

EXP NO 25. Database as a Service (DaaS) create and configure a new VM Image in any Public Cloud Service Provider using Azure.

AIM:

To create a Database as a Service (DaaS) and configure a new VM Image in any Public Cloud Service Provider using Azure.

Procedure:

Procedure:

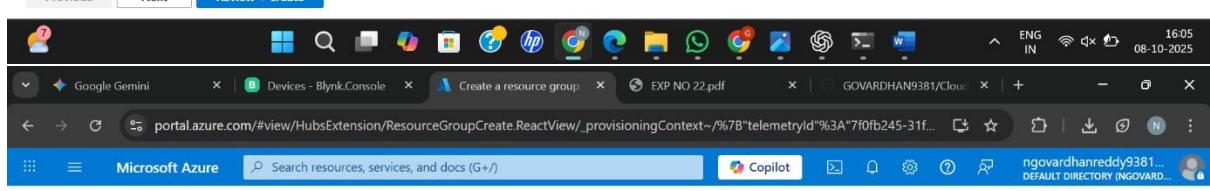
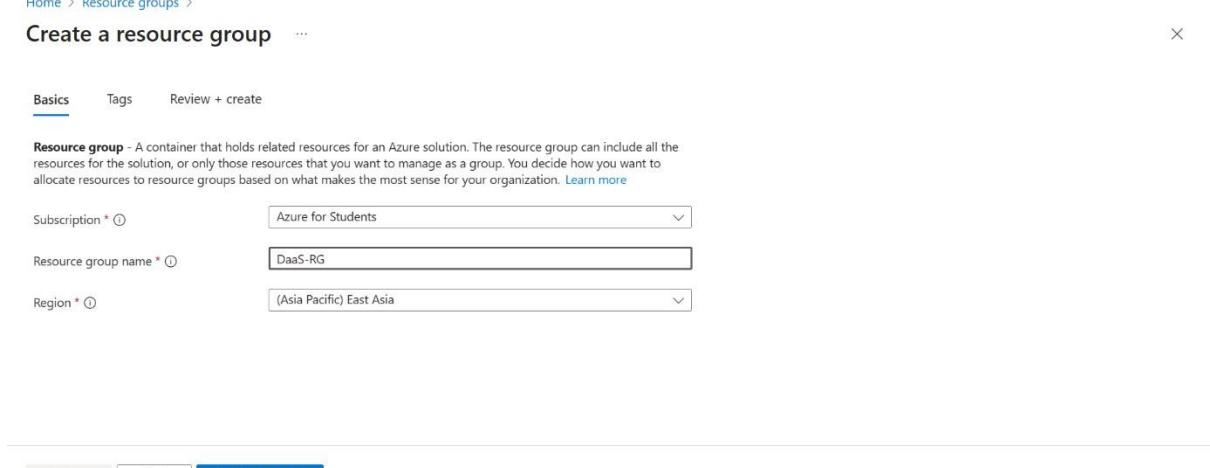
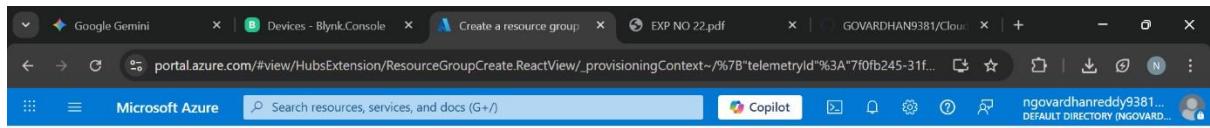
1. Log in to Azure Portal – <https://portal.azure.com>
2. Create a Resource Group → Name: DaaS-RG → Click Create
3. Go to Create a Resource → Virtual Machine ○ Resource Group: DaaS-RG ○ VM Name: daasvm ○ Image: Windows Server or Ubuntu ○ Size: 1 vCPU, 1GB RAM
○ Set username and password → Create
4. Connect to the VM using RDP (Windows) or SSH (Linux).
5. Install a Database Server (SQL Server or MySQL) inside the VM.
6. Go to VM → Capture → Create Image → Name: daasvminimage.
7. Enter Version number: 1.0.0 → Click Review + Create → Create.

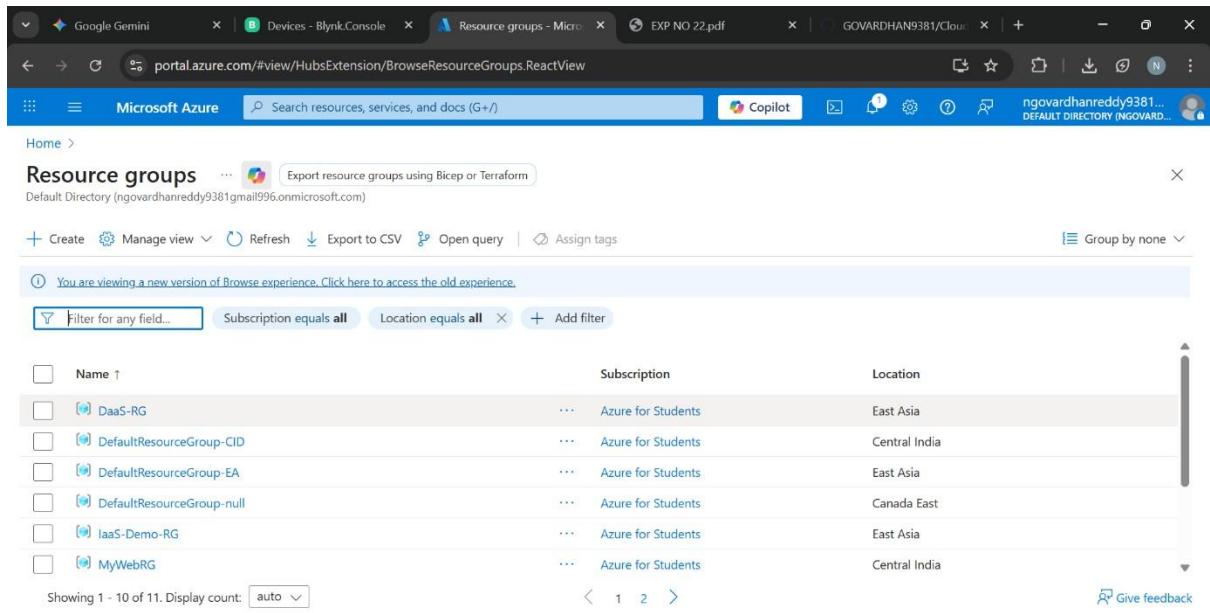
Design:

The screenshot shows the Microsoft Azure Resource Groups page. The URL in the address bar is <https://portal.azure.com/#browse/resourcegroups>. The page displays a list of resource groups with columns for Name, Subscription, and Location. The listed groups are:

Name	Subscription	Location
DefaultResourceGroup-CLD	Azure for Students	Central India
DefaultResourceGroup-EA	Azure for Students	East Asia
DefaultResourceGroup-null	Azure for Students	Canada East
IaaS-Demo-RG	Azure for Students	East Asia
MyWebRG	Azure for Students	Central India
NetworkWatcherRG	Azure for Students	East Asia
DaaS-Demo-RG	Azure for Students	East Asia

At the bottom of the page, there is a message: "Showing 1 - 10 of 10. Display count: auto". The status bar at the bottom right shows the date and time as 08-10-2025 16:04.

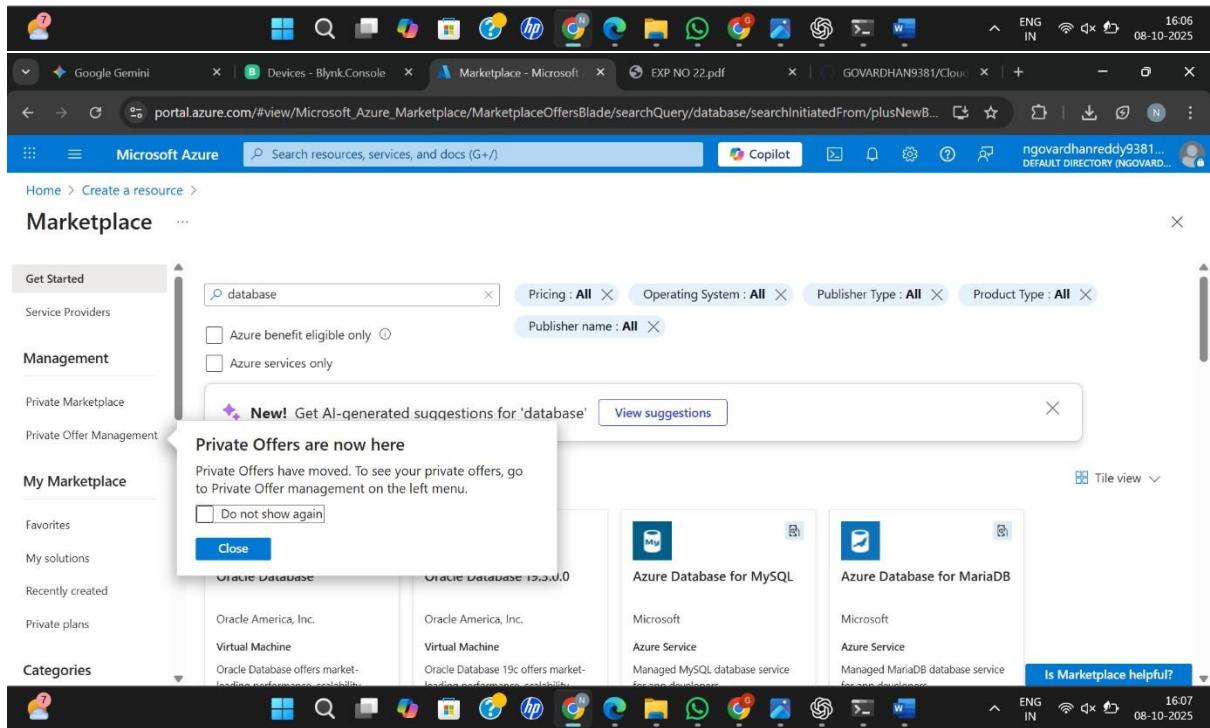




The screenshot shows the Microsoft Azure Resource groups page. At the top, there are tabs for Google Gemini, Devices - Blynk.Console, Resource groups - Micro, EXP NO 22.pdf, and GOVARDHAN9381/Cloud. The main title is "Resource groups". A message at the top says "You are viewing a new version of Browse experience. Click here to access the old experience." Below this is a search bar and filter options: "Subscription equals all", "Location equals all", and "Add filter". The main table lists resource groups:

	Name	Subscription	Location
<input type="checkbox"/>	DaaS-RG	Azure for Students	East Asia
<input type="checkbox"/>	DefaultResourceGroup-CID	Azure for Students	Central India
<input type="checkbox"/>	DefaultResourceGroup-EA	Azure for Students	East Asia
<input type="checkbox"/>	DefaultResourceGroup-null	Azure for Students	Canada East
<input type="checkbox"/>	IaaS-Demo-RG	Azure for Students	East Asia
<input type="checkbox"/>	MyWebRG	Azure for Students	Central India

Showing 1 - 10 of 11. Display count: auto.



The screenshot shows the Microsoft Azure Marketplace page. At the top, there are tabs for Google Gemini, Devices - Blynk.Console, Marketplace - Microsoft, EXP NO 22.pdf, and GOVARDHAN9381/Cloud. The main title is "Marketplace". On the left, a sidebar shows categories like Get Started, Service Providers, Management, Private Marketplace, Private Offer Management, My Marketplace, Favorites, My solutions, Recently created, Private plans, and Categories. The main area has a search bar with "database" and filters for Pricing: All, Operating System: All, Publisher Type: All, Product Type: All. A message says "New! Get AI-generated suggestions for 'database'" with a "View suggestions" button. Below this, a message says "Private Offers are now here" with a "Close" button. The main content area shows marketplace offers:

Offer	Publisher	Description
Oracle Database	Oracle America, Inc.	Virtual Machine
Oracle Database 19c	Oracle America, Inc.	Virtual Machine
Oracle Database 19c	Oracle America, Inc.	Oracle Database 19c offers market-leading performance, availability,
Azure Database for MySQL	Microsoft	Azure Service
Azure Database for MariaDB	Microsoft	Managed MySQL database service for your developers

The screenshot shows the Microsoft Azure Marketplace page for the SQL Database service. At the top, there are several tabs: Google Gemini, Devices - Blynk.Console, SQL Database - Microsoft, EXP NO 22.pdf, and GOVARDHAN9381/Cloud. The main navigation bar includes Microsoft Azure, a search bar, Copilot, and user information (ngovardhanreddy9381...). Below the header, the breadcrumb path is Home > Create a resource > Marketplace > SQL Database. The title "SQL Database" is displayed with a Microsoft logo and a "Create" button.

SQL Database Microsoft

Subscription: Azure for Students | **Plan**: SQL Database | **Create**

Overview Plans Usage Information + Support Ratings + Reviews

SQL Database is a cloud database service built for application developers that lets you scale on-the-fly without downtime and efficiently deliver your applications. Built-in advisors quickly learn your application's unique characteristics and dynamically adapt to maximize performance, reliability, and data protection.

[Create a new database in the SQL Database service. You can create the database on a new logical server or on a logical server that already exists in your subscription.](https://portal.azure.com/#create) [Give feedback](#)

The screenshot shows the "Create SQL Database Server" page. The URL in the address bar is https://portal.azure.com/#view/SqIAzureExtension/SharedCreateServer/isNewServer~/true/subscriptionId/75e1e16e-428e-4402-84c9-4... . The page title is "Create SQL Database Server". The "Server details" section requires a "Server name" (mydaasserver123) and a "Location" ((US) East US). The "Authentication" section notes that Azure Active Directory (Azure AD) is now Microsoft Entra ID. The "OK" button is visible at the bottom left, and a "Feedback" link is at the bottom right.

ENG IN 08-10-2025

mydaasserver123.database.windows.net

(US) East US

OK Feedback

ENG IN 08-10-2025

The image shows two screenshots of the Microsoft Azure portal interface.

Screenshot 1: Create SQL Database Wizard

This screenshot shows the 'Create SQL Database' wizard. The configuration details are as follows:

- Subscription:** Azure for Students
- Resource group:** DaaS-RG
- Region:** East Asia
- Database name:** mydaasdemo
- Server:** (new) mydaasserver123
- Authentication method:** Microsoft Entra-only authentication
- Microsoft Entra Admin:** ngovardhanreddy9381@gmail.com#EXT#@ngovardhanreddy9381@gmail996.onmicrosoft.com
- Compute + storage:** General Purpose: Standard-series (Gen5), 2 vCores, 32 GB storage, zone redundant disabled
- Backup storage redundancy:** Geo-redundant backup storage

The estimated cost per month is 484.26 USD.

Screenshot 2: Database Overview Page

This screenshot shows the overview page for the database 'mydaasdemo' (mydaasserver123/mydaasdemo). The database is a SQL database.

Overview Panel:

- Mirror databases in Microsoft Fabric:** Easily replicate your existing databases in Fabric, and help your team achieve streamlined ETL and operational analytics.
- Essentials:**
 - Resource group: DaaS-RG
 - Status: Online
 - Location: East Asia
 - Subscription: Azure for Students
 - Subscription ID: 75e1e16e-428e-4402-84c9-4163a4486ab1
 - Tags: (edit)

Actions Bar: Includes Copy, Restore, Export, Set server firewall, Delete, Connect with..., and Feedback buttons.

Google Gemini Devices - Blynk.Console mydaasdemo (mydaass... EXP NO 22.pdf GOVARDHAN9381/Cloud

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

mydaasdemo (mydaasserver123/mydaasdemo) | Query editor (preview)

Search Login New Query Open query Feedback Getting started

Overview Activity log Tags Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview)

Resource visualizer

Settings Data management Integrations Power Platform Security

Add or remove favorites by pressing Ctrl+Shift+F

CloudSAd1d48228

OK

Welcome to SQL Database Query Editor

SQL server authentication

Login * CloudSAd1d48228

OR

Microsoft Entra authentication

Reason: An instance-specific error occurred while establishing a connection to SQL Server. Connection was denied because Deny Public Network Access is set to Yes. For more information, see https://go.microsoft.com/fwlink/?linkid=2323206.

Continue as ngovardhanreddy9381@...

16:14 IN 08-10-2025

Google Gemini Devices - Blynk.Console mydaasdemo (mydaass... EXP NO 22.pdf GOVARDHAN9381/Cloud

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

mydaasdemo (mydaasserver123/mydaasdemo) | Query editor (preview)

Search Login New Query Open query Feedback Getting started

Overview Activity log Tags Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview)

Resource visualizer

Settings Data management Integrations Power Platform Security

Add or remove favorites by pressing Ctrl+Shift+F

mydaasdemo

OK

Welcome to SQL Database Query Editor

SQL server authentication

Login * mydaasdemo

OR

Microsoft Entra authentication

Reason: An instance-specific error occurred while establishing a connection to SQL Server. Connection was denied because Deny Public Network Access is set to Yes. For more information, see https://go.microsoft.com/fwlink/?linkid=2323206.

Continue as ngovardhanreddy9381@...

The screenshot shows two views of the Microsoft Azure portal, specifically the Query editor (preview) for a database named 'daasdemo'.

Top View:

- The URL is `portal.azure.com/#@ngovardhanreddy9381gmail996.onmicrosoft.com/resource/subscriptions/75e1e16e-428e-4402-84c9-4163a4486ab1/re...`.
- The title bar says "daasdemo (daasdemoserver/daasdemo) | Query editor (preview)".
- The left sidebar shows navigation options like Overview, Activity log, Tags, Diagnose and solve problems, and Query editor (preview).
- The main area displays the "Welcome to SQL Database Query Editor". It includes fields for "SQL server authentication" (Login: CloudSAf8ae7f09, Password: [redacted]) and "Microsoft Entra authentication" (Logged in as ngovardhanreddy9381@gmail.com, Continue as ngovardhanreddy9381@...).
- The status bar at the bottom shows the date and time: 08-10-2025, 21:42.

Bottom View:

- The URL is the same: `portal.azure.com/#@ngovardhanreddy9381gmail996.onmicrosoft.com/resource/subscriptions/75e1e16e-428e-4402-84c9-4163a4486ab1/re...`.
- The title bar says "daasdemo (daasdemoserver/daasdemo) | Query editor (preview)".
- The left sidebar is identical to the top view.
- The main area shows a query editor titled "Query 1" with the following SQL code:

```
1 SELECT TOP 20 pc.Name as CategoryName, p.name as ProductName
2 FROM SalesLT.ProductCategory pc
3 JOIN SalesLT.Product p
4 ON pc.productcategoryId = p.productcategoryId
```

- The results pane is labeled "Ready".
- The status bar at the bottom shows the date and time: 08-10-2025, 21:45.

daasdemo (demoserverdaas/daasdemo) | Search - Microsoft Bing

portal.azure.com/#ngovardhanreddy9381gmail996.onmicrosoft.com/resource/subscriptions/75e1e16e-428e-4402-84c9-4163a4486ab1/re...

Microsoft Azure Search resources, services, and docs (G+) Copilot Home > Microsoft.SQLDatabase.newDatabaseNewServer_33eed3bc6d8d4e0fa574 | Overview > daasdemo (demoserverdaas/daasdemo)

daasdemo (demoserverdaas/daasdemo) | Query editor (preview) ×

SQL database

Search Login New Query Open query Feedback Getting started

Overview Activity log Tags Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview) Resource visualizer Settings Data management Integrations Power Platform Security

Add or remove favorites by pressing Ctrl+Shift+F

daasdemo (ngovardhanreddy9381@gmail.com)

Showing limited object explorer here. For full capability please click here to open Azure Data Studio.

Tables Views Stored Procedures

Query 1 × Run Cancel query Save query Export data as Show only Editor

```
1 SELECT TOP 20
2     pc.Name AS CategoryName,
3     p.Name AS ProductName
4     FROM SalesLT.ProductCategory pc
5     JOIN SalesLT.Product p
6     ON pc.ProductCategoryID = p.ProductCategoryID;
```

Results Messages

Search to filter items...

CategoryName	ProductName
Road Frames	HL Road Frame - Black, 58
Road Frames	HL Road Frame - Red, 58

Query succeeded | 0s

22:04 08-10-2025

The screenshot shows the Microsoft Azure Query editor (preview) interface. On the left, there's a sidebar with various database management options like Overview, Activity log, and the current selected Query editor (preview). Below that is a list of favorite databases. The main area has a message about the limited object explorer and a link to open Azure Data Studio. The central part is the Query editor, which displays a T-SQL query to select top 20 products from SalesLT tables. The Results tab shows the output of the query, which includes two rows of data: 'Road Frames' under CategoryName and 'HL Road Frame - Black, 58' and 'HL Road Frame - Red, 58' under ProductName. At the bottom, it says 'Query succeeded | 0s'. The status bar at the bottom right shows the time as 22:04 and the date as 08-10-2025.

Resource groups - Microsoft Azure

portal.azure.com/#browse/resourcegroups

Virtual machines

Recent resources

- IaaSVM1 21 hours ago
- Windows-Demo-VM 3 days ago

Learn more with Copilot

Free training from Microsoft

- Introduction to Azure virtual machines 8 units · 1 hr 7 min
- Create a Windows virtual machine in Azure 9 units · 51 min
- Create a Linux virtual machine in Azure 7 units · 1 hr 26 min

Subscription Location

Subscription	Location
Azure for Students	East Asia
Azure for Students	Central India
Azure for Students	East Asia
Azure for Students	Canada East
Azure for Students	East Asia
Azure for Students	Central India

Give feedback

Create a virtual machine - Microsoft Azure

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure

Compute infrastructure | Virtual machines

Create a virtual machine

Help me choose the right VM size for my workload

Help me create a VM optimized for high availability

Help me create a low cost VM

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure for Students

Resource group Loading...

< Previous Next : Disks > Review + create

Give feedback

ENG IN 08:34 09-10-2025

Create a virtual machine - Microsoft Azure

portal.azure.com/#create/Microsoft.VirtualMachine-ARM

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

ngovardhanreddy9381...
DEFAULT DIRECTORY (NGOARD...)

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

Help me choose the right VM size for my workload | Help me create a VM optimized for high availability | Help me create a low cost VM

Help me create a low cost VM | Help me create a VM optimized for high availability | Help me choose the right VM size for my workload

Confirm password *

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * Allow selected ports None

Select inbound ports * RDP (3389)

⚠️ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

< Previous Next : Disks > Review + create Give feedback

Create a virtual machine - Microsoft Azure

portal.azure.com/#create/Microsoft.VirtualMachine

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

ngovardhanreddy9381...
DEFAULT DIRECTORY (NGOARD...)

Home >

Create a virtual machine

Validation passed

Help me create a low cost VM | Help me create a VM optimized for high availability | Help me choose the right VM size for my workload

Basics Disks Networking Management Monitoring Advanced Tags **Review + create**

Price

1 X Standard B1s by Microsoft

Subscription credits apply **0.0186 USD/hr** [Pricing for other VM sizes](#)

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same

< Previous Next > **Create** Download a template for automation Give feedback

ENG IN 08:45 09-10-2025

The screenshot displays two side-by-side browser windows from the Microsoft Azure portal.

Top Window (Deployment Overview):

- Title:** CreateVm-MicrosoftWindowsServer.WindowsServer-202-20251009084358 | Overview
- Status:** Deployment succeeded
- Deployment Details:** Deployment name: CreateVm-MicrosoftWindowsServer..., Start time: 10/9/2025, 8:45:38 AM; Subscription: Azure for Students, Correlation ID: 01bfd247-8131-47c6-b4
- Next Steps:** Setup auto-shutdown (Recommended), Monitor VM health, performance and network dependencies (Recommended), Run a script inside the virtual machine (Recommended).
- Actions:** Go to resource, Create another VM.

Bottom Window (Virtual Machine Overview):

- Title:** Windows-Demo-VM - Microsoft Azure | Overview
- Status:** Windows-Demo-VM virtual machine agent status is not ready. Troubleshoot the issue →
- Actions:** Connect, Start, Stop, Hibernate, Capture, Delete, Refresh, Open in mobile, Feedback.
- Properties:**

Virtual machine		Networking	
Computer name	Windows-Demo-VM	Public IP address	20.2.235.210 (Network interface windows-demo-vm717_z1)
Operating system	Windows	1 associated public IPs	
VM generation	V2	Public IP address (IPv6)	-
VM architecture	x64	Private IP address	10.2.0.4
Agent status	Not Ready	Private IP address (IPv6)	-
Agent version	Unknown	Virtual network	Virtual network 1 (Default)

Windows-Demo-VM - Microsoft Azure

portal.azure.com/#ngovardhanreddy9381@gmail996.onmicrosoft.com/resource/subscriptions/75e1e16e-428e-4402-84c9-4163a4486ab1/re...

Microsoft Azure Search resources, services, and docs (G+) Copilot Home > CreateVm-MicrosoftWindowsServer.WindowsServer-202-20251009084358 | Overview >

Windows-Demo-VM

Virtual machine

Help me copy this VM in any region Help me copy this VM in any region Manage this VM with Azure CLI

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Resource visualizer Connect Networking Settings Availability + scale Security Backup + disaster recovery Add or remove favorites by pressing Ctrl+Shift+F

Windows-Demo-VM virtual machine agent status is not ready. Troubleshoot the issue →

Help me copy this VM in any region Connect Start Restart Stop Hibernate Capture Delete Refresh Open in mobile Feedback

Image Restore point Image JSON View

Properties Monitoring Capabilities (8) Recommendations Tutorials

Virtual machine

Computer name	Windows-Demo-VM
Operating system	Windows
VM generation	V2
VM architecture	x64
Agent status	Not Ready
Agent version	Unknown

Networking

Public IP address	20.235.210 (Network interface windows-demo-vm717_z1)
Public IP address (IPv6)	-
Private IP address	10.2.0.4
Private IP address (IPv6)	-

Virtual network/Subnet: Windows-Demo-VM (Default)

ENG IN 08:48 09-10-2025

Create a VM image definition

Operating system state: Generalized. This can be used for other VM related settings.

Specialized: VMs created from this image require parameters specific to the host.

Capturing a virtual machine image will make the virtual machine unavailable.

Target VM image definition *

Create new The value must not be blank.

Version details

Version number * Example: 0.0.1, 15.35.0 The value must not be blank. The VM image version must be in a valid format. For example: 0.0.1

Security type Trusted launch

VM architecture x64

Higher storage performance with NVMe

Hibernation supported

Accelerated networking

Publisher * MicrosoftWindowsServer

Offer * WindowsServer

SKU * 2022-datacenter-azure-edition

Publishing options (Optional)

Review + create < Previous Next : Tags > Ok Cancel Give feedback

ENG IN 08:51 09-10-2025

Create an image - Microsoft Azure

portal.azure.com/#view/Microsoft_Azure_DiskMgmt/CaptureVmBlade/subscriptionId/75e1e16e-428e-4402-84c9-4163a4486ab1/resourceGr...

Microsoft Azure Search resources, services, and docs (G+) Copilot Home > CreateVm-MicrosoftWindowsServer.WindowsServer-202-20251009084358 | Overview > Windows-Demo-VM > Create an image

Validation passed

Basics Tags Review + create

Basics

Subscription	Azure for Students
Resource group	DaaS-RG
Region	East Asia
Share image to Azure compute gallery	Yes
Automatically delete this virtual machine after creating the image	No
Azure compute gallery	(new) daasvimage
Operating system state	Generalized
Target VM image definition	(new) daasvimage

Create < Previous Next > Download a template for automation Give feedback

Microsoft.Compute-CaptureVM

portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/overview/id/%2Fsubscriptions%2F75e1e16e-428e-4402-84c9-4163a448...

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

Microsoft.Compute-CaptureVM-20251009084813 | Overview

Deployment

Search Delete Cancel Redeploy Download Refresh

Overview

Inputs Outputs Template

Deployment is in progress

Deployment name : Microsoft.Compute-CaptureV... Start time : 10/9/2025, 8:55:04 AM
Subscription : Azure for Students Correlation ID : e4c49a93-0156-43d1-b853-3b...
Resource group : DaaS-RG

Deployment details

Resource	Type	Status	Operator
daasvimage	Azure compute gallery	Created	Operation

Add or remove favorites by pressing Ctrl+Shift+F

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Work with an expert Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support. Find an Azure expert >

ENG IN 08:55 09-10-2025

The screenshot displays two separate Azure portal windows side-by-side.

Top Window (Deployment Overview):

- Deployment Status:** Your deployment is complete.
- Deployment Details:**
 - Deployment name: Microsoft.Compute-CaptureV...
 - Subscription: Azure for Students
 - Resource group: DaaS-RG
 - Start time: 10/9/2025, 8:55:08 AM
 - Correlation ID: e4c49a93-0156-43d1-b853-3b...
- Next Steps:** Go to resource

Bottom Window (VM Image Details):

- VM Image Version:** 1.0.0 (daasvmimage/daasvmimage/1.0.0)
- Essentials:**
 - Resource group (move): DaaS-RG
 - Status: Succeeded
 - Location: East Asia
 - Subscription (move): Azure for Students
 - Subscription ID: 75e1e16e-428e-4402-84c9-4163a4486ab1
 - Azure compute gallery: daasvmimage
 - VM image definition: daasvmimage
 - Replication status: Completed
 - Replication mode: Full
 - Confidential OS disk encryption type: -
 - Encryption type: Platform-managed key
 - End of life date: -
 - Exclude from latest: No
 - Lock deleting Replicated Locations: Yes

Result:

Successfully created and configured a VM Image to demonstrate Database as a Service (DaaS) in Azure.