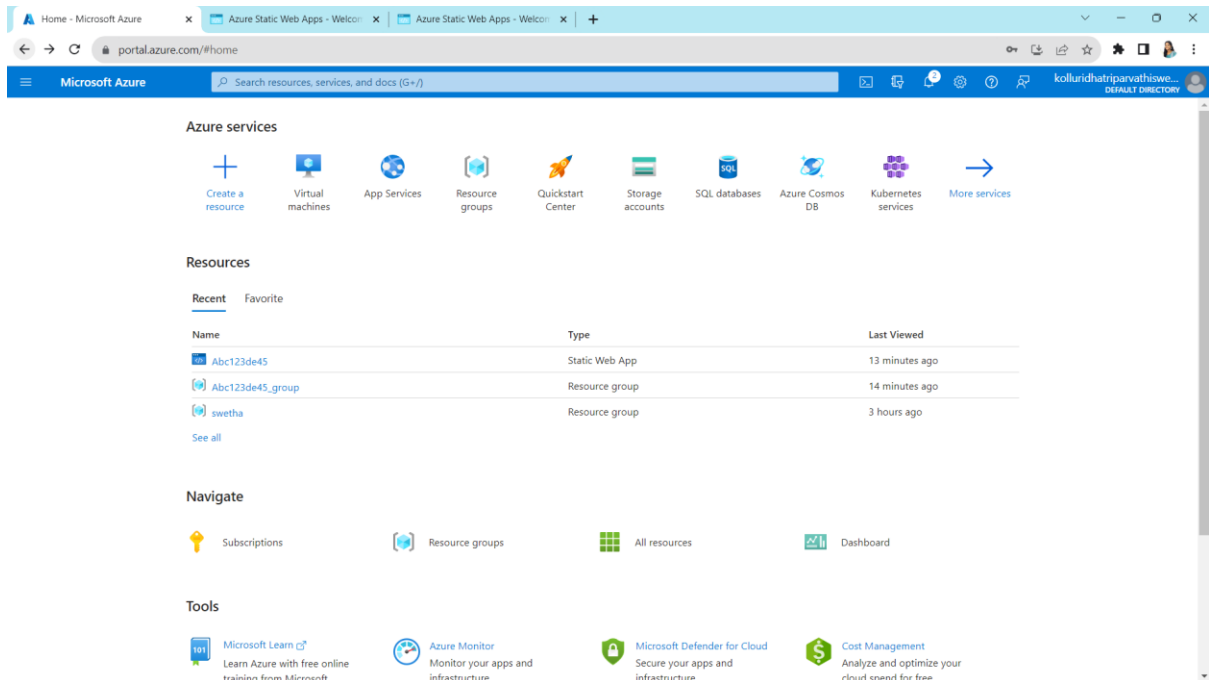


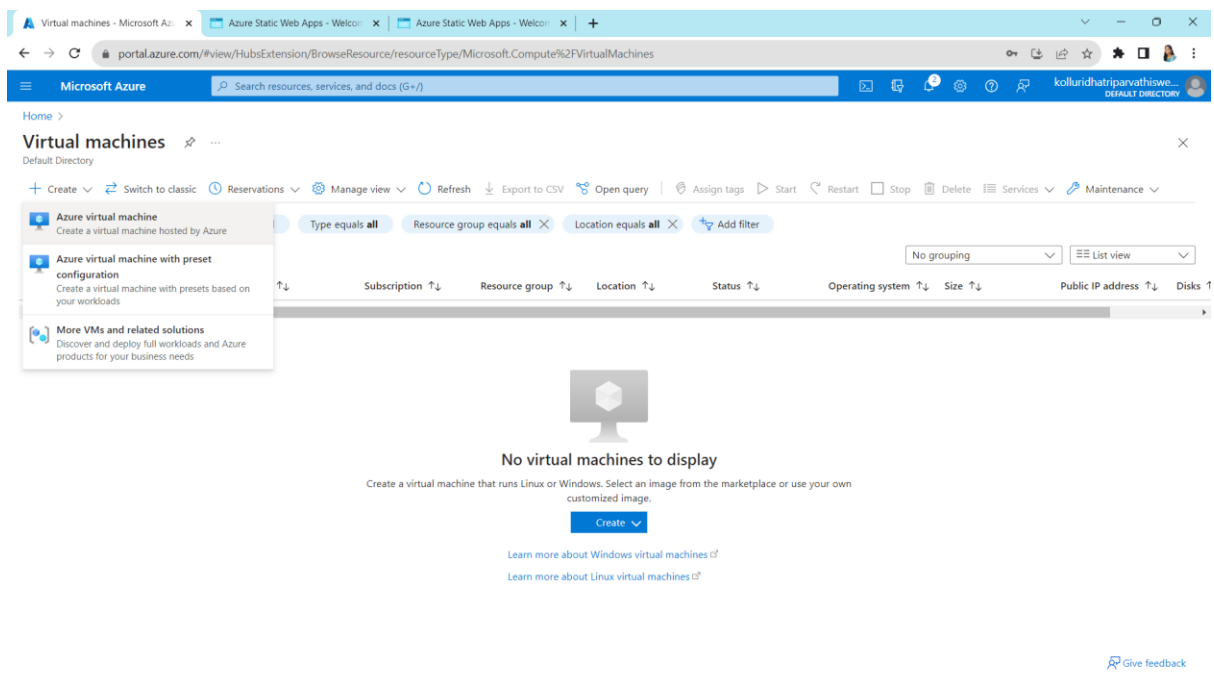
EXPERIMENT 13

Demonstrate Infrastructure as a Service (IaaS) by establishing the remote connection, launch the created VM image and run in your desktop.first we can sign in into Azure

Select virtual machine to create a virtual machine



Click on create



Fill up the given requirements

Create a virtual machine - Micro x +

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

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

Home > Virtual machines >

Create a virtual machine ...

⚠ Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

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 * ⓘ swetha
[Create new](#)

Instance details

Virtual machine name * ⓘ vm1 ✓

Region * ⓘ (Asia Pacific) South India

Availability options ⓘ No infrastructure redundancy required

Security type ⓘ Trusted launch virtual machines
[Configure security features](#)

Image * ⓘ Ubuntu Server 20.04 LTS - x64 Gen2
[See all images](#) | [Configure VM generation](#)

VM architecture ⓘ
☐ Arm64
☒ x64

[Review + create](#) < Previous Next : Disks > [Give feedback](#)

go.microsoft.com/fwlink/?LinkId=2127231

Change the disc size and click on next

Create a virtual machine - Micro x +

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

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

Home > Virtual machines >

Create a virtual machine ...

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

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#) ⓘ

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host ⓘ ☐
Encryption at host is not registered for the selected subscription.
[Learn more about enabling this feature](#) ⓘ

OS disk

OS disk size ⓘ 32 GiB (P4)

Some images are, by default, smaller than the selected OS disk size.
[Click here to learn how to expand your disk partition size after you create your VM.](#) ⓘ

OS disk type * ⓘ Premium SSD (locally-redundant storage)

Delete with VM ⓘ ☒

Key management ⓘ Platform-managed key

[Review + create](#) < Previous Next : Networking > [Give feedback](#)

Click on next

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal. The 'Networking' tab is selected. The page displays the following configuration options:

- NIC network security group:** Basic (selected), None, Advanced.
- Public inbound ports:** Allow selected ports (selected), None.
- Select inbound ports:** SSH (22) (selected).
- Delete public IP and NIC when VM is deleted:** ☐.
- Enable accelerated networking:** ☒.
- Load balancing:** You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#).
- Load balancing options:** None (selected), Azure load balancer.

At the bottom, there are buttons for 'Review + create', '< Previous', and 'Next : Management >'. A 'Give feedback' link is also present.

Click on next

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal, with the 'Management' tab selected. The page displays the following configuration options:

- Microsoft Defender for Cloud:** Your subscription is protected by Microsoft Defender for Cloud basic plan.
- Identity:** Enable system assigned managed identity ☐.
- Azure AD:** Login with Azure AD ☐. RBAC role assignment of Virtual Machine Administrator Login or Virtual Machine User Login is required when using Azure AD login. [Learn more](#).
- Auto-shutdown:** Enable auto-shutdown ☐.

At the bottom, there are buttons for 'Review + create', '< Previous', and 'Next : Monitoring >'. A 'Give feedback' link is also present.

Click on next

The screenshot shows the 'Monitoring' tab of the 'Create a virtual machine' wizard in the Microsoft Azure portal. The breadcrumb navigation is 'Home > Virtual machines > Create a virtual machine'. The tabs are 'Basics', 'Disks', 'Networking', 'Management', 'Monitoring' (selected), 'Advanced', 'Tags', and 'Review + create'. The 'Monitoring' section is titled 'Configure monitoring options for your VM.' and contains two sections: 'Alerts' with a checkbox 'Enable recommended alert rules' (unchecked), and 'Diagnostics' with a section 'Boot diagnostics' containing three radio buttons: 'Enable with managed storage account (recommended)' (selected), 'Enable with custom storage account', and 'Disable'. Below this is a checkbox 'Enable OS guest diagnostics' (unchecked). At the bottom, there are buttons for 'Review + create', '< Previous', and 'Next: Advanced >'. A 'Give feedback' link is also present.

Click on next

The screenshot shows the 'Advanced' tab of the 'Create a virtual machine' wizard in the Microsoft Azure portal. The breadcrumb navigation is 'Home > Virtual machines > Create a virtual machine'. The tabs are 'Basics', 'Disks', 'Networking', 'Management', 'Monitoring', 'Advanced' (selected), 'Tags', and 'Review + create'. The 'Advanced' section is titled 'Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.' and contains three sections: 'Extensions' with a link 'Select an extension to install', 'VM applications' with a link 'Select a VM application to install', and 'Custom data and cloud init' with a text area for 'Custom data'. At the bottom, there are buttons for 'Review + create', '< Previous', and 'Next: Tags >'. A 'Give feedback' link is also present.

Give some names and values and click on next

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal. The 'Tags' tab is selected, displaying a table for adding tags. The table has three columns: Name, Value, and Resource. Two tags are already added: 'cloud' with value '123' and resource 'All resources', and 'computing' with value '456' and resource '13 selected'. There are input fields for adding more tags.

Name	Value	Resource
cloud	123	All resources
computing	456	13 selected
		13 selected

Buttons at the bottom: Review + create, < Previous, Next: Review + create >, and Give feedback.

It shows our summary

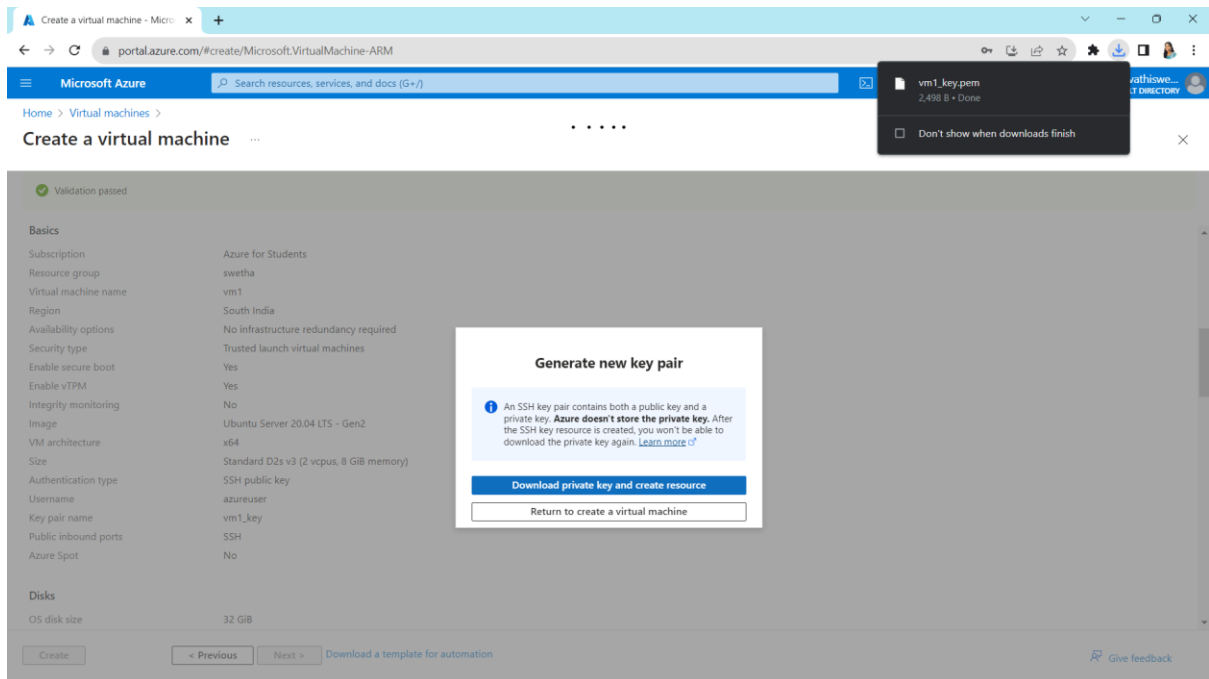
The screenshot shows the 'Review + create' page in the Microsoft Azure portal. A green banner at the top indicates 'Validation passed'. The page displays a summary of the configuration under the 'Basics' section. The configuration includes: Subscription (Azure for Students), Resource group (swetha), Virtual machine name (vm1), Region (South India), Availability options (No infrastructure redundancy required), Security type (Trusted launch virtual machines), Enable secure boot (Yes), Enable vTPM (Yes), Integrity monitoring (No), Image (Ubuntu Server 20.04 LTS - Gen2), VM architecture (x64), Size (Standard D2s v3 (2 vcpus, 8 GiB memory)), Authentication type (SSH public key), Username (azureuser), Key pair name (vm1_key), Public inbound ports (SSH), and Azure Spot (No). The 'Disks' section shows the OS disk size as 32 GiB. Buttons at the bottom: Create, < Previous, Next >, Download a template for automation, and Give feedback.

Basics	
Subscription	Azure for Students
Resource group	swetha
Virtual machine name	vm1
Region	South India
Availability options	No infrastructure redundancy required
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Ubuntu Server 20.04 LTS - Gen2
VM architecture	x64
Size	Standard D2s v3 (2 vcpus, 8 GiB memory)
Authentication type	SSH public key
Username	azureuser
Key pair name	vm1_key
Public inbound ports	SSH
Azure Spot	No

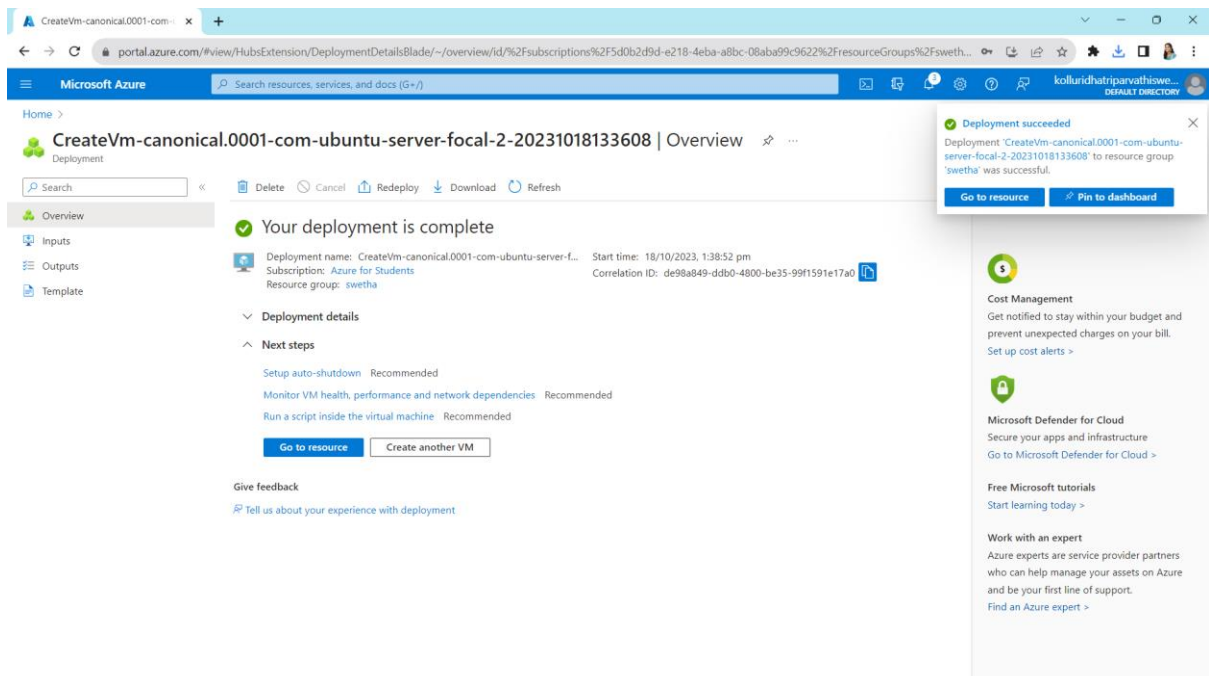
Disks	
OS disk size	32 GiB

Buttons at the bottom: Create, < Previous, Next >, Download a template for automation, and Give feedback.

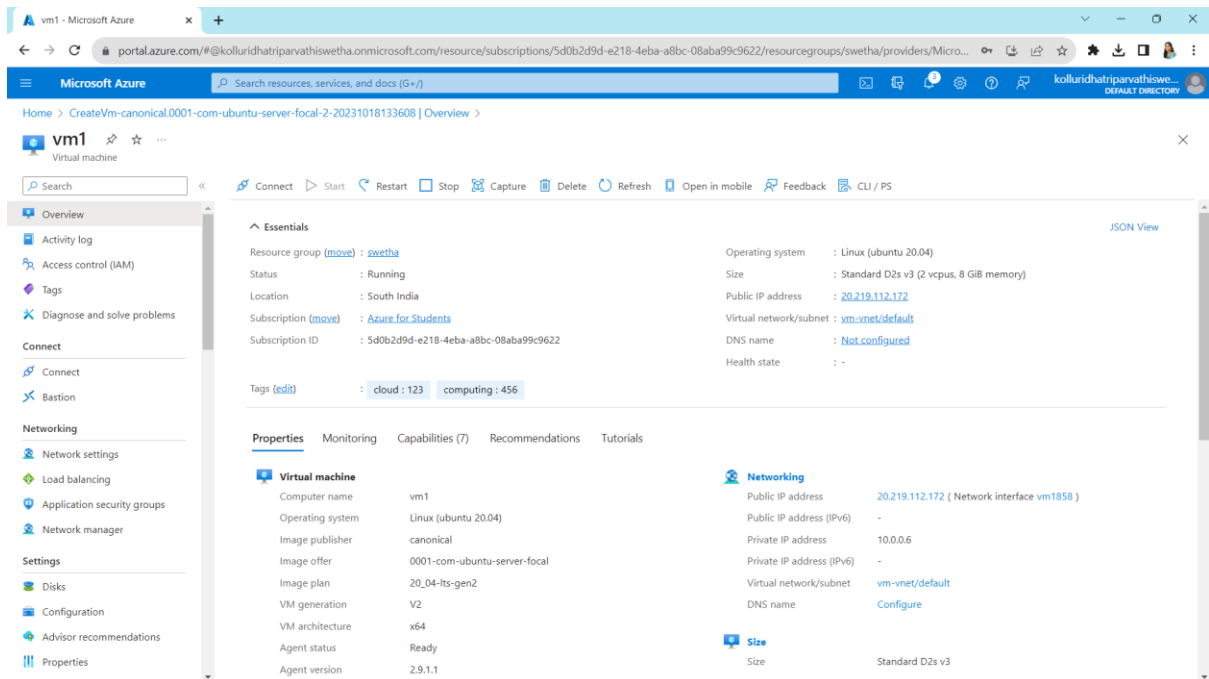
Click on create and it asks to download click on download



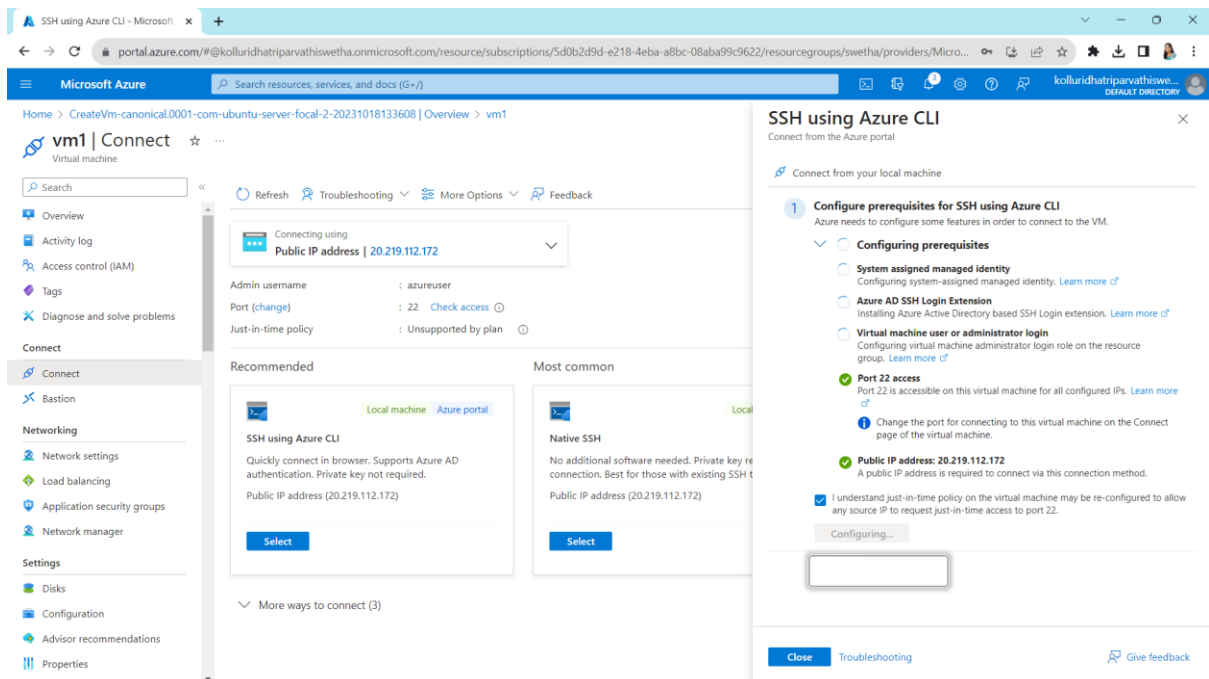
Our required virtual machine is created



Click on connect



It will loaded and appears like this



And then close

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Azure logo, search bar, and user profile. The main content area is titled 'vm1 | Connect' and shows various connection options. The 'Connect' section is expanded, displaying a search bar and a list of connection methods. The 'SSH using Azure CLI' method is highlighted. The 'Public IP address' is 20.219.112.172. The 'Admin username' is 'azureuser' and the 'Port' is 22. The 'Just-in-time policy' is 'Unsupported by plan'. The 'Recommended' section shows 'SSH using Azure CLI' as the most common method. The 'Native SSH' method is also listed. The 'SSH using Azure CLI' method is selected, showing a list of prerequisites: 'Configure prerequisites for SSH using Azure CLI', 'Prerequisites configured', 'System assigned managed identity', 'Azure AD SSH Login Extension', and 'Virtual machine user or administrator login'. The 'Close' button is visible.

The screenshot displays the Azure portal interface for configuring SSH access to a virtual machine. The left-hand navigation pane is visible, showing the 'Connect' section. The main area is titled 'SSH using Azure CLI' and provides instructions on how to connect from the Azure portal or a local machine. A modal dialog is open at the bottom, indicating that no storage is mounted and offering to create a new storage account for Azure Cloud Shell.

Finally established the remote connection

SSH using Azure CLI - Microsoft

portal.azure.com/#@kolluridhatiparvathiswetha.onmicrosoft.com/resource/subscriptions/5d0b2d9d-e218-4eba-a8bc-08aba99c9622/resourcegroups/swetha/providers/Micro...

Microsoft Azure

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20231018133608 | Overview > vm1

vm1 | Connect

Virtual machine

Search

Refresh Troubleshooting More Options Feedback

Connecting using Public IP address | 20.219.112.172

Admin username : azureuser

Port (change) : 22 Check access

Just-in-time policy : Unsupported by plan

Recommended Most common

SSH using Azure CLI Local machine Azure portal

SSH using Azure CLI Native SSH

SSH using Azure CLI

Connect from the Azure portal

Connect from your local machine

1 Configure prerequisites for SSH using Azure CLI

Azure needs to configure some features in order to connect to the VM.

Prerequisites configured

- System assigned managed identity
- Azure AD SSH Login Extension
- Virtual machine user or administrator login

Close Troubleshooting Give feedback

Bash

Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

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

az ssh vm --resource-group swetha --vm-name vm1 --subscription 5d0b2d9d-e218-4eba-a8bc-08aba99c9622

Storage fileshare subscription 5d0b2d9d-e218-4eba-a8bc-08aba99c9622 is not registered to Microsoft.CloudShell Namespace. Please follow these instructions "https://aka.ms/RegisterCloudShell" to register. In future, unregistered subscriptions will have restricted access to CloudShell service.

swetha [~]\$ az ssh vm --resource-group swetha --vm-name vm1 --subscription 5d0b2d9d-e218-4eba-a8bc-08aba99c9622

OpenSSH 8.9p1, OpenSSL 1.1.1k FIPS 25 Mar 2021