

**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:**

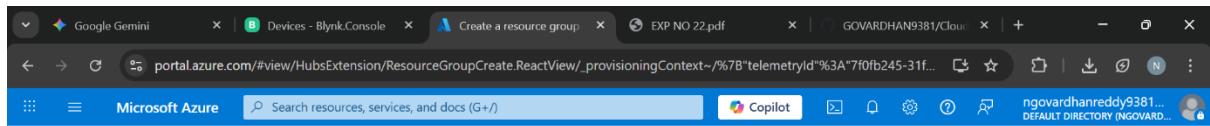
1. Log in to Azure Portal – <https://portal.azure.com>
2. Create a Resource Group → Name: DaaS-RG → Click Create
3. Go to Create a Resource → Virtual Machine
  - o Resource Group: DaaS-RG
  - o VM Name: daasvm
  - o Image: Windows Server or Ubuntu
  - o Size: 1 vCPU, 1GB RAM
  - o Set username and password → 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: daasvmimage.
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 table of resource groups with columns for Name, Subscription, and Location. There are 10 entries listed:

Name	Subscription	Location
DefaultResourceGroup-CID	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 table, it says "Showing 1 - 10 of 10. Display count: auto". The status bar at the bottom right shows the date as 08-10-2025.



Home > Resource groups >

## Create a resource group

Basics Tags Review + create

**Resource group** - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Subscription \* ⓘ

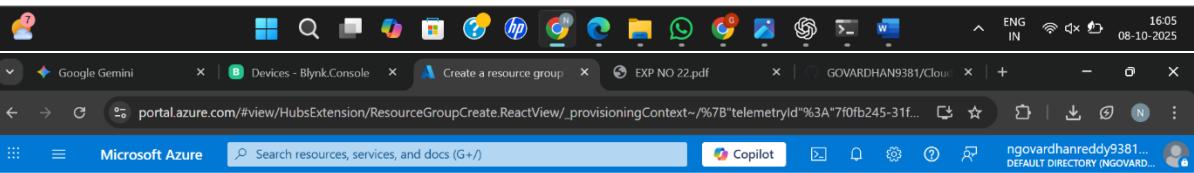
Resource group name \* ⓘ

Region \* ⓘ

Previous

Next

**Review + create**



Home > Resource groups >

## Create a resource group

Basics Tags Review + create

[Automation Link](#)

### Basics

Subscription   
Resource group name   
Region

### Tags

None

Previous

Next

**Create**



The screenshot shows the Microsoft Azure Resource groups page. At the top, there are navigation tabs for Google Gemini, Devices - Blynk.Console, Resource groups - Micro, EXP NO 22.pdf, and GOVARDHAN9381/Cloud. The main title is "Resource groups". A search bar says "Search resources, services, and docs (G+)" and a Copilot button is visible. The user's name "ngovardhanreddy9381..." and "DEFAULT DIRECTORY (NGOARD...)" are at the top right.

Below the header, there are buttons for "+ Create", "Manage view", "Refresh", "Export to CSV", "Open query", and "Assign tags". A message says "You are viewing a new version of Browse experience. Click here to access the old experience." There is a filter bar with "Subscription equals all", "Location equals all", and an "Add filter" button. 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. There are navigation arrows and a "Give feedback" link at the bottom.

The screenshot shows the Microsoft Azure Marketplace page. The top navigation bar includes tabs for Google Gemini, Devices - Blynk.Console, Marketplace - Microsoft, EXP NO 22.pdf, and GOVARDHAN9381/Cloud. The main title is "Marketplace". A search bar says "Search resources, services, and docs (G+)" and a Copilot button is visible. The user's name "ngovardhanreddy9381..." and "DEFAULT DIRECTORY (NGOARD...)" are at the top right.

The left sidebar has sections for "Get Started", "Service Providers", "Management", "Private Marketplace", "Private Offer Management", "My Marketplace", "Favorites", "My solutions", "Recently created", "Private plans", and "Categories".

The main search area has a search bar with "database" and filters for "Pricing : All", "Operating System : All", "Publisher Type : All", "Product Type : All", "Publisher name : All". It also shows a message: "New! Get AI-generated suggestions for 'database'" with a "View suggestions" button. A modal window says "Private Offers are now here" with a "Close" button and a checkbox "Do not show again".

The results section shows two database offerings:

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

At the bottom, there is a "Is Marketplace helpful?" button. The taskbar at the bottom shows various pinned icons like File Explorer, Task View, and Edge browser.

The screenshot shows the Microsoft Azure Marketplace page for the SQL Database service. The top navigation bar includes links for Google Gemini, Devices - Blynk.Console, SQL Database - Microsoft, EXP NO 22.pdf, GOVARDHAN9381/Cloud, and Copilot. The user is signed in as ngovardhanreddy9381... with a DEFAULT DIRECTORY (NGOARDHAN9381).

The main content area displays the SQL Database service details. It features a blue icon with a white 'sql' symbol, the service name 'SQL Database', a 'Microsoft | Azure Service' badge, a rating of '★ 4.4 (2526 ratings)', and a 'Azure benefit eligible' badge. Below this, there are dropdown menus for 'Subscription' (set to 'Azure for Students') and 'Plan' (set to 'SQL Database'), and a large blue 'Create' button.

Below the service details, there are tabs for 'Overview' (which is selected), 'Plans', 'Usage Information + Support', and 'Ratings + Reviews'. A descriptive text block states: '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.'

The URL in the browser address bar is [https://portal.azure.com/#view/Microsoft\\_Azure\\_Marketplace/GalleryItemDetailsBladeNopdl/id/Microsoft.SQLDatabase/selectionMode~/false](https://portal.azure.com/#view/Microsoft_Azure_Marketplace/GalleryItemDetailsBladeNopdl/id/Microsoft.SQLDatabase/selectionMode~/false).

The screenshot shows the 'Create SQL Database Server' page. The top navigation bar is identical to the previous one. The main content area is titled 'Create SQL Database Server' and includes a 'Server details' section. It asks for a 'Server name' (input: 'mydaasserver123') and a 'Location' (input: '(US) East US'). Below this is an 'Authentication' section with a note: 'Azure Active Directory (Azure AD) is now Microsoft Entra ID.' followed by a 'Learn more' link. A note at the bottom says: 'Select your preferred authentication methods for accessing this server. Create a server admin login and password to...'.

At the bottom right of the page, there is an 'OK' button and a 'Feedback' link. The URL in the browser address bar is <https://portal.azure.com/#view/SqIAzureExtension/SharedCreateServer/isNewServer~/true/subscriptionId/75e1e16e-428e-4402-84c9-4...>.

The screenshot shows two consecutive pages from the Microsoft Azure portal.

**Create SQL Database (Step 1)**

This page displays configuration details for creating a new SQL database:

- 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

**Networking:**

Allow Azure services and resources to access this server: No

**Buttons:** Create, < Previous, Download a template for automation

**Estimated Cost / Month:** 484.26 USD

**Home > Create a resource > Marketplace > SQL Database > Create SQL Database**

**mydaasdemo (mydaasserver123/mydaasdemo) | Overview**

This page provides an overview of the created database:

- 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.
- 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 (move): DaaS-RG
  - Status: Online
  - Location: East Asia
  - Subscription (move): Azure for Students
  - Subscription ID: 75e1e16e-428e-4402-84c9-4163a4486ab1
  - Tags (edit)
- Server name:** mydaasserver123.database.windows.net
- Elastic pool:** No elastic pool
- Connection strings:** Show database connection strings
- Pricing tier:** General Purpose: Gen5, 2 vCores
- Earliest restore point:** No restore point available

**Actions:** Copy, Restore, Export, Set server firewall, Delete, Connect with..., Feedback.

**Metrics:** Show me performance metrics for this SQL database.

**Timestamps:** 16:11 IN 08-10-2025, 16:14 IN 08-10-2025

Screenshot of Microsoft Azure SQL Database Query Editor (preview) showing a connection error.

The browser address bar shows: portal.azure.com/#@ngovardhanreddy9381@gmail.com

The Azure portal navigation bar includes: Microsoft Azure, Search resources, services, and docs (G+), Copilot, and ngovardhanreddy9381... DEFAULT DIRECTORY (NGOARDHANREDDY9381).

The left sidebar menu for the database "mydaasdemo" includes: Overview, Activity log, Tags, Diagnose and solve problems, and Query editor (preview). The "Query editor (preview)" item is selected.

The main content area displays the "Welcome to SQL Database Query Editor". It shows two authentication options:

- SQL server authentication:** Login: CloudSAd1d48228, Password: [redacted].
- Microsoft Entra authentication:** OR 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.

A blue button at the bottom right says: Continue as ngovardhanreddy9381@...

The status bar at the bottom of the browser window shows: 16:14, ENG IN, 08-10-2025.

The second screenshot below it shows the same interface after changing the login to "mydaasdemo". The "OK" button is visible at the bottom of the authentication form.

The screenshot shows the Microsoft Azure portal interface for a SQL database named 'daasdemo'. The top navigation bar includes 'Microsoft Azure', 'Search resources, services, and docs (G+)', 'Copilot', and user information 'ngovardhanreddy9381... DEFAULT DIRECTORY (NGOARD...)'. The main content area is titled 'daasdemo (daasdemoserver/daasdemo) | Query editor (preview)'. On the left, a sidebar lists various database management options like Overview, Activity log, Tags, Diagnose and solve problems, and Query editor (preview). The 'Query editor (preview)' option is selected. The central area displays the 'Welcome to SQL Database Query Editor' screen, which includes fields for 'SQL server authentication' (Login: CloudSAf8ae7f09, Password: [redacted]) and 'Microsoft Entra authentication' (Logged in as ngovardhanreddy9381@gmail.com, Continue as ngovardhanreddy9381@...). Below this is a query editor window titled 'Query 1' containing the following T-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 bottom right corner of the screenshot shows a taskbar with various application icons and system status indicators.

daasdemo (demoserverdaas/dasdemo) | Microsoft Azure | portal.azure.com/#/resource/subscriptions/75e1e16e-428e-4402-84c9-4163a4486ab1/resourceGroups/daasdemo/providers/Microsoft.SqlServer/daasdemo

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

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

Search resources, services, and docs (G+) Copilot Getting started

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

CategoryName ProductName

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

Query succeeded | 0s

Search

22.04 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

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

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 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 \*  None  Allow selected ports

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 Home > Create a virtual machine

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

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 Terms of use | Privacy policy 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)
- Buttons:** Go to resource, Create another VM

**Bottom Window (Virtual Machine Overview):**

- Title:** Windows-Demo-VM - Microsoft Azure | Virtual machine
- 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
- Essentials:** Properties, Monitoring, Capabilities (8), Recommendations, Tutorials
- Properties:** 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, 1 associated public IPs), Private IP address: 10.2.0.4, Private IP address (IPv6): -
- Logs:** Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Connect, Networking, Settings, Availability + scale, Security, Backup + disaster recovery

**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

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/Cloud: Windows-Demo-VM (westcentralus)

ENG IN 08:48 09-10-2025

**Create a VM image definition**

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

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

Target VM image definition: Create new (The value must not be blank.)

Version details: Version number: 0.0.1, 15.35.0 (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: C...

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

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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Free Microsoft tutorials Start learning today >

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 shows two stacked Azure portal pages. The top page is titled 'Microsoft.Compute-CaptureVM-20251009084813 | Overview' under 'Deployment'. It displays deployment details: name (Microsoft.Compute-CaptureV...), subscription (Azure for Students), resource group (DaaS-RG), start time (10/9/2025, 8:55:08 AM), and correlation ID (e4c49a93-0156-43d1-b853-3b...). A green checkmark indicates the deployment is complete. Below this are sections for 'Deployment details' and 'Next steps', with a 'Go to resource' button. The right sidebar features links for 'Cost management', 'Microsoft Defender for Cloud', and 'Free Microsoft tutorials'. The bottom page is titled '1.0.0 (daasvminstance/daasvminstance/1.0.0)' under 'VM image version'. It shows essentials like resource group (DaaS-RG), status (Succeeded), location (East Asia), and replication mode (Full). A JSON View button is available on the right. Both pages have standard browser navigation and search bars at the top.

## Result:

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