Placement Empowerment Program

Cloud Computing and DevOps Centre

Set Up IAM Roles and PermissionsCreate an IAM role on your cloud platform. Assign the role to your VM to restrict/allow specific actions.

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Department:ADS

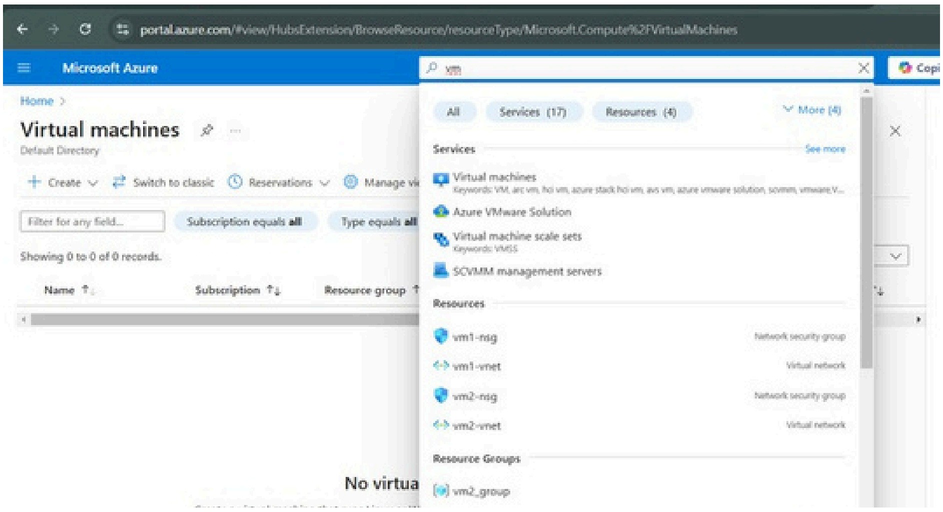
INTRODUCTION:

Introduction to Setting Up IAM Roles and Permissions in Azure
In cloud environments, managing access control is crucial for security and efficient resource management. In this task, we set up IAM (Identity and Access Management) roles and permissions in Microsoft Azure to control access to a Virtual Machine (VM). By assigning a built-in role to a user, group, or service principal, we define the specific actions they can perform on the VM. This ensures that only authorized users have the necessary permissions while maintaining security and compliance.

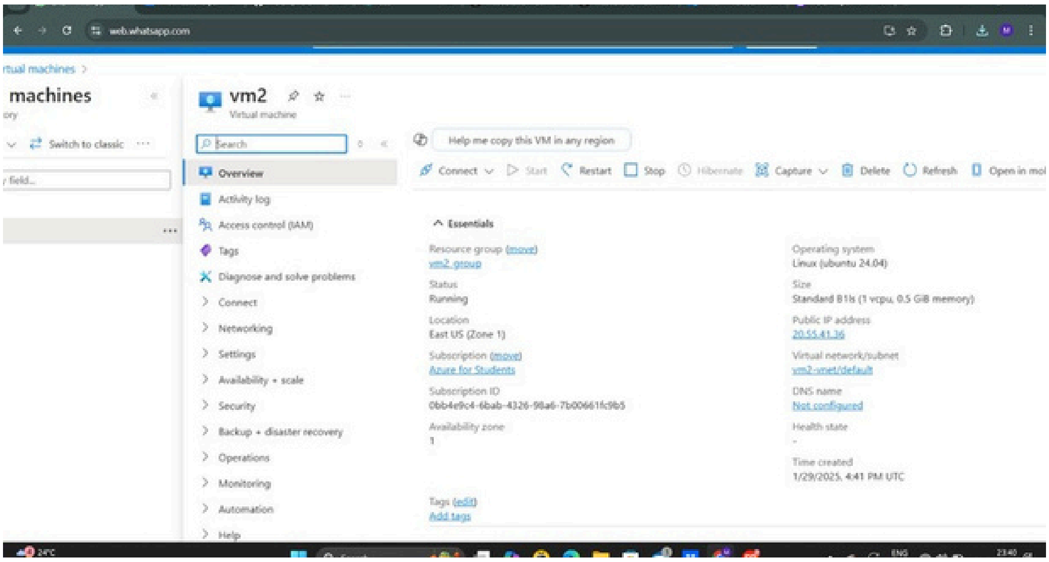
OBJECTIVE:

Understand the concept of IAM roles and permissions in Azure.
Assign a built-in IAM role to control access to a Virtual Machine (VM).
Configure role-based access at the subscription, resource group, or VM level.
Verify and test the assigned role to ensure proper access control.
Review and secure access by checking role assignments and monitoring logs.

Step 1: Set Up An Azure Vm



Search for virtua machine in the azure portal



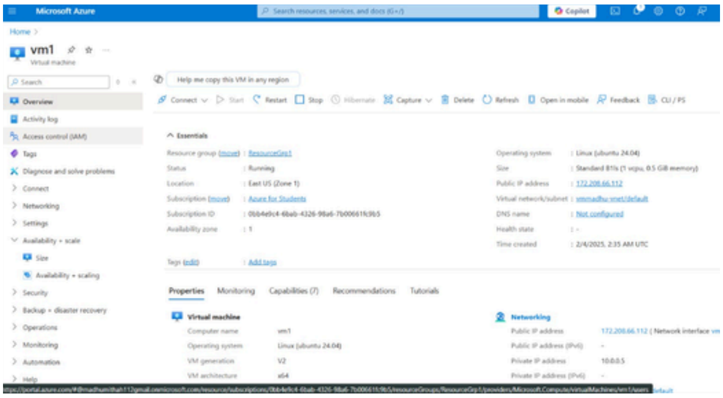
Resource group (move)
vm2_group
Status
Running
Location
East US (Zone 1)
Subscription (move)
Azure for Students
Subscription ID
0bb4e9c4-6bab-4326-98a6-7b00661fc9b5
Availability zone
1
Tags (edit)
Add tags

Operating system
Linux (ubuntu 24.04)
Size
Standard B1ls (1 vcpu, 0.5 GiB memory)
Public IP address
20.55.41.36
Virtual network/subnet
vm2-vnet/default
DNS name
Not configured
Health state
-
Time created
1/29/2025, 4:41 PM UTC

Create a VM with the following configuration and give review +create at the end

Step2:

Navigate to Access Control (IAM): Went to the relevant resource (VM, Subscription, or Resource Group) and opened the Access Control (IAM) settings.



Essentials

Resource group (move) : ResourceGrp1

Status : Running

Location : East US (Zone 1)

Subscription (move) : Azure for Students

Subscription ID : 0bb4e9c4-6bab-4326-98a6-7b00661fc9b5

Availability zone : 1

Tags (edit) : Add tags

Operating system : Linux (ubuntu 24.04)

Size : Standard B1ls (1 vcpu, 0.5 GiB memory)

Public IP address : 172.208.66.112

Virtual network/subnet : vmmadhu-vnet/default

DNS name : Not configured

Health state : -

Time created : 2/4/2025, 2:35 AM UTC

Virtual machine

Computer name vm1

Operating system Linux (ubuntu 24.04)

VM generation V2

VM architecture x64

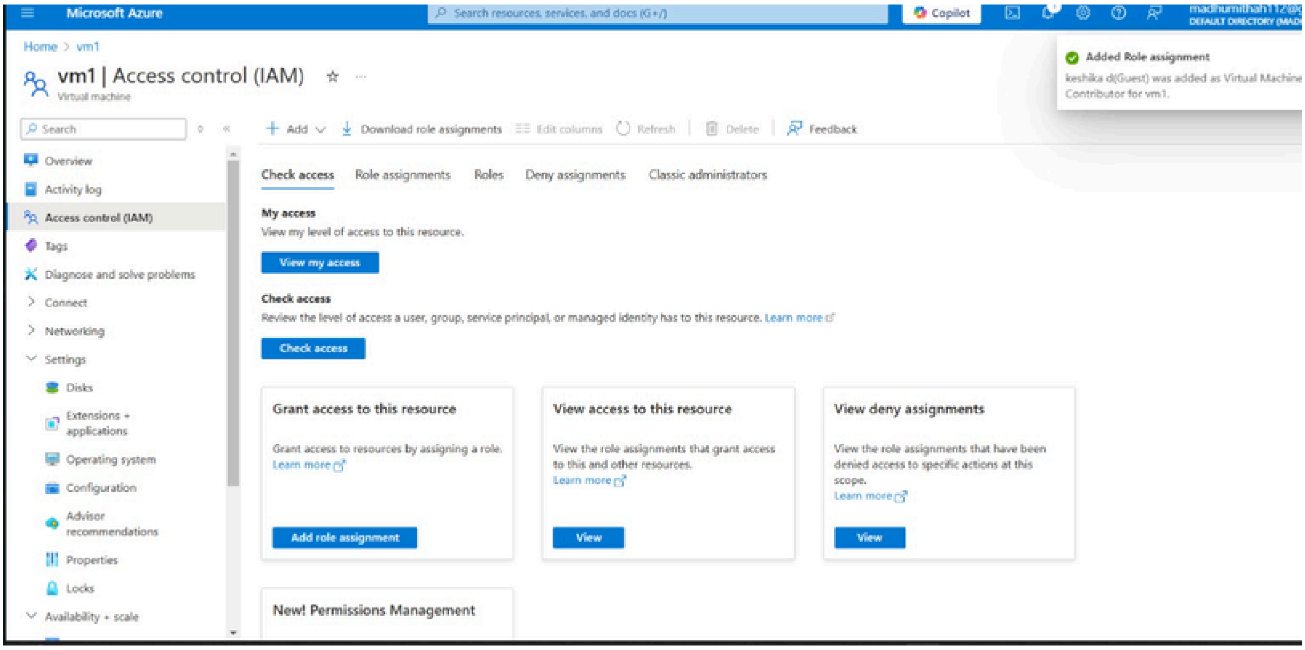
Networking

Public IP address 172.208.66.112 (Network interface vm

Public IP address (IPv6) -

Private IP address 10.0.0.5

Private IP address (IPv6) -



Added Role assignment

keshika d(Guest) was added as Virtual Machine Contributor for vm1.

My access

View my level of access to this resource.

Check access

Review the level of access a user, group, service principal, or managed identity has to this resource. Learn more

Grant access to this resource

Grant access to resources by assigning a role. Learn more

View access to this resource

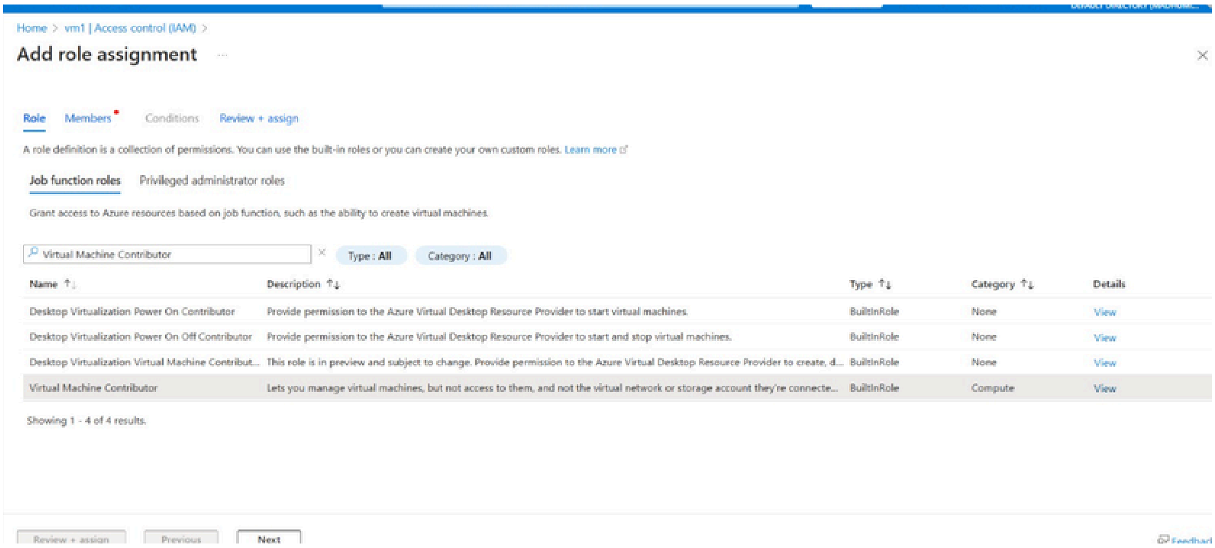
View the role assignments that grant access to this and other resources. Learn more

View deny assignments

View the role assignments that have been denied access to specific actions at this scope. Learn more

New! Permissions Management

Assign Built-In Role: Selected a built-in IAM role (e.g., Virtual Machine Contributor, Reader) and assigned it to the appropriate user or group.



Add role assignment

A role definition is a collection of permissions. You can use the built-in roles or you can create your own custom roles. Learn more

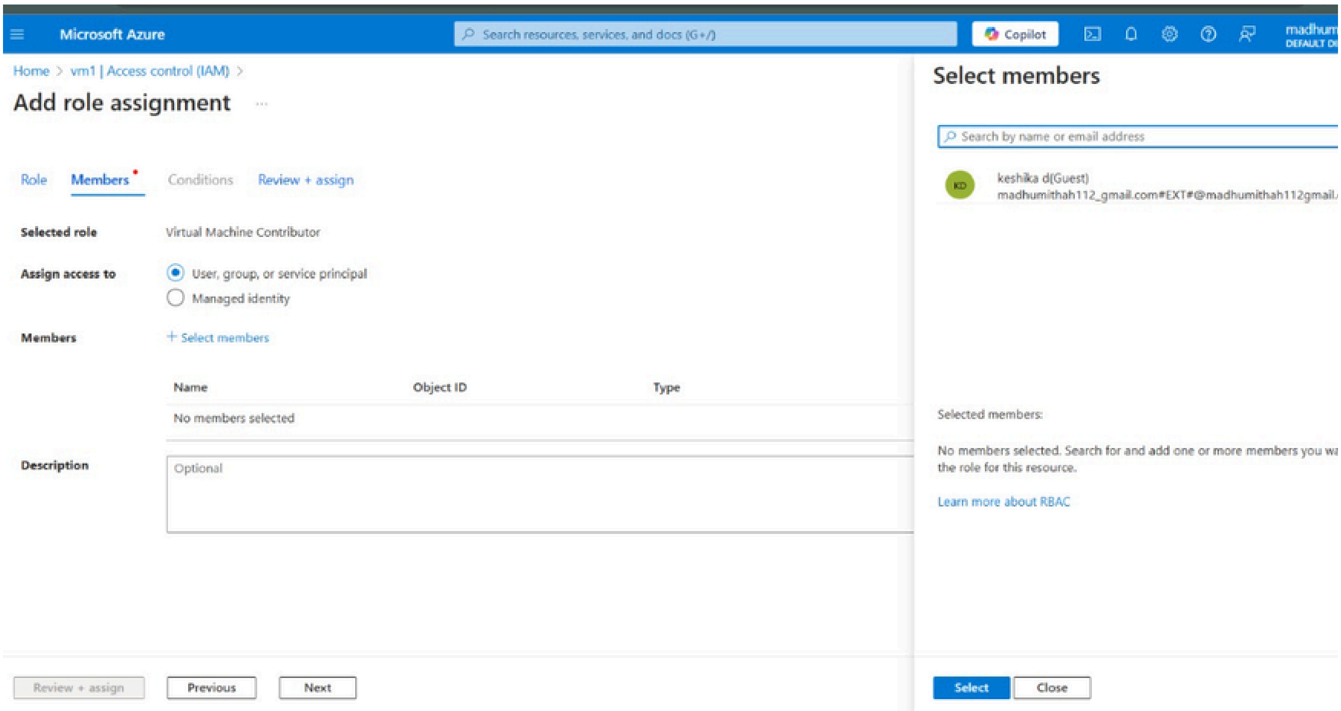
Grant access to Azure resources based on job function, such as the ability to create virtual machines.

Virtual Machine Contributor

Name ↑↓	Description ↑↓	Type ↑↓	Category ↑↓	Details
Desktop Virtualization Power On Contributor	Provide permission to the Azure Virtual Desktop Resource Provider to start virtual machines.	BuiltInRole	None	View
Desktop Virtualization Power On Off Contributor	Provide permission to the Azure Virtual Desktop Resource Provider to start and stop virtual machines.	BuiltInRole	None	View
Desktop Virtualization Virtual Machine Contribut...	This role is in preview and subject to change. Provide permission to the Azure Virtual Desktop Resource Provider to create, d...	BuiltInRole	None	View
Virtual Machine Contributor	Lets you manage virtual machines, but not access to them, and not the virtual network or storage account they're connecte...	BuiltInRole	Compute	View

Showing 1 - 4 of 4 results.

Verify Role Assignment: Ensured the correct role was applied and tested the permissions to check access.



Microsoft Azure | Search resources, services, and docs (G+/) | Copilot | madhum DEFAULT DI

Home > vm1 | Access control (IAM) >

Add role assignment ...

Role | Members* | Conditions | Review + assign

Selected role	Virtual Machine Contributor
Assign access to	● User, group, or service principal ○ Managed identity
Members	+ Select members

Name	Object ID	Type
No members selected		

Description: Optional

Review + assign | Previous | Next

Select members

Search by name or email address

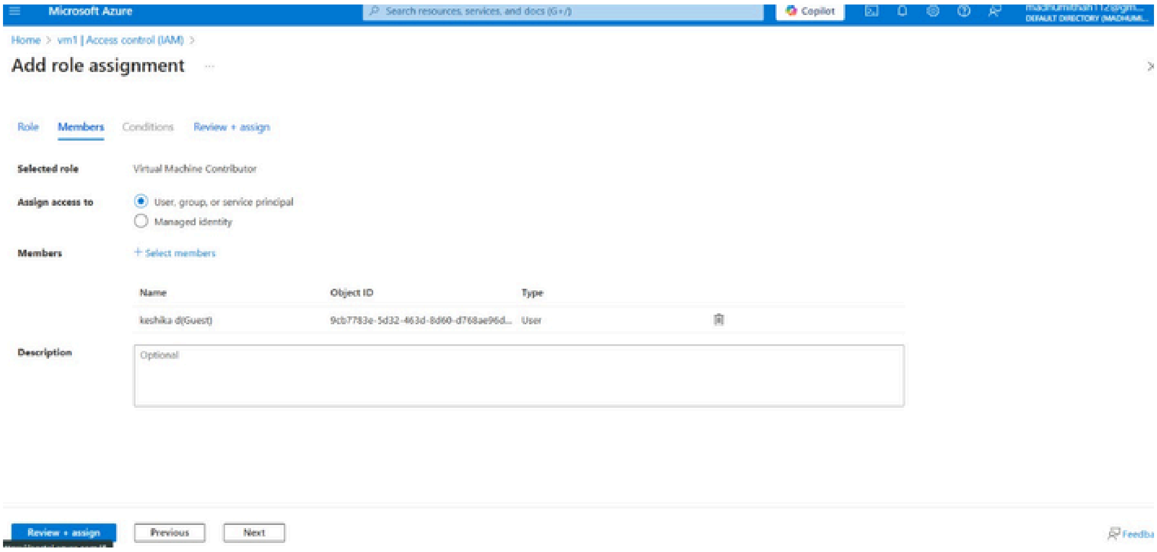
KD keshika d(Guest)
madhumithah112_gmail.com#EXT#@madhumithah112gmail.

Selected members:

No members selected. Search for and add one or more members you wa the role for this resource.

Learn more about RBAC

Select | Close



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Add role assignment ...

Role | Members | Conditions | Review + assign

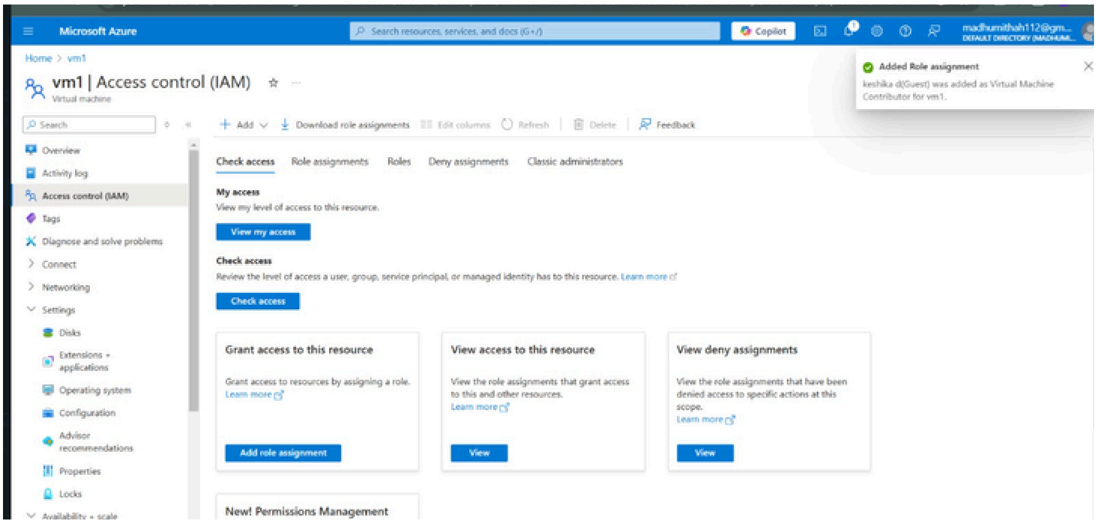
Selected role	Virtual Machine Contributor
Assign access to	● User, group, or service principal ○ Managed identity
Members	+ Select members

Name	Object ID	Type
keshika d(Guest)	9cb7783e-5d32-463d-8d60-d768ae96d...	User

Description: Optional

Review + assign | Previous | Next | Feedba

Review and Secure Access: Checked the VM's network security settings and optionally reviewed logs for monitoring access activities.



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Home > vm1

vm1 | Access control (IAM)
Virtual machine

Added Role assignment
keshika d(Guest) was added as Virtual Machine Contributor for vm1.

+ Add | Download role assignments | Edit columns | Refresh | Delete | Feedback

Check access | Role assignments | Roles | Deny assignments | Classic administrators

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View my access

Check access
Review the level of access a user, group, service principal, or managed identity has to this resource. Learn more

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Learn more
View

View deny assignments
View the role assignments that have been denied access to specific actions at this scope.
Learn more
View

New! Permissions Management