Creation Of Virtual Machine in cloud and connecting using SSH

ABOUT:

SSH (Secure Shell) in an **Azure Virtual Machine (VM)** is a secure protocol used to remotely connect and manage Linux-based VMs over an encrypted connection. It allows you to execute commands, transfer files, and perform administrative tasks securely.

SIGNIFICANCE:

1️⃣🔒 Secure Remote Access

- Provides encrypted communication between the client and VM, preventing unauthorized access and eavesdropping.
- Protects credentials and sensitive data over the network.

2️⃣🛠️ Remote Management & Automation

- Enables remote administration, software installation, and system configuration.
- Can be used for automation via shell scripts and tools like Ansible, Terraform, or Azure CLI.

3️⃣🔑 Key-Based Authentication (Enhanced Security)

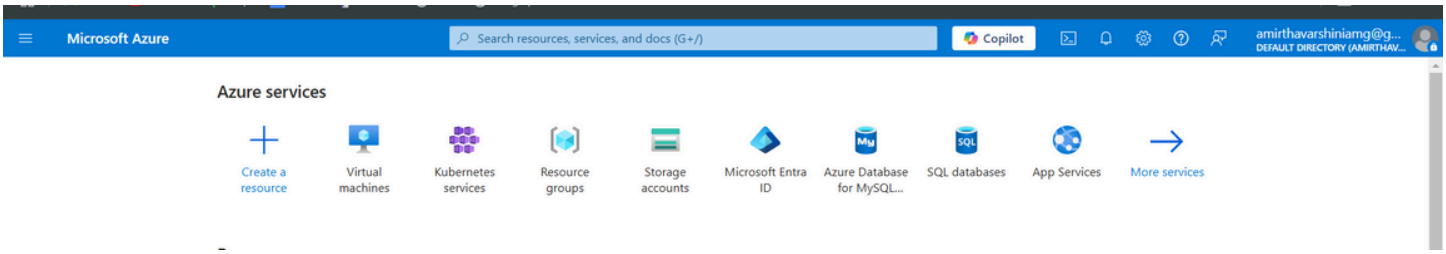
- Uses public-private key pairs for authentication, reducing risks compared to password-based login.
- Helps enforce security policies by disabling password authentication.

4️⃣🌐 Secure File Transfers

- Supports SCP (Secure Copy Protocol) and SFTP (Secure File Transfer Protocol) for transferring files between local and remote systems securely.

STEP 1:

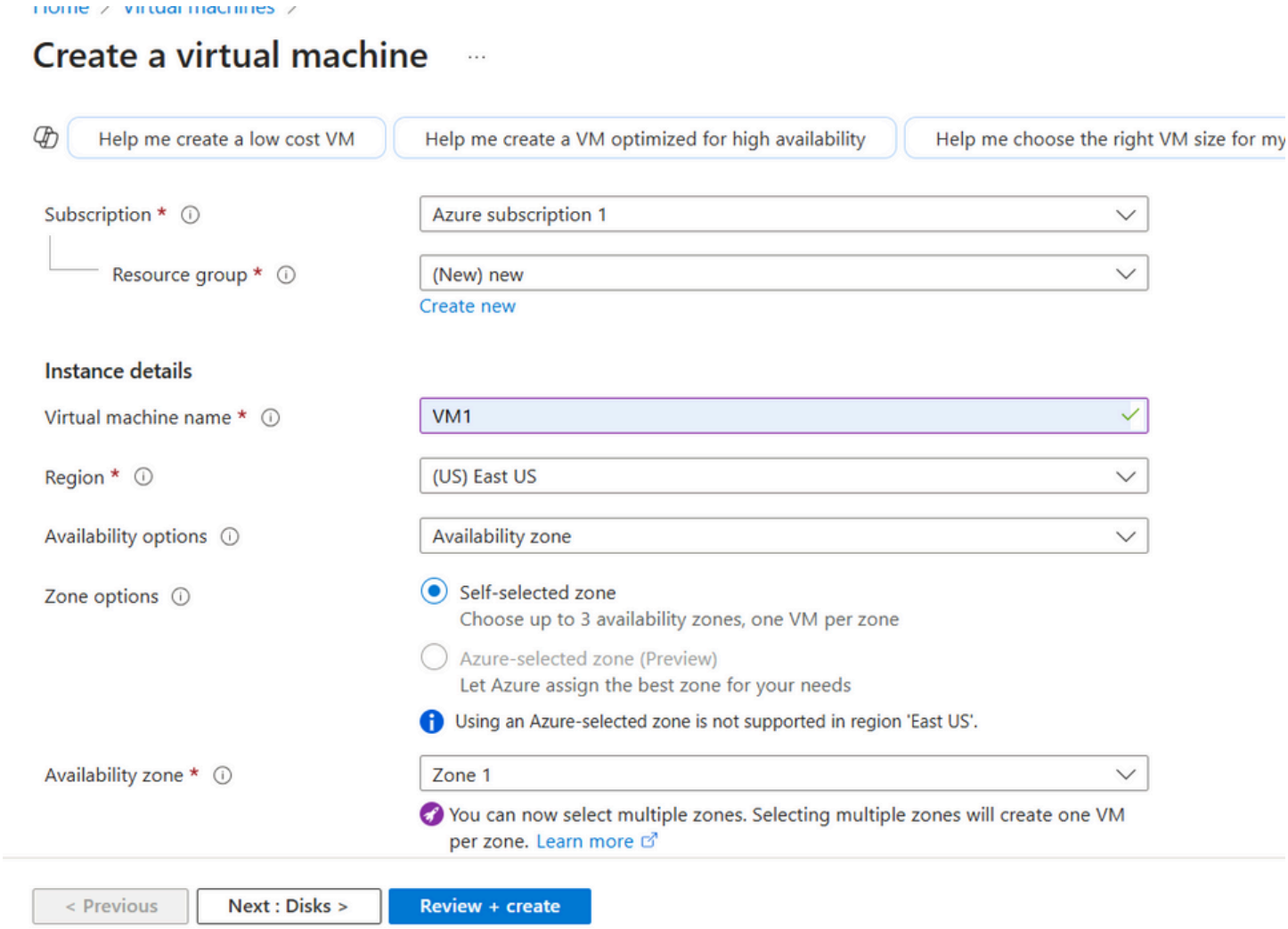
Sign-in to the azure user portal



STEP 2:

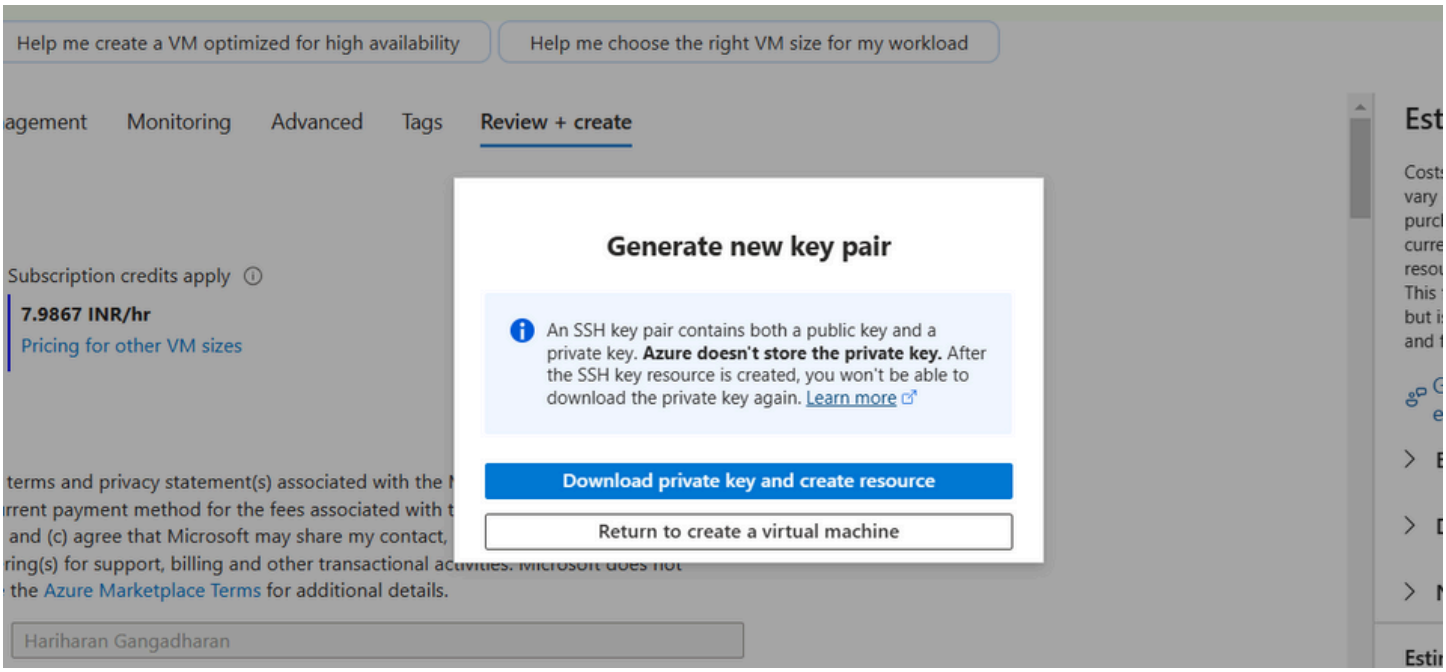
Click on virtual Machine and configure it as per requirement

- Create a resource group
- Authentication type - choose SSH
- Give a key-pair name



STEP 3:

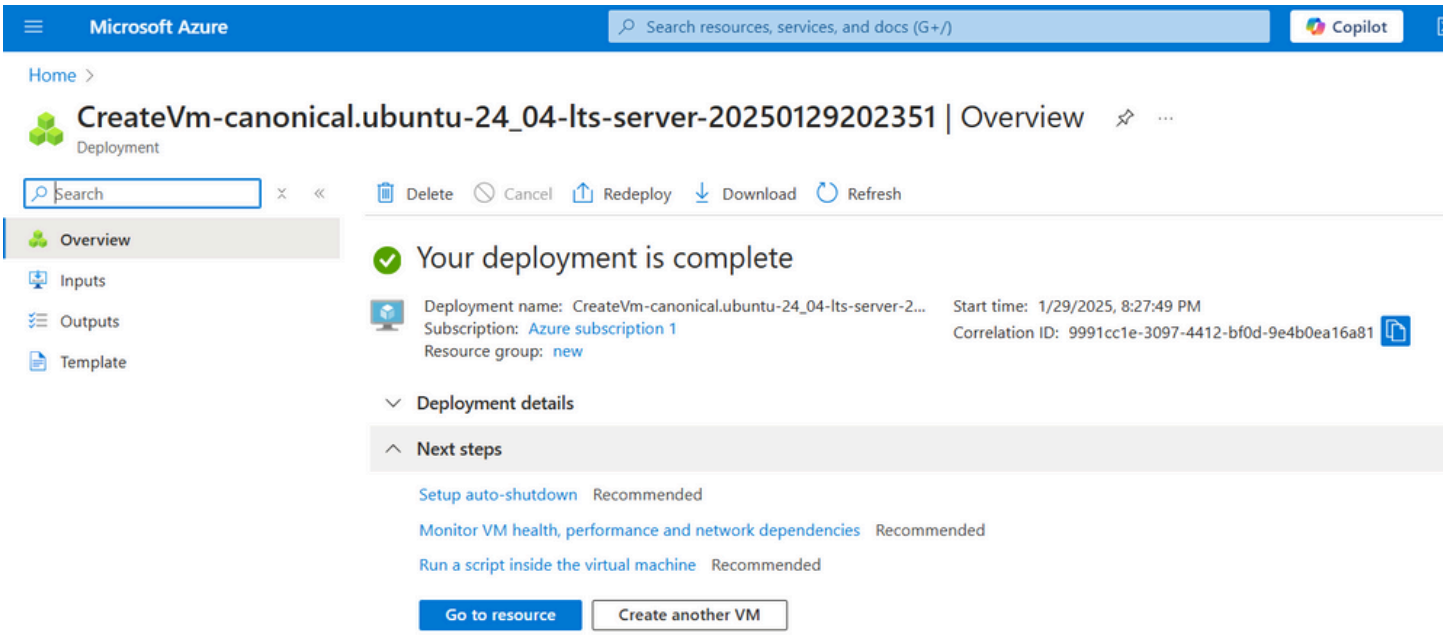
Click on review+create, select create



select Download private key

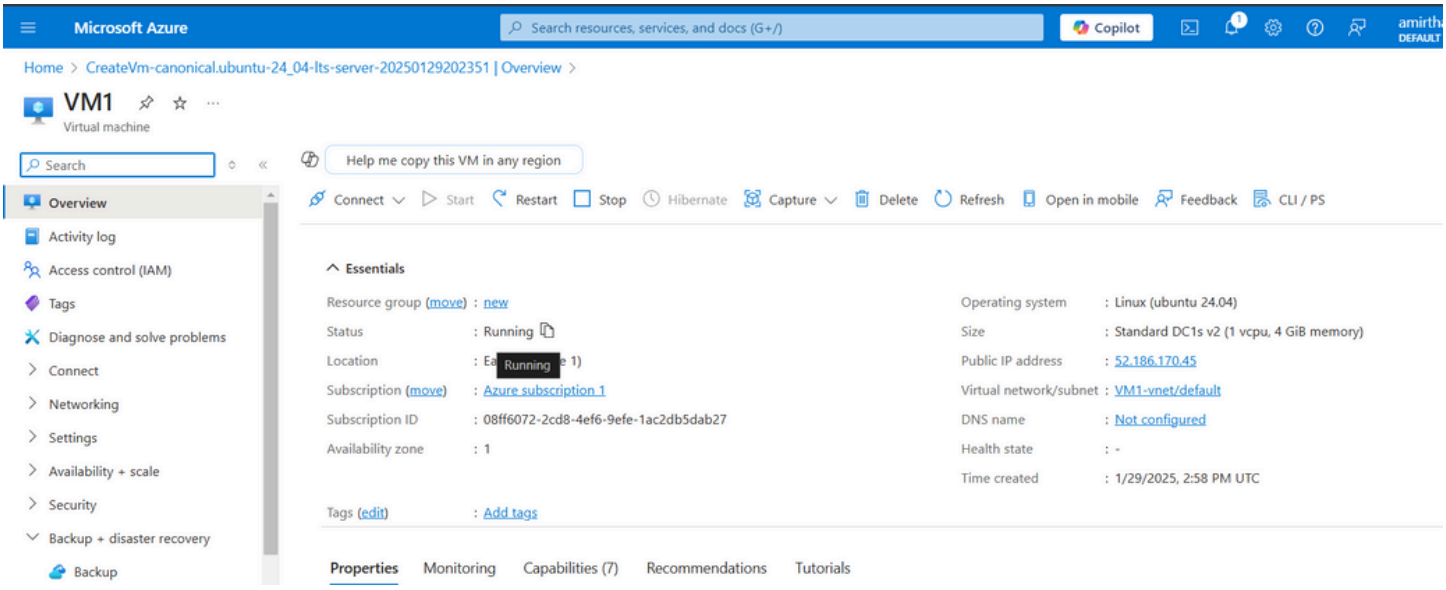
STEP 4:

Deployment is complete



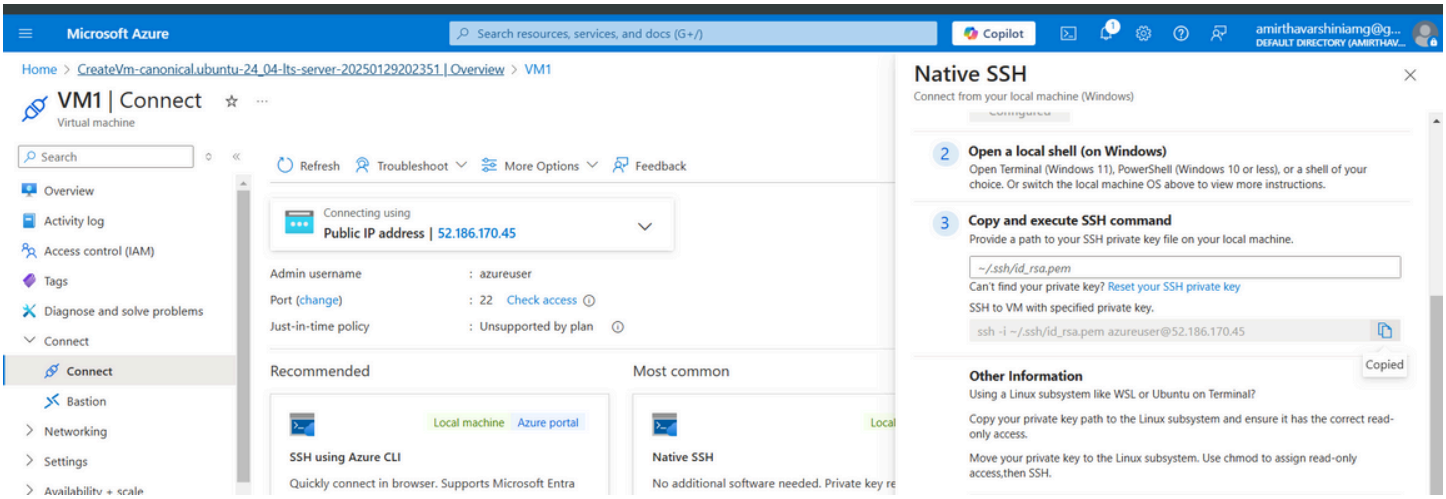
STEP 5:

Click on go to resource, select connect



STEP 6:

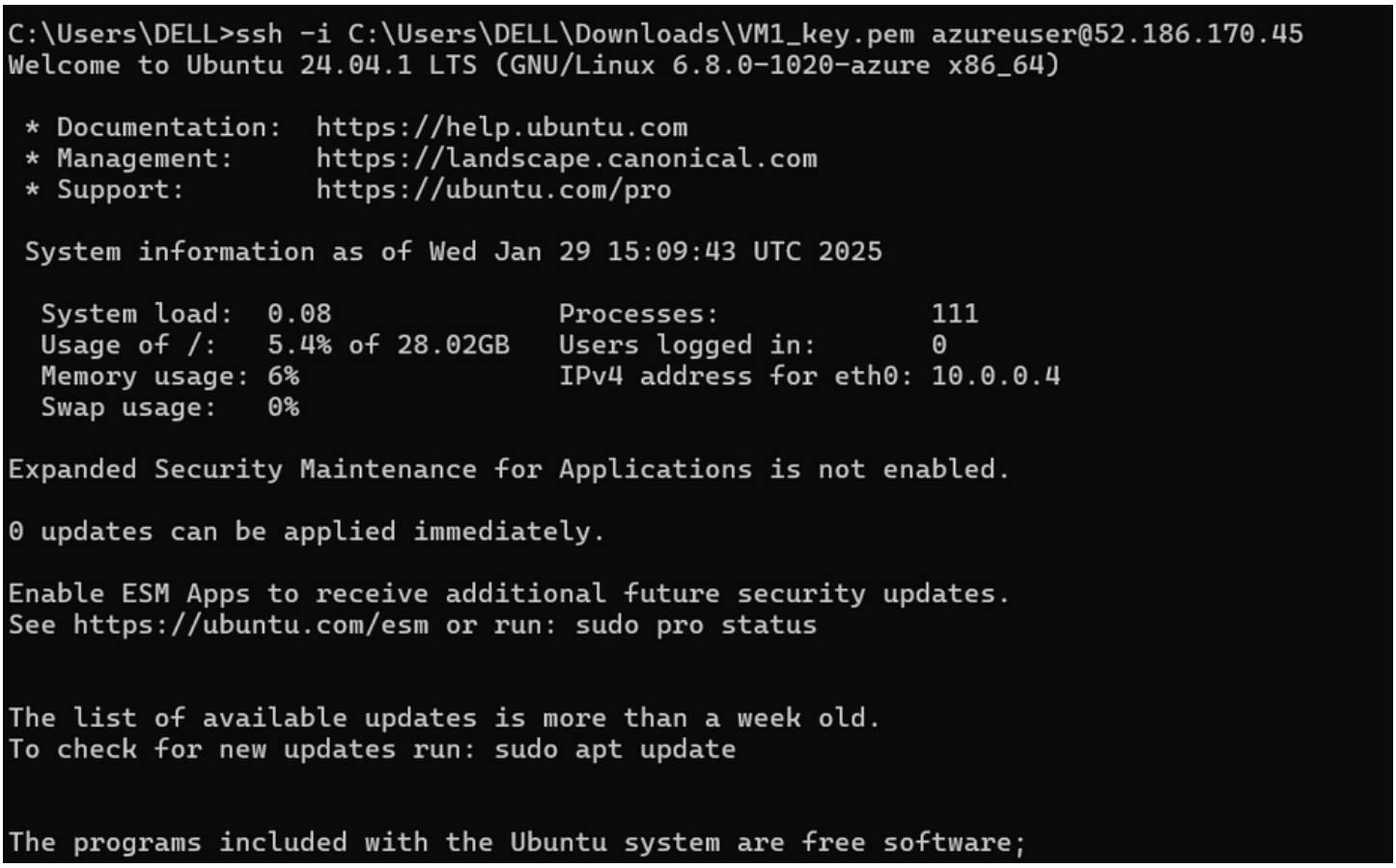
Select SSH and copy the path



STEP 7:

Open command prompt, copy the path of downloaded file and paste it here. click enter

The VM is accessed successfully



Outcomes of Using SSH in Azure Virtual Machines

1️⃣🔒 Secure & Encrypted Access

- Ensures safe remote login and communication, protecting sensitive data from cyber threats.

2️⃣🛠️ Efficient Remote Management

- Enables seamless administration, troubleshooting, and automation of server tasks from anywhere.

3️⃣🚀 Enhanced DevOps & CI/CD Integration

- Facilitates secure deployments, script execution, and server configuration in cloud environments.

4️⃣🔑 Improved Access Control & Authentication

- Strengthens security with key-based authentication and supports multi-user role-based access.