

OBS: For all the resources in this lab, we are using the **East US** region. Verify with your instructor this is the region to use for class.

Lab scenario

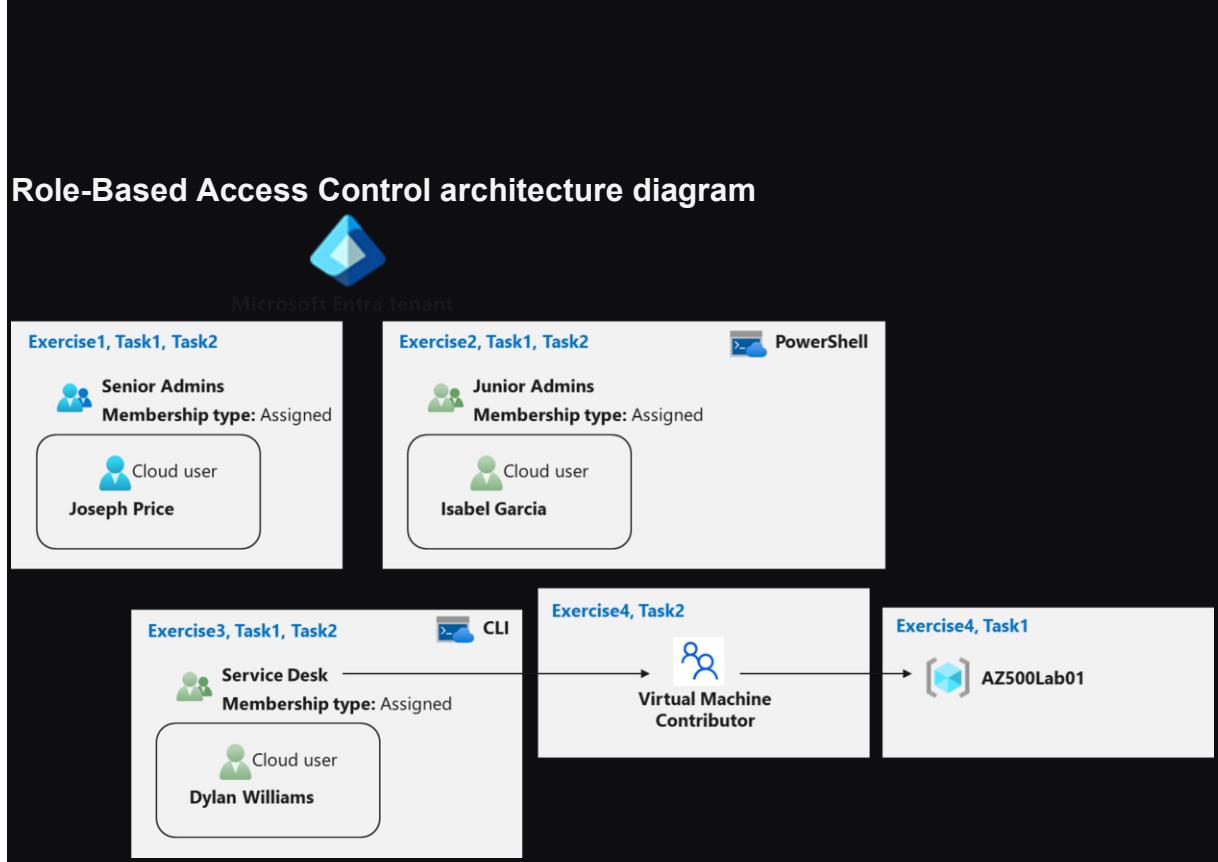
You have been asked to create a proof of concept showing how Azure users and groups are created. Also, how role-based access control is used to assign roles to groups. Specifically, you need to:

- Create a Senior Admins group containing the user account of Joseph Price as its member.
- Create a Junior Admins group containing the user account of Isabel Garcia as its member.
- Create a Service Desk group containing the user account of Dylan Williams as its member.
- Assign the Virtual Machine Contributor role to the Service Desk group.

Lab objectives

In this lab, you will complete the following exercises:

- Exercise 1: Create the Senior Admins group with the user account Joseph Price as its member (the Azure portal).
- Exercise 2: Create the Junior Admins group with the user account Isabel Garcia as its member (PowerShell).
- Exercise 3: Create the Service Desk group with the user Dylan Williams as its member (Azure CLI).
- Exercise 4: Assign the Virtual Machine Contributor role to the Service Desk group.



Exercise 1: Create the Senior Admins group with the user account Joseph Price as its member.

The screenshot shows two separate pages from the Microsoft Azure portal:

- User Profile Page:** Shows the profile of a user named "Joseph Price". Key details include:
 - Profile picture: JP
 - Name: Joseph Price
 - Email: joseph-price@davirocha2014hotmail.onmicrosoft.com
 - Type: Member
 - Information: UPN (joseph-price@davirocha2014hotmail.onmicrosoft.com), Object ID (0aa24390-9707-4320-be2a-d80400f5c32e), Creation Date (4 de fev. de 2026, 09:29), User Type (Membro), Identity (davirocha2014hotmail.onmicrosoft.com).
 - Actions: Status da conta (Enabled), Convite de colaboração B2B, Converter em usuário externo.
 - Rapid Actions: Editar propriedades.
- Group Management Page:** Shows the members of the "Senior Admins" group. It lists one member:

Nome	Tipo	Email	Tipo de usuário	ID do objeto	ID do dispositivo...
Joseph Price	Usuário		Membro	0aa24390-9707-4320-be2a-d80400f5c32e	

Exercise 2: Create a Junior Admins group containing the user account of Isabel Garcia as its member.

```

    Alternar para Bash Reiniciar Gerenciar arquivos Nova sessão Editor Visualização da Web Configurações Ajuda
Solicitando um Cloud Shell.Succeeded.
Connecting terminal...
Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

Your Cloud Shell session will be ephemeral so no files or system changes will persist beyond your current session.

MOTD: Share your feedback and help us improve Cloud Shell: https://aka.ms/cloudshell/feedback

VERBOSE: Authenticating to Azure ...
PS /home/davi> $passwordProfile = New-Object -TypeName Microsoft.Open.AzureAD.Model.PasswordProfile
PS /home/davi> $passwordProfile.Password = "Pa55w.rdi1234"
PS /home/davi> Connect-AzureAD
PS /home/davi> $domainName = ((Get-AzureAdTenantDetail).VerifiedDomains)[0].Name
PS /home/davi> New-AzureADUser -DisplayName "Isabel Garcia" -PasswordProfile $passwordProfile -UserPrincipalName "Isabel@$domainName" -AccountEnabled $true -MailNickname 'Isabel'

ObjectId DisplayName UserPrincipalName UserType
----- ----- -----
fcb6c555-8770-467d-a553-f27194782cae Isabel Garcia Isabel@davirocha2014hotmail.onmicrosoft.com Member

PS /home/davi> Get-AzureADUser -All $true | Where-Object {$_._UserPrincipalName -like "Isabel@lab.labinstance.Id*"}
PS /home/davi> New-AzADGroup -DisplayName 'Junior Admins@lab.labinstance.Id' -MailEnabled $false -SecurityEnabled $true -MailNickname JuniorAdmins

ObjectId DisplayName Description
----- ----- -----
4470c26e-cde8-45f6-9872-9dad23d5c642 Junior Admins@lab.labinstance.Id

PS /home/davi> Get-AzADGroup

ObjectId DisplayName Description
----- ----- -----
4470c26e-cde8-45f6-9872-9dad23d5c642 Junior Admins@lab.labinstance.Id
6bc18aa6-65f9-42de-8cd4-50a09b2e8add Senior Admins

PS /home/davi> $user = Get-AzureADUser -Filter "UserPrincipalName eq 'isabel@davirocha2014hotmail.onmicrosoft.com'"
PS /home/davi> Add-AzADGroupMember -MemberUserPrincipalName $user.UserPrincipalName -TargetGroupDisplayName "Junior Admins@lab.labinstance.Id"
WARNING: This cmdlet is using a preview API version and is subject to breaking change in a future release.
PS /home/davi> Get-AzADGroupMember -GroupDisplayName "Junior Admins@lab.labinstance.Id"

AccountEnabled : True
AgeGroup : 
ApproximateLastSignInDateTime : 
BusinessPhone : {}
City : 
CompanyName : 
ComplianceExpirationDateTime : 
ConsentProvidedForMinor : 
Country : 
CreatedDateTime : 2/4/2026 1:37:56 PM
CreationType : 
DeletedDateTime : 
Department : 
DeviceVersion : 
DisplayName : Isabel Garcia
EmployeeHireDate : 
EmployeeId : 
EmployeeOrgData : {}
EmployeeType : 
ExternalUserState : 
ExternalUserStateChangeDateTime : 
FaxNumber : 
GivenName : 
Id : fcb6c555-8770-467d-a553-f27194782cae
Identity : {
  "issuer": "davirocha2014hotmail.onmicrosoft.com",
  "issuerAssignedId": "Isabel@davirocha2014hotmail.onmicrosoft.com",
  "signInType": "userPrincipalName"
}
ImAddress : {}
IsResourceAccount : 
JobTitle : 
LastPasswordChangeDateTime : 
LegalAgeGroupClassification : 
LegalAgeGroupClassification : 
Mail : 
MailNickname : Isabel
Manager : {}
MobilePhone : 
OdataId : 
OdataType : #microsoft.graph.user
OfficeLocation : 
OnpremisesImmutableId : 
OnpremisesLastSyncDateTime : 
OnpremisesSyncEnabled : 
OperatingSystem : 
OperatingSystemVersion : 
OtherMail : {}
PasswordPolicy : {}
PasswordProfile : {
  "forceChangePasswordNextSignIn": true,
  "forceChangePasswordNextSignInWithMfa": false
}
PhysicalId : 
PostalCode : 
PreferredLanguage : 
ProxyAddress : {}
ResourceGroupName : 
ShowInAddressList : 
SignInSessionsValidFromDateTime : 2/4/2026 1:37:56 PM
State : 
StreetAddress : 
Surname : 
TrustType : 
UsageLocation : 
UserPrincipalName : Isabel@davirocha2014hotmail.onmicrosoft.com
UserType : Member
AdditionalProperties : {[@odata.type, #microsoft.graph.user], [id, fcb6c555-8770-467d-a553-f27194782cae], [accountEnabled, True], [businessPhones, System.Object[]]}}

PS /home/davi>

```

Exercise 3: Create a Service Desk group containing the user account of Dylan Williams as its member.

```
Solicitando um Cloud Shell.Succeeded.
Connecting terminal...
Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

Your Cloud Shell session will be ephemeral so no files or system changes will persist beyond your current session.
davi [ ~ ]$ DOMAINNAME=$az ad signed-in-user show --query 'userPrincipalName' | cut -d '@' -f 2 | sed 's/\//'
davi [ ~ ]$ az ad user create --display-name "Dylan Williams" --password "Pa55w.rdi234" --user-principal-name Dylan@$DOMAINNAME
{
    "@odata.context": "https://graph.microsoft.com/v1.0/$metadata#users/$entity",
    "businessPhones": [],
    "displayName": "Dylan Williams",
    "givenName": null,
    "id": "3f60145d-288f-48bf-bf11-114250fab89e",
    "jobTitle": null,
    "mail": null,
    "mobilePhone": null,
    "officeLocation": null,
    "preferredLanguage": null,
    "surname": null,
    "userPrincipalName": "Dylan@davirocha2014hotmail.onmicrosoft.com"
}
davi [ ~ ]$ az ad user list --output table
DisplayNames GivenNames PreferredLanguages Surnames UserPrincipals
-----
Davi Rocha Davi en Rocha davirocha2014@hotmail.com@ext#@davirocha2014@hotmail.onmicrosoft.com
Dylan Williams Dylan@davirocha2014@hotmail.onmicrosoft.com
Isabel Garcia Isabel@davirocha2014@hotmail.onmicrosoft.com
Joseph Price Joseph Price joseph.price@davirocha2014@hotmail.onmicrosoft.com
davi [ ~ ]$ az ad group create --display-name "Service Desk" --mail-nickname "ServiceDesk"
{
    "@odata.context": "https://graph.microsoft.com/v1.0/$metadata#groups/$entity",
    "classification": null,
    "createdDateTime": "2026-02-04T16:37:06Z",
    "creationOptions": [],
    "deletedDateTime": null,
    "description": null,
    "displayName": "Service Desk",
    "expirationDateTime": null,
    "groupTypes": [],
    "id": "b7cb15a6-dcd7-43b1-9848-f4b4971cabf6",
    "isAssignableToRole": null,
    "mail": null,
    "mailEnabled": false,
    "mailNickname": "ServiceDesk",
    "membershipRule": null,
    "membershipRuleEvaluationState": null,
    "onPremisesLastSyncDateTime": null,
    "onPremisesMailNickname": null,
    "onPremisesProvisioningFrom": [],
    "onPremisesSamAccountName": null,
    "onPremisesSecurityIdentifier": null,
    "onPremisesSyncEnabled": null,
    "preferredDataLocation": null,
    "preferredLanguage": null,
    "proxiesAddresses": [],
    "renewedDateTime": "2026-02-04T16:37:06Z",
    "resourceBehaviorOptions": [],
    "resourceRevisioningOptions": [],
    "securityEnabled": true,
    "securityIdentifier": "5-1-12-1-3083539878-1135729879-3035908248-4138409111",
    "serviceProvisioningErrors": [],
    "theme": null,
    "uniqueName": null,
    "uniquename": null
}
davi [ ~ ]$ az ad group list -o table
CreatedDateTime DisplayName MailEnabled MailNickname RenewedDateTime SecurityEnabled SecurityIdentifier
-----
2026-02-04T13:38:57Z Junior Admin@lab.LabInstance.Id False JuniorAdmins 2026-02-04T13:38:57Z True 5-1-12-1-1148240494-1173802472-2912776856-1120326947
2026-02-04T12:33:08Z Senior Admins False SeniorAdmins 2026-02-04T12:33:08Z True 5-1-12-1-1887840654-1121871353-2689651852-3498716827
2026-02-04T16:37:06Z Service Desk False ServiceDesk 2026-02-04T16:37:06Z True 5-1-12-1-3083539878-1135729879-3035908248-4138409111
davi [ ~ ]$ az ad user list --filter "displayname eq 'Dylan Williams'"
davi [ ~ ]$ OBJECTID=$(az ad user show \
--id Dylan@davirocha2014@hotmail.onmicrosoft.com \
-o json | jq -r '.id')
davi [ ~ ]$ az ad group member add --group "Service Desk" --member-id $OBJECTID
davi [ ~ ]$ az ad group member list --group "Service Desk"
[
    {
        "@odata.type": "#microsoft.graph.user",
        "businessPhones": [],
        "displayName": "Dylan Williams",
        "givenName": null,
        "id": "3f60145d-288f-48bf-bf11-114250fab89e",
        "jobTitle": null,
        "jobTitle": null,
        "mail": null,
        "mobilePhone": null,
        "officeLocation": null,
        "preferredLanguage": null,
        "surname": null,
        "userPrincipalName": "Dylan@davirocha2014@hotmail.onmicrosoft.com"
    }
]
davi [ ~ ]$
```



Exercise 4: Assign the Virtual Machine Contributor role to the Service Desk group

Screenshot of the Azure portal showing the 'AZ500Lab01' resource group details. The 'Visão geral' (Overview) section is displayed, showing fundamental information like the signature, ID, and location. A search bar and various navigation links are visible on the left.

Fundamentos

Assinatura (mover)	: Assinatura do Azure 1	Implantações	: Nenhuma implantação
ID da Assinatura	: 62e77354-d9b-4f24-9235-1c0ba46a574c	Localização	: East US
Rótulos (editar)	: Adicionar marcas		

Recursos Recomendações

Filtrar por qualquer ca... Tipo é igual a tudo Localização é igual a tudo + Adicionar filtro

Nenhum recurso corresponde aos seus filtros

Experimente alterar ou limpar seus filtros.

+ Criar Limpar filtros Saiba mais

Screenshot of the Azure portal showing the 'Adicionar atribuição de função' (Add role assignment) page for the 'AZ500Lab01 | IAM (Controle de acesso)' resource group. The search bar shows 'virtual machine contributor'. The results table lists four roles:

Nome	Descrição	Tipo	Categoria	Detalhes
Desktop Virtualization Power On Contributor	This role is in preview and subject to change. Provide permission to the Azure Virtual Desktop Resource Provider to start virtual machines.	BuiltinRole	Nenhum	Exibir
Desktop Virtualization Power Off Contributor	This role is in preview and subject to change. Provide permission to the Azure Virtual Desktop Resource Provider to start and stop virtual machines.	BuiltinRole	Nenhum	Exibir
Desktop Virtualization Virtual Machine Contributor	This role is in preview and subject to change. Provide permission to the Azure Virtual Desktop Resource Provider to create, delete, update, start, and stop virt...	BuiltinRole	Nenhum	Exibir
Service Fabric Cluster Contributor	Manage your Service Fabric Cluster resources. Includes clusters, application types, application type versions, applications, and services. You will need addition...	BuiltinRole	Nenhum	Exibir

Mostrando 1 - 4 de 4 resultados.

Painel > Resource Manager | Grupos de Recursos > AZ500Lab01 | IAM (Controle de acesso)

Adicionar atribuição de função

Função **Membros** **Condições** Examinar + atribuir

Função selecionada Desktop Virtualization Virtual Machine Contributor

Atribuir acesso a

- Usuário, grupo ou entidade de serviço
- Identidade gerenciada

Membros + Selecionar membros

Nome	ID de objeto	Tipo
Service Desk	b7cb15a6-dcd7-43b1-9848-f4b4971cabf6	Grupo

Description [Opcional]

Painel > Resource Manager | Grupos de Recursos > AZ500Lab01

AZ500Lab01 | IAM (Controle de acesso)

Grupo de recursos

Atribuições de função

Verificar acesso	Atribuições de função	Funções	Atribuições de negação	Administradores clássicos										
	Priviligiado 1													
Número de atribuições de função desta assinatura	4000													
2	1													
Exibir tarefas														
<input type="text" value="Pesquisar por nome ou email"/> Tipo : Todos Função : Todos Escopo : Todos os escopos Agrupar por : Função														
Todos (2) Funções de trabalho (1) Funções de administrador privilegiadas (1)														
<table border="1"> <thead> <tr> <th>Nome</th> <th>Tipo</th> <th>Função</th> <th>Escopo</th> <th>Condição</th> </tr> </thead> <tbody> <tr> <td>Service Desk</td> <td>Grupo</td> <td>Desktop Virtualization Virtual Machine Contribut...</td> <td>Este recurso</td> <td>Nenhum</td> </tr> </tbody> </table>					Nome	Tipo	Função	Escopo	Condição	Service Desk	Grupo	Desktop Virtualization Virtual Machine Contribut...	Este recurso	Nenhum
Nome	Tipo	Função	Escopo	Condição										
Service Desk	Grupo	Desktop Virtualization Virtual Machine Contribut...	Este recurso	Nenhum										
Mostrando 1 - 2 de 2 resultados.														

Dylan Williams atribuições – AZ500Lab01 X[Atribuições de função atuais](#) [Atribuições qualificadas](#)

As atribuições para o usuário, o grupo, a entidade de serviço ou a identidade gerenciada selecionada nesse escopo ou herdada pelo escopo.

 Pesquisar por nome da atribuição ou descriçãoAtribuições de função (1) (1)

Função	Descrição	Escopo	Atribuição de grupo	Condição
Desktop Virtualization V1 This role is in preview and subject to change. <small>This role is in preview and subject to change.</small>	Este recurso	Service Desk	Nenhum	

Atribuições de negação (0) (1)Administradores clássicos (0) (1)