lokasjon hvor IT-avdelingen trenger MGMT Groups for både test, dev og produksjonsmiljø

Svar :

skal opprett ny management Groups

New-AzManagementGroup -GroupId   'mg-it-tmp' -DisplayName 'MGMT IT TMP'

```
# Lag Hierarki
$parentGroup = Get-AzManagementGroup -Group 'mg-it-tmp'
New-AzManagementGroup -GroupID 'mg-it-prod-tmp' -ParentId $parentGroup.id
New-AzManagementGroup -GroupID 'mg-it-dev-tmp' -ParentId $parentGroup.id
New-AzManagementGroup -GroupID 'mg-it-test-tmp' -ParentId $parentGroup.id
```

Her skal script   kjøres på powershell termin

Get-AzManagementGroup

Her ser vi alle avdelinger i en bedrift:

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzManagementGroup  | ft

Id                                                                     Type

/providers/Microsoft.Management/managementGroups/mg-it-dev-tmp   /providers/Microsoft.Management/managementGroups
/providers/Microsoft.Management/managementGroups/mg-it-prod-tmp /providers/Microsoft.Management/managementGroups
/providers/Microsoft.Management/managementGroups/mg-it-test-tmp /providers/Microsoft.Management/managementGroups
/providers/Microsoft.Management/managementGroups/mg-it-tmp       /providers/Microsoft.Management/managementGroups
```

Oppgave2:

Basert på hva som gås igjennom i videoene skal dere nå klare å opprette fem Resource Groups (RG) som inneholder fem Storage Accounts (SA)

```
# Opprette Ressurser -Variable med navn vi skal bruke senere
$rgname ="rg-undervisning-demo-01"
$location ="norwyeast"
$saname = "sttim001"
$fsname ="fs-demo-01-norwayeast"
$shareName = "myshare"
```

Her er 5 Ressourse Groupe

```
# Opprette Resourse Groupe
New-AzResourceGroup -Name "rg-undervisning-demo-001" -Location "norwayeas"
New-AzResourceGroup -Name $rgname -Location $location
New-AzResourceGroup -Name "rg-lektur-demo-001" -Location "norwayeast"
New-AzResourceGroup -Name "rg-praktisk-001" -Location "norwayeast"
New-AzResourceGroup -Name "rg-Pro-001" -Location "norwayeast"
New-AzResourceGroup-Name "rg-bruker-002" -Location "norwayeast"
```

Vi kjøre script på powershell termin:

Vi bruke Get-AzResourceGroup for å se alle de ressource grouper vi har opprettet i Azure:

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzResourceGroup  | ft

ResourceGroupName   Location    ProvisioningState Tags              TagsTable
-----------------   --------    ----------------- ----              ---------
NetworkWatcherRG    norwayeast  Succeeded
rg-lektur-demo-001  norwayeast  Succeeded
rg-praktisk-001     norwayeast  Succeeded
rg-Pro-001          norwayeast  Succeeded          {owner, costventer} …
rg-bruker-002       norwayeast  Succeeded
```

Oppretter Storage Account

```
 New-AzStorageAccount -ResourceGroupName $rgname`
 -Name $saname `
 -Location $rgname`
 -SkuName Standard_LRV `
 -Kind StorageV2
$ctx = (Get-AzStorageAccount -ResourceGroupName $rgname -Name $saname).Context
$fileshare = New-AzStorageAccount .Context $ctx -Name $fsname
```

Kjøre script på PowerShell:

Get-AzStorageAccount :

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzStorageAccount | ft

StorageAccountName  ResourceGroupName      PrimaryLocation  SkuName       Kind       AccessTier  CreationTime          ProvisioningStat
                                                                                                                       e
------------------  -----------------      ---------------  -------       ----       ----------  ------------          ----------------
testmystorage1      NetworkWatcherRG       westeurope       Standard_LRS  StorageV2  Hot         14/05/2023 19:29:27   Succeeded
sttim002            rg-Pro-001             norwayeast       Standard_LRS  StorageV2  Hot         18/05/2023 22:21:39   Succeeded
sttim003            rg-lektur-demo-001     norwayeast       Standard_GRS  StorageV2  Hot         18/05/2023 22:27:22   Succeeded
sttim5              rg-Praktisk-001        norwayeast       Standard_LRS  StorageV2  Hot         18/05/2023 22:43:39   Succeeded
```

Tags :

```
# Tags
# Get-Help New-AzTags -Online
$Tags = @{"costventer"= "12345"; "owner"= "sarah-
moniboss23@outlook.com"}
# Hente id til resource group
$rginfo = Get-AzResourceGroup -Name rg-Pro-001
# Setter Tags på Resource Group
# Merk et en overskriver eksisterend Tags med samme kommando
New-AzTag -Tag $Tags -ResourceId $rginfo.ResourceId
Set-AzResourceGroup -Name $rgname -Tag $tags

# Erstatt eller oppdater
$Tags = @{"department"="it"}
Update-AzTag -ResourceId $rginfo.ResourceId -Tag $Tags -Operation
Merge

# For å liste ut alle Resourse Croup eller Resourse basert på Tag
Get-AzResourceGroup -Tag @{'owner'='sarah-moniboss23@outlook.com'} |
ft
Get-AzResource -Tag @{'owner'='sarah-moniboss23@outlook.com' } | ft
```

For å liste ut alle Resource Group og Resource basert på tag

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Update-AzTag -ResourceId $rginfo.ResourceId -Tag $Tag
s -Operation Merge

Id          : /subscriptions/251fbb72-8d59-46b2-91ab-0853493069dd/resourceGroups/rg-Pro-001/providers/Microsoft.Resources/tag
              s/default
Name        : default
Type        : Microsoft.Resources/tags
Properties  :
              Name        Value
              ==========  ============================
              costventer  12345
              department  it
              owner       sarah-moniboss23@outlook.com
```

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzResourceGroup -Tag @{'owner'='sarah-moniboss23@
outlook.com'} | ft

ResourceGroupName Location    ProvisioningState Tags                                   TagsTable
----------------- --------    ----------------- ----                                   ---------
rg-Pro-001        norwayeast  Succeeded         {costventer, department, owner} …
```

Oppgave3

Opprett noen testbrukere og forsøk å gi disse tilgang til noen av RG-ene samt test hvordan RG-ene kan beskyttes mot utilsiktet sletting ved bruk av Locks

Opprett noen testbrukere:

Greate User In Azure med Csv:

```powershell
$newUsers = Import-Csv .\Testbruker.csv

foreach ($user in $newUsers) {
    $SecureStringPassword = ConvertTo-SecureString -String $user.Password -AsPlainText -Force
    New-AzADUser -DisplayName $user.DisplayName `
        -UserPrincipalName $user.UserPrincipalName `
        -Password $SecureStringPassword `
        -MailNickname $user.MailNickName
}
```

Ser alle nye brukeren på PowerShell

PowerShell script $newUsers:

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> $newUsers

UserPrincipalName : Ola.Normann@azdemoundervisning.onmicros
                    oft.com
DisplayName       : Ola
GivenName         : Normann
SurName           : Ola
TelephoneNumber   : 84563207
Password          : Sdmbg++w2
MailNickName      : Ola.Normann@azdemoundervisning.onmicros
                    oft.com

UserPrincipalName : karina.Normann@azdemo1undervisning.onmi
                    crosoft.com
DisplayName       : Karina
GivenName         : Normann
SurName           : Karina
TelephoneNumber   : 96745997
Password          :
MailNickName      : karina.Normann@azdemo1undervisning.onmi
                    crosoft.com
```

Gi tilgang til noen av RG-ene :

```
<# Tildel rolle til bruker
    New-AzRoleassignment
    Get-AzRolassignment
    Remove-AzRoleassignment
#>
# For å finne rollene
$roledef = Get-AzRoleDefinition # veldig lang liste
Get-AzRoleDefinition | Where-Object -Property Name -eq 'Owner'
Get-AzRoleDefinition | Where-Object -Property Name -eq 'Reader'
Get-AzRoleDefinition | Where-Object -Property Name -like 'Monito*'

$location = 'norwayeast'
$rgrbac = 'rg-demo-rbac'
$rbacgroup = 's_demogroup-rbac'

New-AzResourceGroup -Name $rgrbac -Location $location
$newgroup = new-azdgroup -DisplayName $rbacgroup -MailNickname $rbacgroup
$newgroup

$demouser = Get-AzDUser -UserPrincipalName 'sarah-moniboss23@outlook.com'
```

Her er script på PowerShell:

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzRoleDefinition | Where-Object -Property Name -eq 'Ow

Name          : Owner
Id            : 8e3af657-a8ff-443c-a75c-2fe8c4bcb635
IsCustom      : False
Description   : Grants full access to manage all resources, including the ability to assign roles in Azure RBAC.
Actions       : {*}
NotActions    : {}
```

Vi så at det finnes en som har blitt tildelt owner og Reader

```
Id            : 79b01272-bf9f-4f4c-9517-5506269cf524
IsCustom      : False
Description   : Read Cognitive Search serverless index schema and documents. This role is in preview and subject to change.
Actions       : {}
NotActions    : {}
DataActions   : {Microsoft.CognitiveSearch/indexes/schema/read, Microsoft.CognitiveSearch/indexes/documents/read}
NotDataActions : {}
AssignableScopes : {/}
```

Locks

```
# Locks
$rglocks = 'rg-demo-lock'
$location = 'norwayeast'
$rglockname = 'RG-Lock'

1..5 |foreach {
    New-AzResourceGroup -Name $rglocks$_ -Location $location
}


$storageaccount = Nes-AzStorageAccount -ResourceGroupName "rg-demo-lock1" `
  -Name "sttim005" `
  -Location $location `
  -SkuiName Standard_RAGRS
  -Kind StorageV2

  # -Locklevel Accepted
  1..5 | foreach {
    New-AzResourceLock -LockLevel CanNotDelete -LockName $rglockname -
ResourceGroupName $rglocks
    }
```

test hvordan RG-ene kan beskyttes mot utilsiktet sletting ved bruk av Locks.

```
Get-AzResourceLock
$getlock = Get-AzResourceLock | Where-Object -Property resourcename -eq 'RG-Lock'
$getlock.ResourceGroupName
```

Script fra PowerShell:

```
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzResourceLock | ft
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzResourceLock
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> $getlock = Get-AzResourceLock | Where-Object -Propert
y resourcename -eq 'RG-Lock'
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> $getlock.ResourceGroupName
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1>
```

```
Confirm
Provided resource group already exists. Are you sure you want to update it?
[Y] Yes  [N] No  [S] Suspend  [?] Help (default is "Y"): y
ResourceGroupName : 4
Location          : norwayeast
ProvisioningState : Succeeded
Tags              :
ResourceId        : /subscriptions/251fbb72-8d59-46b2-91ab-0853493069dd/resourceGroups/4

Confirm
Provided resource group already exists. Are you sure you want to update it?
[Y] Yes  [N] No  [S] Suspend  [?] Help (default is "Y"): y
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzResourceLock | ft
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> Get-AzResourceLock
PS C:\Users\sarah\OneDrive\Dokumenter\IT SKOLE 2022\PowerShell-script1> $getlock = Get-AzResourceLock | Where-Object -Propert
```

Oppgaver var veldig krevende og jeg brukte mye tid å fikse ERROR. Men jeg lærte mye både å lese dokumentasjon og fikser errror (Debugging)