

1. Observe assigned Subscriptions Observe Azure Entra ID or create own Azure Entra ID in personal Azure account Create test users and groups Assign a RBAC role to user and test Create a custom role and assigned to users and test.

Answer: Azure Entra ID

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'dhruvbansal0505@gmail...'. The main content area is titled 'Default Directory | Overview'. On the left, there is a sidebar with navigation links: Overview, Preview features, Diagnose and solve problems, Manage, Monitoring, and Troubleshooting + Support. The main content area has a sub-header 'Default Directory' and a search bar. Below this, there is a 'Basic information' section with a table of details:

Property	Value	Count
Name	Default Directory	Users: 1
Tenant ID	bc9daf86-6a77-4ff3-be83-aea55fc30bc	Groups: 0
Primary domain	dhruvbansal0505gmail.onmicrosoft.com	Applications: 0
License	Microsoft Entra ID Free	Devices: 0

Below the table, there are two alert boxes: 'MSOnline PowerShell Retirement' and 'Migrate to the converged Authentication methods policy'. At the bottom right, there is a 'Activate Windows' watermark.

Create New Entra ID

The screenshot shows the Microsoft Azure portal interface for creating a new user. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'dhruvbansal0505@gmail...'. The main content area is titled 'New user'. On the left, there is a sidebar with navigation links: Overview, Audit logs, Sign-in logs, Diagnose and solve problems, Custom security attributes, Assigned roles, Administrative units, Groups, Applications, Licenses, Devices, Azure role assignments, Authentication methods, and New support request. The main content area has a sub-header 'New user' and a search bar. Below this, there is a 'Basic info' section with a table of details:

Property	Value	Count
User principal name	dhruv@dhruvbansal0505gmail.onmicrosoft.com	Group memberships: 0
Object ID	42f6979b-4341-4e45-81d7-1c896f543c2	Applications: 0
Created date time	Jun 18, 2025, 8:34 PM	Assigned roles: 1
User type	Member	Assigned licenses: 0
Identities	dhruvbansal0505gmail.onmicrosoft.com	

Below the table, there is a 'My Feed' section with two items: 'Account status' (Enabled) and 'B2B invitation' (Convert to external user). At the bottom right, there is a 'Activate Windows' watermark.

Creating New User:

Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory | Overview >

Create new user

Create a new internal user in your organization

Basics Properties Assignments **Review + create**

Basics

User principal name: dhruv@dhruvbansal0505gmail.onmicrosoft.com

Display name: New user

Mail nickname: dhruv

Password: [password field]

Account enabled: Yes

Properties

User type: Member

Assignments

Administrative units

Groups

Roles

Create < Previous Next >

Activate Windows
Go to PC settings to activate Windows.
[Give feedback](#)

In Entra ID No. of Users Updated:

Microsoft Azure Search resources, services, and docs (G+)

Home >

Default Directory | Overview

Overview Manage tenants What's new Preview features Got feedback?

Overview Preview features Diagnose and solve problems Manage Monitoring Troubleshooting + Support

Microsoft Entra has a simpler, integrated experience for managing all your Identity and Access Management needs. Try the new Microsoft Entra admin center.

Overview Monitoring Properties Recommendations Setup guides

Search your tenant

Basic information

Name	Default Directory	Users	2
Tenant ID	bc9daf86-6a77-4ff3-be83-aeae55fc30bc	Groups	0
Primary domain	dhruvbansal0505gmail.onmicrosoft.com	Applications	0
License	Microsoft Entra ID Free	Devices	0

Alerts

MSOnline PowerShell Retirement

Please migrate from any use of MSOnline PowerShell. This module is deprecated and will retire in April 2025. Temporary outages for MSOnline PowerShell will occur between January and March 2025.

Migrate to the converged Authentication methods policy

Please migrate your authentication methods off the legacy MFA and SSPR policies by September 2025 to avoid any service impact.

Add or remove favorites by pressing Ctrl+Shift+F

Activate Windows
Go to PC settings to activate Windows.

All Users Display:

Microsoft Azure

Search resources, services, and docs (G+I)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY

Home > Default Directory | Users >

Users

Default Directory

+ New user

Edit

Delete

Download users

Bulk operations

Refresh

Manage view

Per-user MFA

Got feedback?

All users

Audit logs

Sign-in logs

Diagnose and solve problems

Deleted users

Password reset

User settings

Bulk operation results

New support request

Azure Active Directory is now Microsoft Entra ID

Search

Add filter

2 users found

	Display name	User principal name	User type	On-premises sy...	Identities	Company name	Creation type
<input type="checkbox"/>	Dhruv Bansal	dhruvbansal0505_...	Member	No	MicrosoftAccount		
<input type="checkbox"/>	New user	dhruv@dhruvban...	Member	No	dhruvbansal0505gmailo...		

Activate Windows
Go to PC settings to activate Windows.

Add or remove favorites by pressing Ctrl+L+Shift+F

Create New Groups:

Microsoft Azure

Search resources, services, and docs (G+I)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY (DHHRVBA...

Home > Groups | All groups >

newgroup

Group

Delete

Got feedback?

Overview

Diagnose and solve problems

Manage

Activity

Troubleshooting + Support

Overview

Basic information

newgroup

this is a new group

Membership type	Assigned	Total direct members	1
Source	Cloud	User(s)	1
Type	Security	Group(s)	0
Object ID	77b2d237-a7af-4326-85be-dee39deb2a11	Device(s)	0
Created on	6/21/2025, 11:34 AM	Other(s)	0

Feed

Group memberships

0

Owners

1

Activate Windows
Go to PC settings to activate Windows.

Add or remove favorites by pressing Ctrl+L+Shift+F

Assign User Role:

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY

Home > Default Directory | Users > Users > New user

New user | Assigned roles

User

Search

Add assignments Remove assignments Refresh

Overview
Audit logs
Sign-in logs
Diagnose and solve problems
Custom security attributes
Assigned roles
Administrative units
Groups
Applications
Licenses
Devices
Azure role assignments
Authentication methods
New support request

Administrative roles
Administrative roles can be used to grant access to Microsoft Entra ID and other Microsoft services.
Search by name or description
Add filters

No directory roles assigned.

Directory roles

To assign custom roles to a user, your organization needs Microsoft Entra ID Premium P1 or P2.

☐ Teams Devices Administrator

Can perform management related tasks on Teams certified devices.

☐ Teams Reader

Read everything in the Teams admin center, but not update anything.

☐ Teams Telephony Administrator

Manage voice and telephony features and troubleshoot communication issues within the Microsoft Teams service.

☐ Tenant Creator

Create new Microsoft Entra or Azure AD B2C tenants.

☐ Usage Summary Reports Reader

Can see only tenant level aggregates in Microsoft 365 Usage Analytics and Productivity Score.

☐ User Administrator

Can manage all aspects of users and groups, including resetting passwords for limited admins.

☐ User Experience Success Manager

View product feedback, survey results, and reports to find training and communication opportunities.

☐ Virtual Visits Administrator

Manage and share Virtual Visits information and metrics from admin centers or the Virtual Visits app.

☐ Viva Glint Tenant Administrator

Manage and configure Microsoft Viva Glint settings in the Microsoft 365 admin center.

☐ Viva Goals Administrator

Manage and configure all aspects of Microsoft Viva Goals.

☐ Viva Pulse Administrator

Can manage all settings for Microsoft Viva Pulse app.

☒ Windows 365 Administrator

Can provision and manage all aspects of Cloud PCs.

☐ Windows Update Deployment Administrator

Can create and manage all aspects of Windows Update deployments through the Windows Update for Business deployment service.

☐ Yammer Administrator

Manage all aspects of the Yammer service.

Add

Activate Windows
Go to PC settings to activate Windows.

New Role for User:

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY

Home > Default Directory | Users > Users > New user

New user | Assigned roles

User

Search

Add assignments Remove assignments Refresh Got feedback?

Overview
Audit logs
Sign-in logs
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Groups
Applications
Licenses
Devices
Azure role assignments
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New support request

Administrative roles
Administrative roles can be used to grant access to Microsoft Entra ID and other Microsoft services. [Learn more](#)

Search by name or description
Add filters

Role	Description	Resource Name	Resource Type	Assignment Path	Type
<input type="checkbox"/> Windows 365 Administrator	Can provision and manage all aspects of Cloud PCs.	Directory	Organization	Direct	Built-in

Activate Windows
Go to PC settings to activate Windows.

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Answer: Azure Entra ID

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Basic information	
Name	Default Directory
Tenant ID	bc9daf86-6a77-4ff3-be83-aea55fc30bc
Primary domain	dhruvbansal0505gmail.onmicrosoft.com
License	Microsoft Entra ID Free

Below the table, there are two alert boxes: 'MSOnline PowerShell Retirement' and 'Migrate to the converged Authentication methods policy'. At the bottom right, there is a 'Activate Windows' watermark.

Create New Entra ID

The screenshot shows the Microsoft Azure portal interface for creating a new user. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'dhruvbansal0505@gmail...'. The main content area is titled 'New user'. On the left, there is a sidebar with navigation links: Overview, Audit logs, Sign-in logs, Diagnose and solve problems, Custom security attributes, Assigned roles, Administrative units, Groups, Applications, Licenses, Devices, Azure role assignments, Authentication methods, and New support request. The main content area has tabs for Overview, Monitoring, and Properties. Under the Overview tab, there is a search bar and a table of basic information:

Basic info	
User principal name	dhruv@dhruvbansal0505gmail.onmicrosoft.com
Object ID	42f6979b-4341-4e45-81d7-1c896f543c2
Created date time	Jun 18, 2025, 8:34 PM
User type	Member
Identities	dhruvbansal0505gmail.onmicrosoft.com

Below the table, there are two alert boxes: 'Account status' and 'B2B invitation'. At the bottom right, there is a 'Activate Windows' watermark.

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Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory | Overview >

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Create a new internal user in your organization

Basics Properties Assignments **Review + create**

Basics

User principal name: dhruv@dhruvbansal0505gmail.onmicrosoft.com

Display name: New user

Mail nickname: dhruv

Password: [password field]

Account enabled: Yes

Properties

User type: Member

Assignments

Administrative units

Groups

Roles

Create < Previous Next >

Activate Windows
Go to PC settings to activate Windows.
[Give feedback](#)

In Entra ID No. of Users Updated:

Microsoft Azure Search resources, services, and docs (G+)

Home >

Default Directory | Overview

Overview Manage tenants What's new Preview features Got feedback?

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Overview Monitoring Properties Recommendations Setup guides

Search your tenant

Basic information

Name	Default Directory	Users	2
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Primary domain	dhruvbansal0505gmail.onmicrosoft.com	Applications	0
License	Microsoft Entra ID Free	Devices	0

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Go to PC settings to activate Windows.

All Users Display:

Microsoft Azure

Search resources, services, and docs (G+I)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY

Home > Default Directory | Users >

Users

Default Directory

+ New user

Edit

Delete

Download users

Bulk operations

Refresh

Manage view

Per-user MFA

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All users

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Search

Add filter

2 users found

	Display name	User principal name	User type	On-premises sy...	Identities	Company name	Creation type
<input type="checkbox"/>	Dhruv Bansal	dhruvbansal0505_...	Member	No	MicrosoftAccount		
<input type="checkbox"/>	New user	dhruv@dhruvban...	Member	No	dhruvbansal0505gmai...		

Activate Windows
Go to PC settings to activate Windows.

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Create New Groups:

Microsoft Azure

Search resources, services, and docs (G+I)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY (DHHRVBA...

Home > Groups | All groups >

newgroup

Group

Delete

Got feedback?

Overview

Diagnose and solve problems

Manage

Activity

Troubleshooting + Support

Overview

Basic information

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this is a new group

Membership type	Assigned	Total direct members	1
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Object ID	77b2d237-a7af-4326-85be-dee39deb2a11	Device(s)	0
Created on	6/21/2025, 11:34 AM	Other(s)	0

Feed

Group memberships

0

Owners

1

Activate Windows
Go to PC settings to activate Windows.

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Assign User Role:

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY

Home > Default Directory | Users > Users > New user

New user | Assigned roles

User

Search

+ Add assignments

Remove assignments

Refresh

Overview

Audit logs

Sign-in logs

Diagnose and solve problems

Custom security attributes

Assigned roles

Administrative units

Groups

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Devices

Azure role assignments

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☐

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Tenant Creator

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☐

Usage Summary Reports Reader

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☐

User Experience Success Manager

View product feedback, survey results, and reports to find training and communication opportunities.

☐

Virtual Visits Administrator

Manage and share Virtual Visits information and metrics from admin centers or the Virtual Visits app.

☐

Viva Glint Tenant Administrator

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☐

Viva Goals Administrator

Manage and configure all aspects of Microsoft Viva Goals.

☐

Viva Pulse Administrator

Can manage all settings for Microsoft Viva Pulse app.

☒

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☐

Windows Update Deployment Administrator

Can create and manage all aspects of Windows Update deployments through the Windows Update for Business deployment service.

☐

Yammer Administrator

Manage all aspects of the Yammer service.

Add

Activate Windows
Go to PC settings to activate Windows.

New Role for User:

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY

Home > Default Directory | Users > Users > New user

New user | Assigned roles

User

Search

+ Add assignments

Remove assignments

Refresh

Got feedback?

Overview

Audit logs

Sign-in logs

Diagnose and solve problems

Custom security attributes

Assigned roles

Administrative units

Groups

Applications

Licenses

Devices

Azure role assignments

Authentication methods

New support request

Administrative roles

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Search by name or description

Add filters

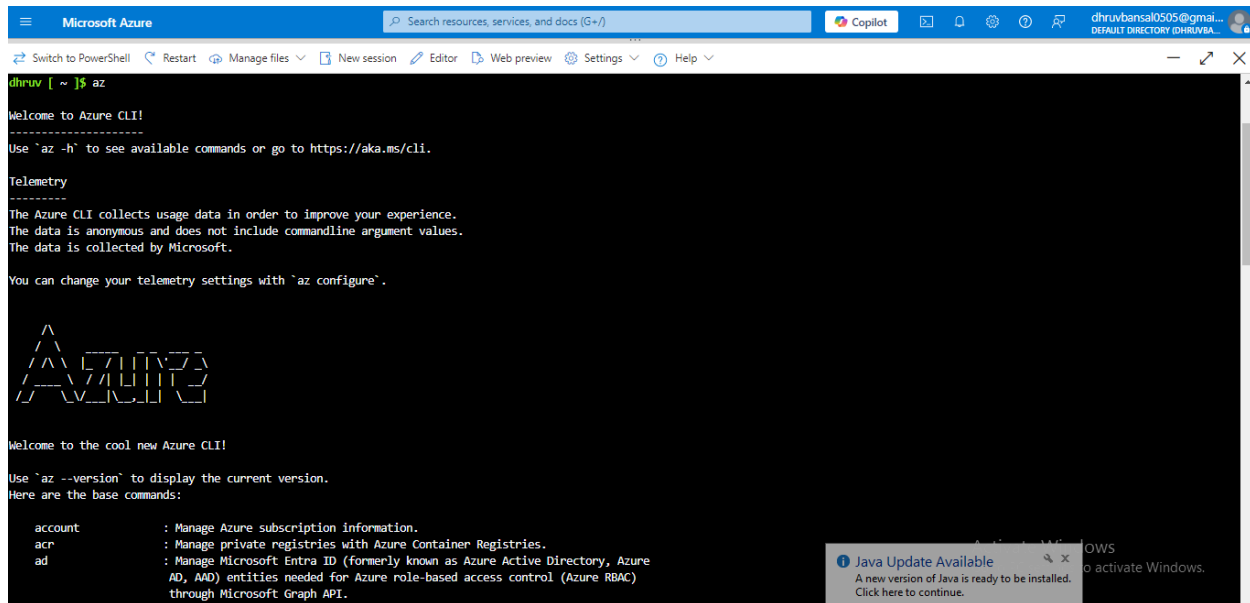
Role	Description	Resource Name	Resource Type	Assignment Path	Type
<input type="checkbox"/> Windows 365 Administrator	Can provision and manage all aspects of Cloud PCs.	Directory	Organization	Direct	Built-in

Activate Windows
Go to PC settings to activate Windows.

3. Create Virtual machine and Vnet from Azure CLI.

Answer: Virtual Machine using Azure CLI:

Azure CLI Opening:



```
Microsoft Azure
Search resources, services, and docs (G+/)
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DEFAULT DIRECTORY (DHHRUBA...)

Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help

dhruv [ ~ ]$ az

Welcome to Azure CLI!
-----
Use 'az -h' to see available commands or go to https://aka.ms/cli.

Telemetry
-----
The Azure CLI collects usage data in order to improve your experience.
The data is anonymous and does not include commandline argument values.
The data is collected by Microsoft.

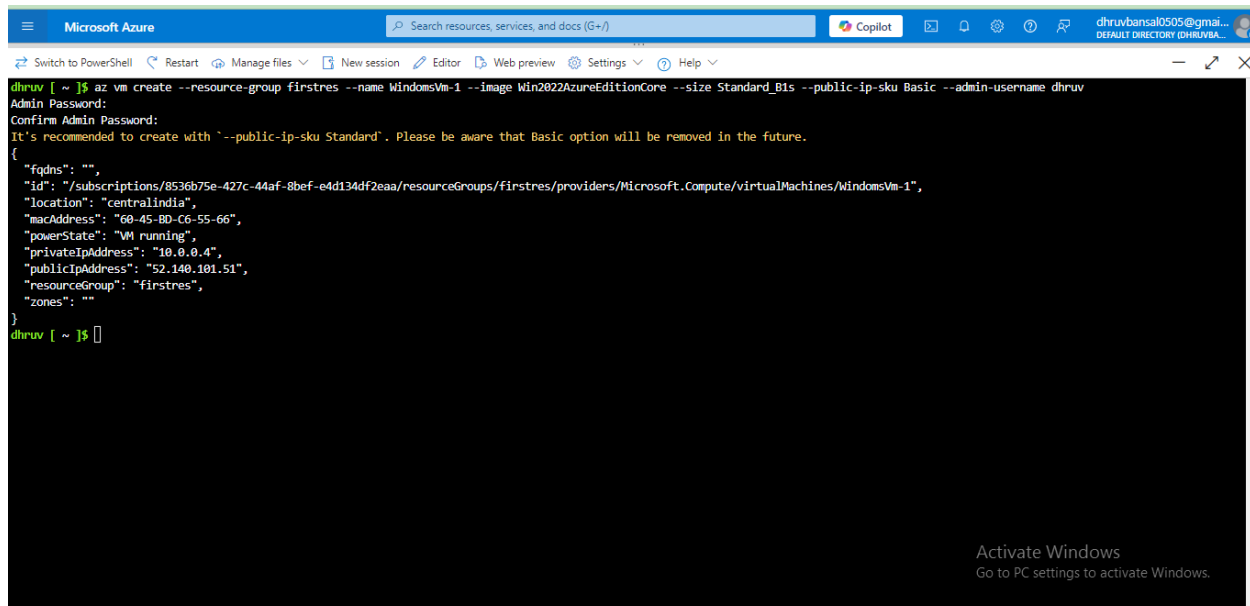
You can change your telemetry settings with 'az configure'.

Welcome to the cool new Azure CLI!

Use 'az --version' to display the current version.
Here are the base commands:

account      : Manage Azure subscription information.
acr           : Manage private registries with Azure Container Registries.
ad           : Manage Microsoft Entra ID (formerly known as Azure Active Directory, Azure
              AD, AAD) entities needed for Azure role-based access control (Azure RBAC)
              through Microsoft Graph API.
```

Virtual Machine Creation Steps:



```
Microsoft Azure
Search resources, services, and docs (G+/)
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DEFAULT DIRECTORY (DHHRUBA...)

Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help

dhruv [ ~ ]$ az vm create --resource-group firstres --name WindowsVm-1 --image Win2022AzureEditionCore --size Standard_B1s --public-ip-sku Basic --admin-username dhruv
Admin Password:
Confirm Admin Password:
It's recommended to create with '--public-ip-sku Standard'. Please be aware that Basic option will be removed in the future.
{
  "fqdns": "",
  "id": "/subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/firstres/providers/Microsoft.Compute/virtualMachines/WindowsVm-1",
  "location": "centralindia",
  "macAddress": "68-45-80-C6-55-66",
  "powerState": "VM running",
  "privateIpAddress": "10.0.0.4",
  "publicIpAddress": "52.140.101.51",
  "resourceGroup": "firstres",
  "zones": ""
}
dhruv [ ~ ]$
```

Azure Virtual Machine Created:

The screenshot displays the Microsoft Azure portal interface. At the top, the navigation bar includes the Microsoft Azure logo, a search bar, and a user profile. The main content area shows the details of a Virtual Machine named 'WondomsVm-1'. The left sidebar contains a navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Connect, Networking, Settings, Availability + scale, Security, Backup + disaster recovery, Operations, and Monitoring. The main panel is divided into sections: Essentials, Properties, Monitoring, Capabilities (8), Recommendations, and Tutorials. The Essentials section provides key information about the VM, including its resource group, status, location, subscription, and various configuration details. The Networking section shows the public IP address and the network interface.

Microsoft Azure Search resources, services, and docs (G+/I) Copilot dhrubansal0505@gmail...
Home > All resources > firstres >
WondomsVm-1 Virtual machine
Help me copy this VM in any region

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Connect
Networking
Settings
Availability + scale
Security
Backup + disaster recovery
Operations
Monitoring

Essentials
Resource group (move) : FIRSTRES
Status : Running
Location : Central India
Subscription (move) : Azure for Students
Subscription ID : 8536b75e-427c-44af-8bef-e4d134df2eaa
Operating system : Windows (Windows Server 2022 Datacenter Azure Edition)
Size : Standard B1s (1 vcpu, 1 GiB memory)
Public IP address : 52.140.101.51
Virtual network/subnet : WondomsVm-1VNET/WondomsVm-1Subnet
DNS name : Not configured
Health state : -
Time created : 6/19/2025, 10:17 AM UTC

Properties Monitoring Capabilities (8) Recommendations Tutorials
Virtual machine
Computer name : WondomsVm-1
Networking
Public IP address : 52.140.101.51 (Network interface WondomsVm-1VMNic)

Virtual Network Using Azure CLI:

```
Microsoft Azure
Search resources, services, and docs (G+)
Copilot
dhruvbansal0505@gmail...
DEFAULT DIRECTORY (DHURVBA...)

Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help

dhruv [ ~ ]$ az group create --name vnetres --location centralindia
{
  "id": "/subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/vnetres",
  "location": "centralindia",
  "managedBy": null,
  "name": "vnetres",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
dhruv [ ~ ]$ az network vnet create --name myvnet --resource-group vnetres --subnet-name default
{
  "newVNet": {
    "addressSpace": {
      "addressPrefixes": [
        "10.0.0.0/16"
      ]
    },
    "enableDdosProtection": false,
    "etag": "W/\"28cbfa8f-ff18-4e1f-9dbc-0515fcb7617\"",
    "id": "/subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/vnetres/providers/Microsoft.Network/virtualNetworks/myvnet",
    "location": "centralindia",
    "name": "myvnet",
    "privateEndpointNetPolicies": "Disabled",
    "provisioningState": "Succeeded",
    "resourceGroup": "vnetres",
    "resourceGuid": "c835740a-304d-46ae-9531-cdb3a24cf3c6",
    "subnets": [
      {
        "addressPrefix": "10.0.0.0/24",

```

Virtual Network Creation Completed On Azrue CLI:

```
Microsoft Azure
Search resources, services, and docs (G+)
Copilot
dhruvbansal0505@gmail...
DEFAULT DIRECTORY (DHURVBA...)

Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help

dhruv [ ~ ]$ az network vnet create --name myvnet --resource-group vnetres --subnet-name default
{
  "newVNet": {
    "addressSpace": {
      "addressPrefixes": [
        "10.0.0.0/16"
      ]
    },
    "enableDdosProtection": false,
    "etag": "W/\"28cbfa8f-ff18-4e1f-9dbc-0515fcb7617\"",
    "id": "/subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/vnetres/providers/Microsoft.Network/virtualNetworks/myvnet",
    "location": "centralindia",
    "name": "myvnet",
    "privateEndpointNetPolicies": "Disabled",
    "provisioningState": "Succeeded",
    "resourceGroup": "vnetres",
    "resourceGuid": "c835740a-304d-46ae-9531-cdb3a24cf3c6",
    "subnets": [
      {
        "addressPrefix": "10.0.0.0/24",
        "delegations": [],
        "etag": "W/\"28cbfa8f-ff18-4e1f-9dbc-0515fcb7617\"",
        "id": "/subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/vnetres/providers/Microsoft.Network/virtualNetworks/myvnet/subnets/default",
        "name": "default",
        "privateEndpointNetPolicies": "Disabled",
        "privateLinkServiceNetworkPolicies": "Enabled",
        "provisioningState": "Succeeded",
        "resourceGroup": "vnetres",
        "type": "Microsoft.Network/virtualNetworks/subnets"
      }
    ]
  },

```

Virtual Network created on Azure Portal using Azure CLI:

The screenshot displays the Microsoft Azure portal interface for a virtual network named 'myvnet'. The top navigation bar includes the 'Microsoft Azure' logo, a search bar, and user information for 'dhrubansal0505@gmail...'. The left sidebar shows the 'Overview' tab selected, with options for Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, Monitoring, Automation, and Help.

The main content area shows the 'myvnet' virtual network details under the 'Overview' tab. The 'Essentials' section lists the following properties:

- Resource group (move): [vnetres](#)
- Location (move): Central India
- Subscription (move): [Azure for Students](#)
- Subscription ID: 8536b75e-427c-44af-8bef-e4d134df2eaa
- Tags (edit): [Add tags](#)
- Address space: 10.0.0.0/16
- DNS servers: [Azure provided DNS service](#)
- BGP community string: [Configure](#)
- Virtual network ID: c835740a-304d-46ae-9531-cdb3a24cf3c6

Below the Essentials section, the 'Capabilities (5)' tab is selected, showing four configuration cards:

- DDoS protection**: Configure additional protection from distributed denial of service attacks. Status: Not configured.
- Azure Firewall**: Protect your network with a stateful L3-L7 firewall. Status: Not configured.
- Peerings**: Seamlessly connect two or more virtual networks. Status: Not configured.
- Microsoft Defender for Cloud**: Strengthen the security posture of your environment.

At the bottom, there is a 'Private endpoints' section and an 'Activate Windows' watermark.

4. Create and assign a any policy at subscription level.

Answer: Creating and Assign an Azure Policy:

The screenshot displays the 'Allowed locations' policy assignment in the Microsoft Azure portal. The top navigation bar includes the Microsoft Azure logo, a search bar, and a Copilot button. The breadcrumb trail shows 'Home > Policy | Assignments > Allowed locations'. Below the title, there are several action buttons: 'Edit assignment', 'Delete assignment', 'Duplicate assignment', 'View compliance', 'View definition', 'Create exemption', and 'Create remediation task'. The 'Essentials' section provides key details: Name is 'Allowed locations', Scope is 'Azure for Students', Definition version is '1.0*', Description is '--', Assignment ID is a long alphanumeric string, and Assigned by is '--'. Below this, a table lists parameters. The table has columns for 'Parameter ID', 'Parameter name', 'Parameter value', and 'Policy assignment parameter reference type'. One parameter is listed: 'listOfAllowedLocations' with the value '["eastus"]' and reference type 'User defined parameter'. At the bottom right, there is an 'Activate Windows' watermark.

Testing The Azure Policy:

The screenshot shows the 'Create virtual network' wizard in the Microsoft Azure portal, with a validation failure. The breadcrumb trail is 'Home > All resources > Create a resource > Create virtual network'. A red banner at the top states 'Validation failed. Click here to view details.' with a right-pointing arrow. The 'Review + create' tab is selected. The 'Basics' section shows: Subscription 'Azure for Students', Resource Group 'vnetres', Name 'vnet1', and Region 'Central India'. The 'Security' section shows 'Azure Bastion', 'Azure Firewall', and 'Azure DDoS Network Protection' all set to 'Disabled'. The 'IP addresses' section shows 'Address space' as '10.0.0.0/16 (65,536 addresses)' and 'Subnet' as 'default (10.0.0.0/24) (256 addresses)'. At the bottom are 'Previous', 'Next', and 'Create' buttons. On the right, an 'Errors' pane is open, showing a 'Summary' tab. The error message is: 'Resource 'vnet1' was disallowed by policy. (Code: RequestDisallowedByPolicy)'. The policy is identified as 'Allowed locations'. Below the error message are links for 'Explain with Copilot', 'Troubleshooting Options', 'Check Usage + Quota', and 'New Support Request'. At the bottom right, there is an 'Activate Windows' watermark.

The Above Virtual Network in the resource group where the policy is defined is not working as the policy is defined for location east us but in these example we are using different location that is why it is throwing exception and prevention of virtual network for deployment.

5. Create an Azure key vault and store secrets. Configure access policies for the Key Vault to allow authorized users or applications to manage keys and secrets. retrieve secret from key vault using azure CLI.

Answer: Creating an azure key vault:

The screenshot displays the Microsoft Azure portal interface for a Key Vault named 'vault0505'. The left sidebar shows the navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Access policies, Resource visualizer, Events, Objects, Settings, Monitoring, Automation, and Help. The main content area is titled 'vault0505 Key vault' and includes a search bar and action buttons (Delete, Move, Refresh, Open in mobile). Below this, the 'Essentials' section provides key details: Resource group (firstres), Location (Central India), Subscription (Azure for Students), and Subscription ID (8536b75e-427c-44af-8bef-e4d134df2eaa). It also lists the Vault URI (https://vault0505.vault.azure.net/), Sku (Standard), Directory ID, Directory Name (Default Directory), Soft-delete (Enabled), and Purge protection (Disabled). A 'JSON View' link is available in the top right. The 'Get started' section offers links for Properties, Monitoring, Tools + SDKs, and Tutorials. A central message states: 'Manage keys and secrets used by apps and services. Our recommendation is to use a vault per application per environment (Development, Pre-Production and Production). This helps you to not share secrets across environments and also reduces the threat in case of a breach.' Below this, three cards provide quick actions: 'Control access to key vault', 'Enable logging and set up alerts', and 'Turn on recovery options'. An 'Activate Windows' watermark is visible on the right side.

Assign Secrets to key Vault:

The screenshot shows the 'Create a secret' form within the Azure portal for the 'vault0505' Key Vault. The form includes the following fields and options: 'Upload options' set to 'Manual', 'Name' set to 'mysec', 'Secret value' masked with asterisks, 'Content type (optional)' as an empty text box, 'Set activation date' and 'Set expiration date' as unchecked checkboxes, 'Enabled' set to 'Yes', and 'Tags' set to '0 tags'. At the bottom, there are 'Create' and 'Cancel' buttons. An 'Activate Windows' watermark is present in the bottom right corner.

Azure Secret Value Retrival:

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

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DEFAULT DIRECTORY (DHRLVBA...)

Home > vault0505

vault0505 | Properties

Key vault

Search

Save Discard changes Refresh

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Access policies
- Resource visualizer
- Events
- Objects
- Settings
 - Access configuration
 - Networking
 - Microsoft Defender for Cloud
 - Properties**
 - Locks

Name	vault0505
SKU (Pricing tier)	Standard
Location	centralindia
Vault URI	https://vault0505.vault.azure.net/
Resource ID	/subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/firstres/providers/Microsoft.KeyVault/vaults/vault0505
Subscription ID	8536b75e-427c-44af-8bef-e4d134df2eaa
Subscription Name	Azure for Students
Directory ID	bc9daf86-6a77-4ff3-be83-aeae55fc30bc
Directory Name	Default Directory
Soft-delete	Soft delete has been enabled on this key vault
Days to retain deleted vaults	30
Purge protection	<input checked="" type="radio"/> Disable purge protection (allow key vault and objects to be purged during retention period) <input type="radio"/> Enable purge protection (enforce a mandatory retention period for deleted vaults and vault objects)

Copy to clipboard

Activate Windows

6. Create a VM from Powershell.

Answer: Virtual machine using PowerShell:

New Resource group Using PowerShell:

```
Microsoft Azure | Search resources, services, and docs (G+I) | Copilot | dhruvbansal0505@gmail... | DEFAULT DIRECTORY (DHURVBA...)

Switch to Bash | Restart | Manage files | New session | Editor | Web preview | Settings | Help

PS /home/dhruv> New-AzResourceGroup -Name powsheres -Location centralindia

ResourceGroupName : powsheres
Location           : centralindia
ProvisioningState  : Succeeded
Tags               :
ResourceId         : /subscriptions/8536b75e-427c-44af-8bef-e4d134df2eaa/resourceGroups/powsheres

PS /home/dhruv> $crea = Get-Credential -Message "Enter a username and password"

PowerShell credential request
Enter a username and password
User: dhruvsh
Password for user dhruvsh: *****
```

New Virtual Machine Using Azure CLI:

```
PS /home/dhruv> $vm = @{
>> ResourceGroup='powsheres'
>> Name='shellMyVM'
>> Location='centralindia'
>> ImageName='win2016datacenter'
>> Credential=$crea
>> OpenPorts=3389
>> }
PS /home/dhruv> $newVM1= New-AzVM @vm
New-AzVM: Cannot validate argument on parameter 'ResourceGroupName'. The argument is null or empty. Provide an argument that is not null or empty, and then try the command again.
PS /home/dhruv> $newVM1= New-AzVM @vm
You can reference https://aka.ms/findImagePS on how to find VM Images using PowerShell.
No Size value has been provided. The VM will be created with the default size Standard_D2s_v3.
PS /home/dhruv> 
```

Azure Portal VM created:

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All services > Resource groups > powsheres >

shellMyVM

Virtual machine

Search | Help me copy this VM in any region

Overview | Connect | Start | Restart | Stop | Hibernate | Capture | Delete | Refresh | Open in mobile | Feedback | CLI / PS

Activity log | Access control (IAM) | Tags | Diagnose and solve problems | Resource visualizer

> Connect > Networking > Settings > Availability + scale > Security > Backup + disaster recovery > Operations > Monitoring > Automation > Help

Essentials

Resource group	powsheres
Status	Running
Location	Central India
Subscription	Azure for Students
Subscription ID	8536b75e-427c-44af-8bef-e4d134df2eaa

Tags (edit) : Add tags

Properties

Virtual machine	
Computer name	shellMyVM
Operating system	Windows (Windows Server 2016 Datacenter)
VM generation	V1
VM architecture	x64
	Ready

Networking

Public IP address	-
Public IP address (IPv6)	-
Private IP address	192.168.1.4
Private IP address (IPv6)	-
Virtual network/subnet	shellMyVM/shellMyVM

Operating system : Windows (Windows Server 2016 Datacenter)
Size : Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address : -
Virtual network/subnet : shellMyVM/shellMyVM
DNS name : -
Health state : -
Time created : 6/21/2025, 6:47 AM UTC

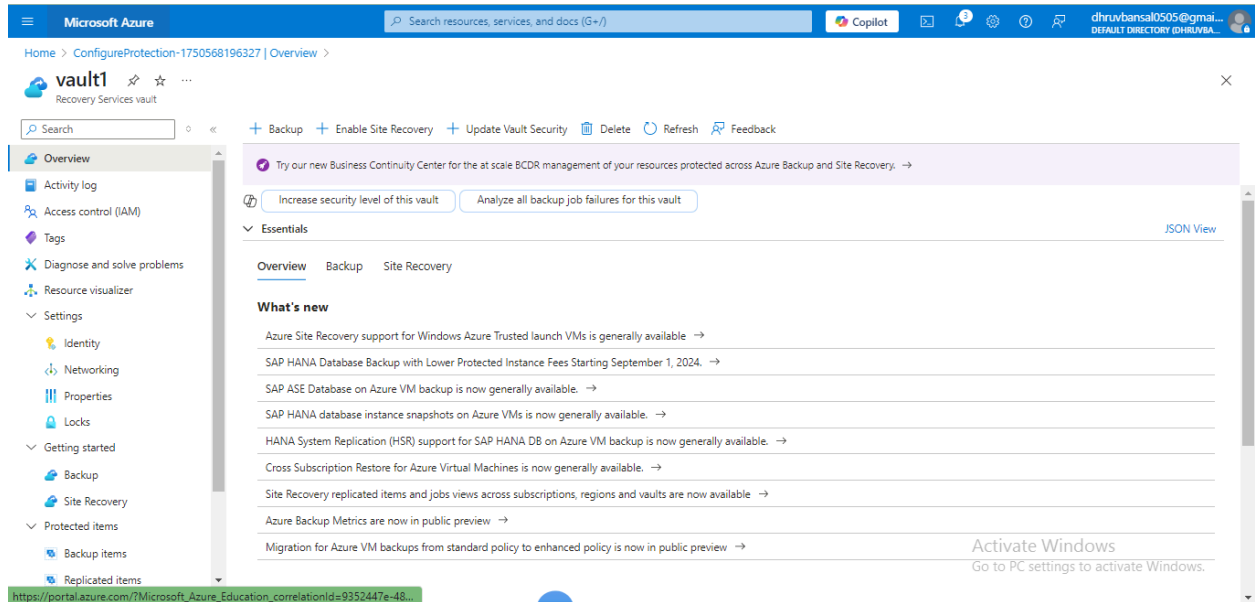
Activate Windows
Go to PC settings to activate Windows.

https://portal.azure.com/?Microsoft_Azure_Education_correlationId=9352447e-48...

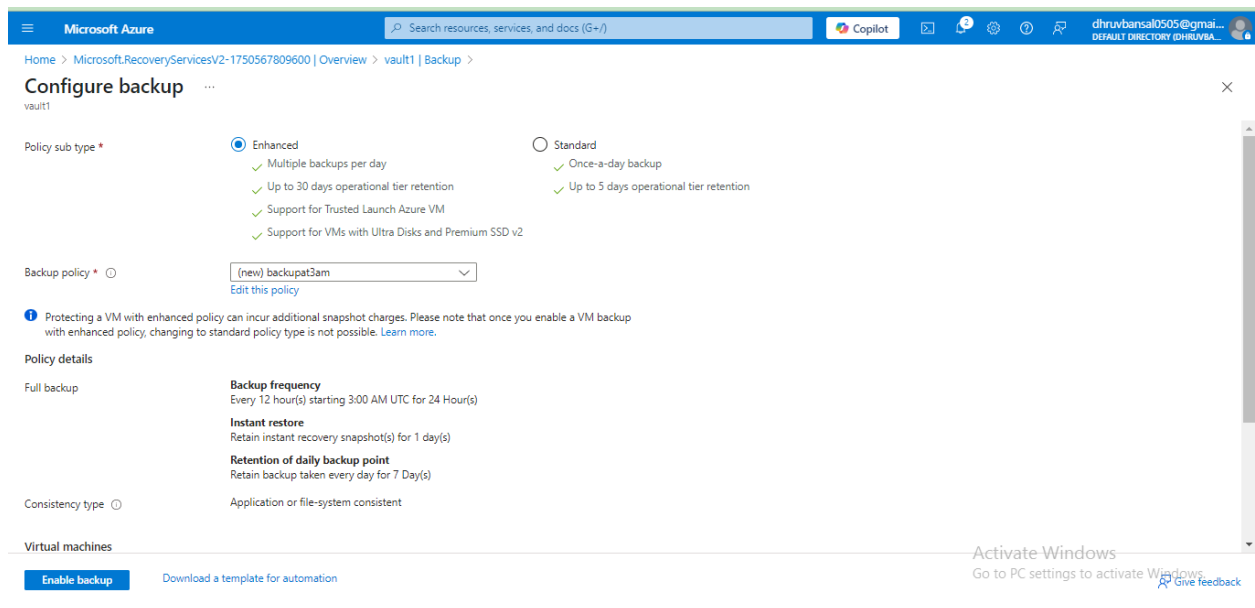
7. A. Schedule a Daily backup of VM at 3:AM using vault 1. Create an Alert rule for VM CPU percentage: Criteria: CPU% MoreThan 80 There Should be analert on Email."

B.Provision backups in backup center 2. Schedule a Daily backup of VM at 3:AM using vault. Configure Retention period in backup policy and retain an old backup.

Answer: Schedule a Daily backup of VM at 3:AM using vault:



Backup policy creation at 3 AM:



Alert Group Created:

The screenshot shows the Microsoft Azure portal interface. At the top, there's a navigation bar with the Microsoft Azure logo, a search bar, and a user profile. Below the navigation bar, the breadcrumb trail indicates the current location: Home > vm1 | Alerts > Action groups. The main heading is 'Action groups' with a plus icon and a refresh icon. Below this, there's a toolbar with options: Create, Columns, Refresh, Open query, Delete, Enable, Disable, and Test action group. A filter bar shows 'Subscription: Azure for Students', 'Resource group: all', 'Location: all', 'Status: Enabled', and an 'Add tag filter' button. A dropdown menu is set to 'No grouping'. The table below lists the action groups:

Name ↑↓	Short name ↑↓	Resource group ↑↓	Subscription ↑↓	Actions	Status ↑↓
NotifyByEmail	Byemail	firstres	Azure for Students	1 Email	Enabled

At the bottom, it says 'Showing 1 - 1 of 1 results.' There's also an 'Activate Windows' watermark and a 'Give feedback' link.

8. A. Schedule a Daily backup of VM at 3:AM using vault 1. Create an Alert rule for VM CPU percentage: Criteria: CPU% MoreThan 80 There Should be analert on Email."

B.Provision backups in backup center 2. Schedule a Daily backup of VM at 3:AM using vault. Configure Retention period in backup policy and retain an old backup.

Answer: Schedule a Daily backup of VM at 3:AM using vault:

The screenshot shows the Microsoft Azure portal interface for the 'vault1' Recovery Services vault. The navigation bar at the top shows the Microsoft Azure logo, a search bar, and a user profile. The breadcrumb trail indicates the current location: Home > ConfigureProtection-1750568196327 | Overview > vault1. The main heading is 'vault1' with a star icon and a refresh icon. Below this, there's a toolbar with options: Backup, Enable Site Recovery, Update Vault Security, Delete, Refresh, and Feedback. A search bar is also present. The left sidebar shows the navigation menu with options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, Identity, Networking, Properties, Locks, Getting started, Backup, Site Recovery, Protected items, Backup items, and Replicated items. The main content area shows the 'Overview' tab selected. It includes a 'What's new' section with several updates: Azure Site Recovery support for Windows Azure Trusted launch VMs is generally available, SAP HANA Database Backup with Lower Protected Instance Fees Starting September 1, 2024, SAP ASE Database on Azure VM backup is now generally available, SAP HANA database instance snapshots on Azure VMs is now generally available, HANA System Replication (HSR) support for SAP HANA DB on Azure VM backup is now generally available, Cross Subscription Restore for Azure Virtual Machines is now generally available, Site Recovery replicated items and jobs views across subscriptions, regions and vaults are now available, Azure Backup Metrics are now in public preview, and Migration for Azure VM backups from standard policy to enhanced policy is now in public preview. There's also an 'Activate Windows' watermark and a 'Give feedback' link.

Backup policy creation at 3 AM:

Microsoft Azure

Search resources, services, and docs (G+I)

Copilot

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DEFAULT DIRECTORY (DHURVBA...

Home > Microsoft.RecoveryServicesV2-1750567809600 | Overview > vault1 | Backup >

Configure backup

vault1

Policy sub type *

Enhanced

Standard

Multiple backups per day

Once-a-day backup

Up to 30 days operational tier retention

Up to 5 days operational tier retention

Support for Trusted Launch Azure VM

Support for VMs with Ultra Disks and Premium SSD v2

Backup policy *

(new) backupat3am

Edit this policy

Protecting a VM with enhanced policy can incur additional snapshot charges. Please note that once you enable a VM backup with enhanced policy, changing to standard policy type is not possible. [Learn more.](#)

Policy details

Full backup

Backup frequency

Every 12 hour(s) starting 3:00 AM UTC for 24 Hour(s)

Instant restore

Retain instant recovery snapshot(s) for 1 day(s)

Retention of daily backup point

Retain backup taken every day for 7 Day(s)

Consistency type

Application or file-system consistent

Virtual machines

Enable backup

Download a template for automation

Activate Windows
Go to PC settings to activate Windows.
Give feedback

Alert Group Created:

Microsoft Azure

Search resources, services, and docs (G+I)

Copilot

dhruvbansal0505@gmail...
DEFAULT DIRECTORY (DHURVBA...

Home > vm1 | Alerts >

Action groups

Create

Columns

Refresh

Open query

Delete

Enable

Disable

Test action group

Search

Subscription : Azure for Students

Resource group : all

Location : all

Status : Enabled

Add tag filter

No grouping

Name ↑↓	Short name ↑↓	Resource group ↑↓	Subscription ↑↓	Actions	Status ↑↓	
<input type="checkbox"/> NotifyByEmail	Byemail	firstres	Azure for Students	1 Email	Enabled	...

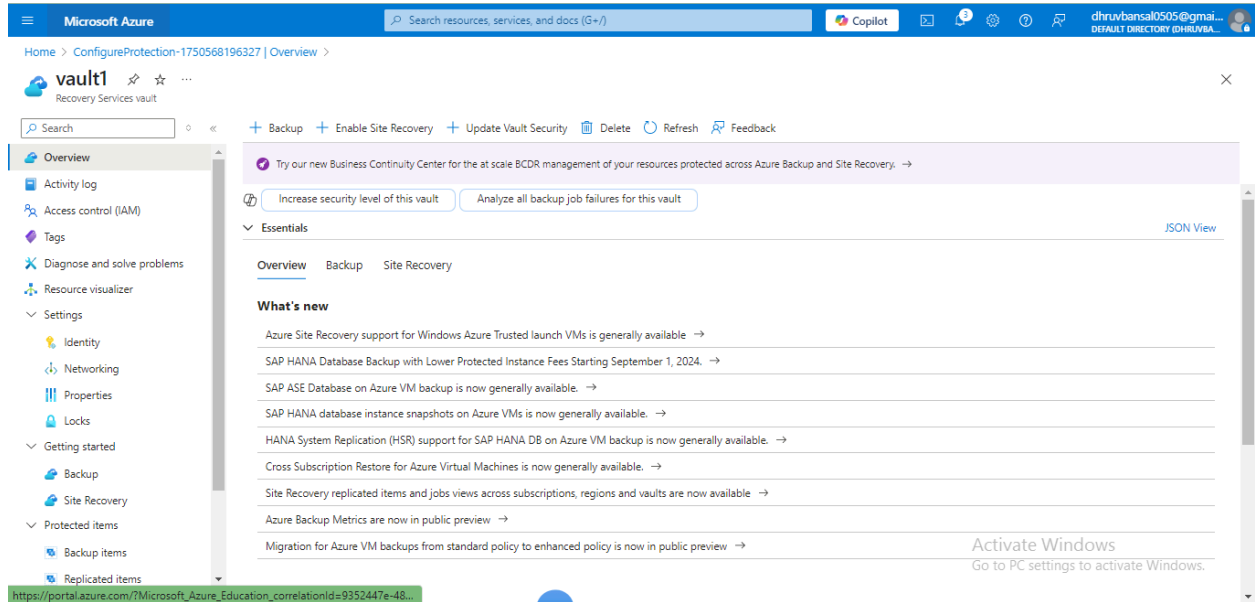
Showing 1 - 1 of 1 results.

Activate Windows
Go to PC settings to activate Windows.
Give feedback

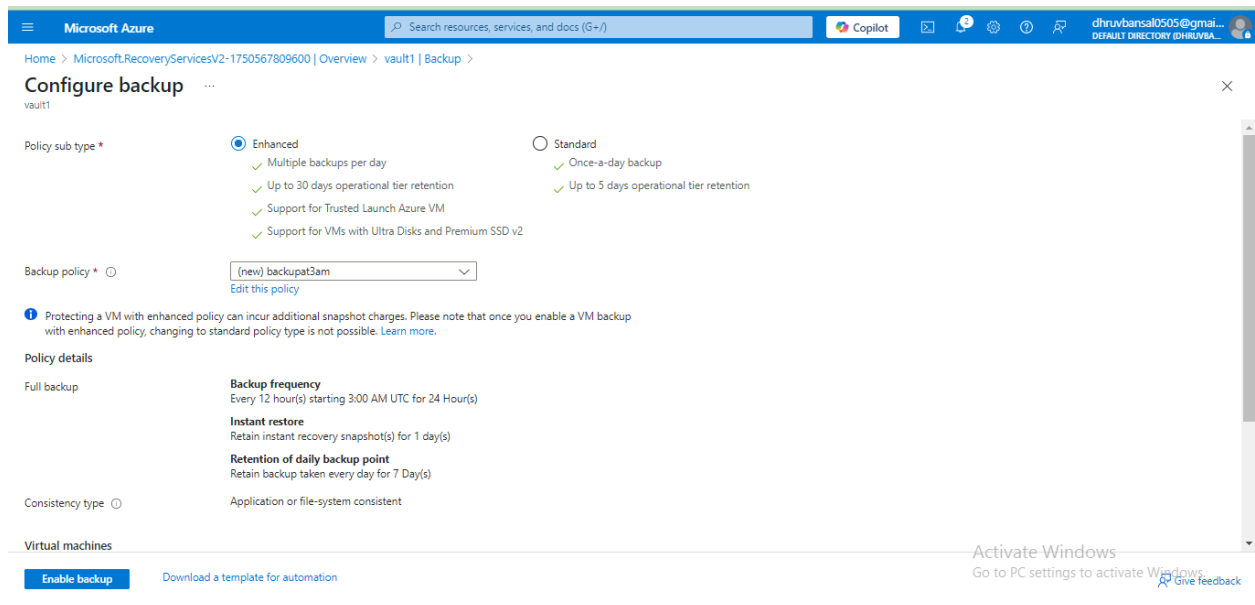
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Answer: Schedule a Daily backup of VM at 3:AM using vault:



Backup policy creation at 3 AM:



Alert Group Created:



Microsoft Azure


Search resources, services, and docs (G+)


Copilot


dhrubansal0505@gmail...
DEFAULT DIRECTORY (DHRUBA...


Home > vm1 | Alerts >


Action groups  


 Create


 Columns


 Refresh


 Open query

 Delete

 Enable

 Disable

 Test action group


 Search


Subscription : **Azure for Students**









Resource group : **all**

Location : **all**


Status : **Enabled**

 Add tag filter

No grouping 

Name 	Short name 	Resource group 	Subscription 	Actions	Status 	
<input type="checkbox"/> NotifyByEmail	Byemail	 firstres	 Azure for Students	1 Email	 Enabled	...

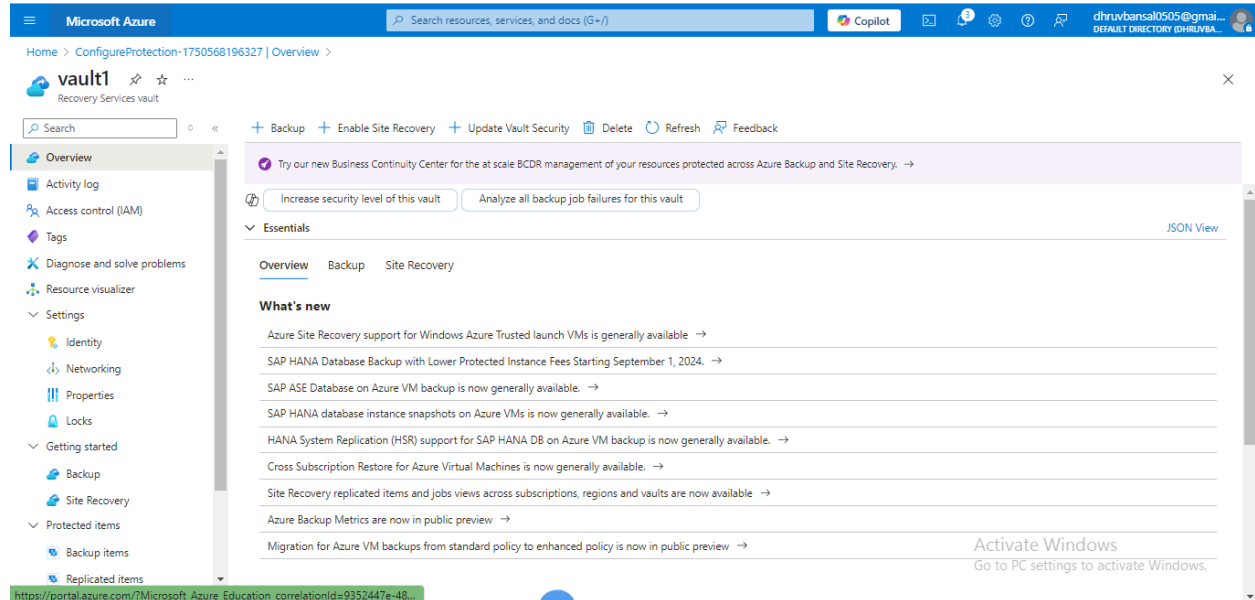
Showing 1 - 1 of 1 results.

Activate Windows
Go to PC settings to activate Windows.
 Give feedback

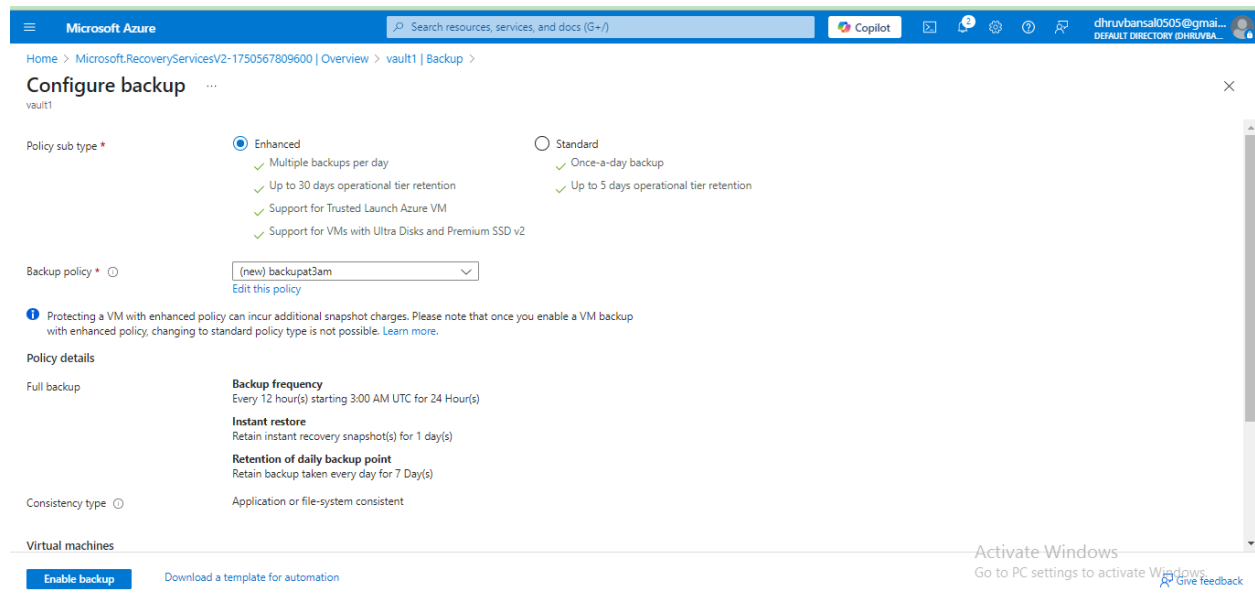
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B.Provision backups in backup center 2. Schedule a Daily backup of VM at 3:AM using vault. Configure Retention period in backup policy and retain an old backup.

Answer: Schedule a Daily backup of VM at 3:AM using vault:



Backup policy creation at 3 AM:



Alert Group Created:



Microsoft Azure


Search resources, services, and docs (G+)


Copilot


dhrubansal0505@gmail...
DEFAULT DIRECTORY (DHRUBA...


Home > vm1 | Alerts >


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 Open query

 Delete

 Enable

 Disable

 Test action group


 Search


Subscription : **Azure for Students**









Resource group : **all**

Location : **all**


Status : **Enabled**

 Add tag filter

No grouping 

Name 	Short name 	Resource group 	Subscription 	Actions	Status 	
<input type="checkbox"/> NotifyByEmail	Byemail	 firstres	 Azure for Students	1 Email	 Enabled	...

Showing 1 - 1 of 1 results.

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Go to PC settings to activate Windows.
 Give feedback