

DEVOPS with MULTI-CLOUD

Practice Tasks

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Course : DevOps with Multi-Cloud
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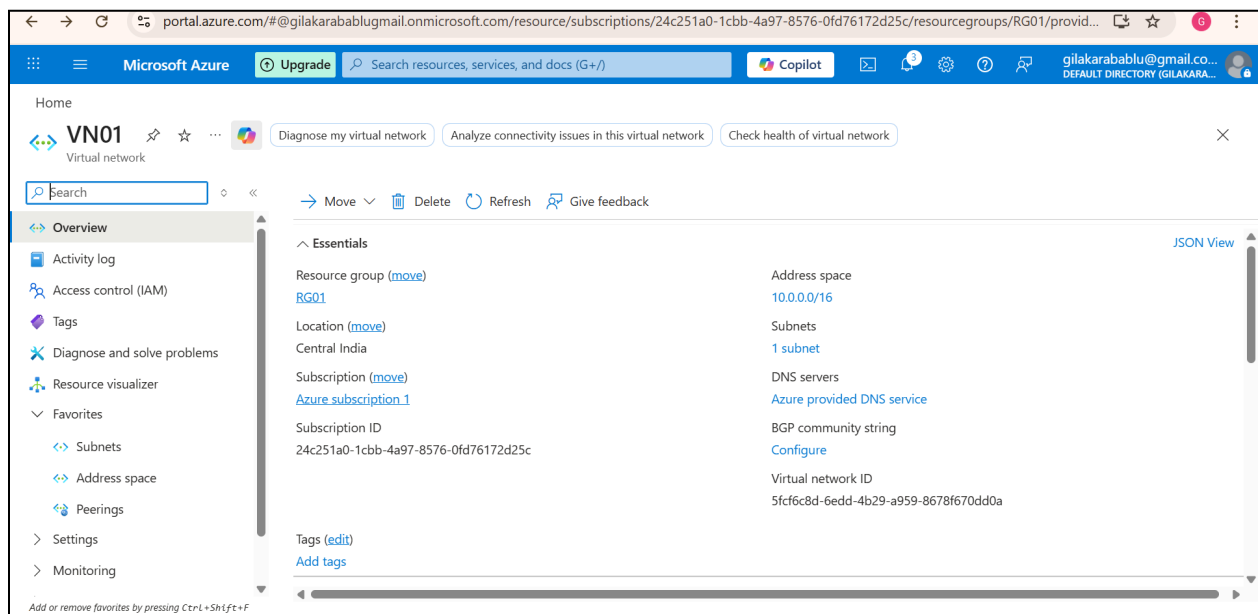
TASK-2 : Virtual Network, Virtual Machine Creation & Nginx installation

Date : 21/01/26

Objective : The objective of this task is to create basic Azure infrastructure components such as a virtual network, subnet, and virtual machine, connect to the virtual machine using SSH, and install a web server for validation.

Virtual Network : The Azure Virtual Network (VNet) is a private, isolated network in Microsoft Azure that enables Azure resources to securely communicate with each other, the internet, and on-premises networks.

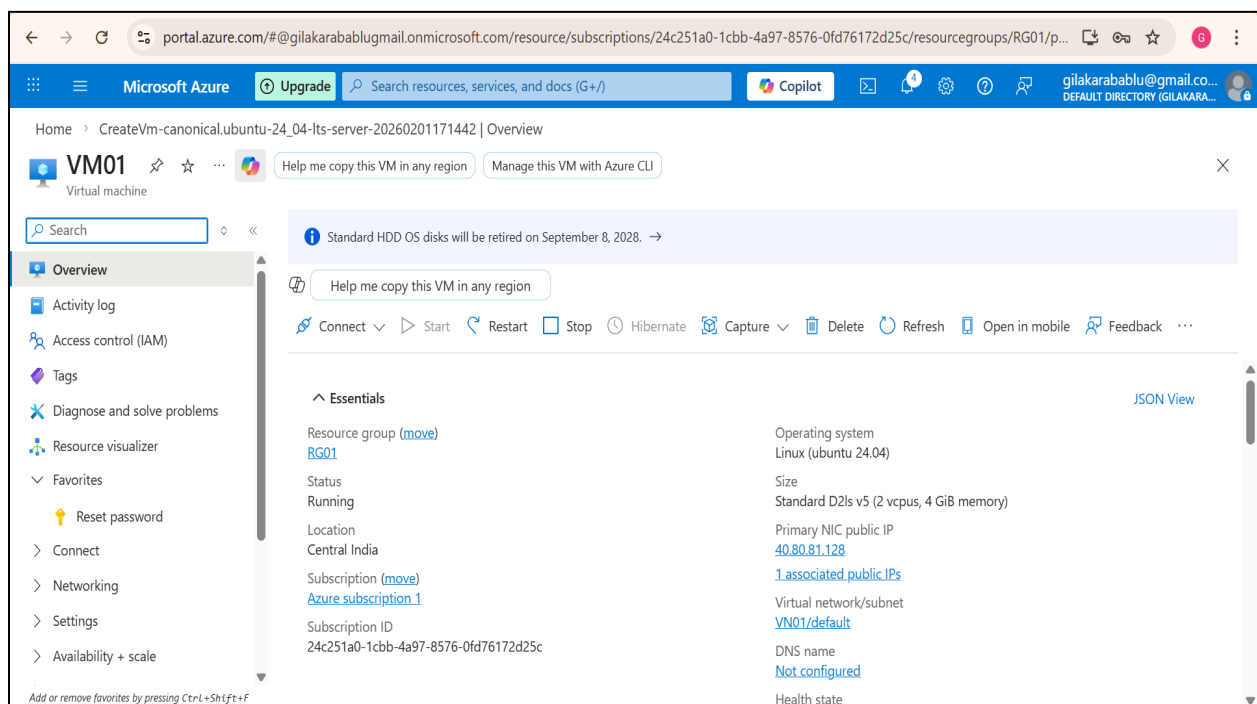
- Created a virtual network under the resource group rg01 with the one default subnet.



Virtual Machine : Azure Virtual Machine (VM) is a virtual computer that runs in the Microsoft Azure cloud.

It lets you install an operating system and run applications just like a physical computer.

- Created a Virtual Machine vm01 with the Ubuntu Linux Operating System in virtual n/w vn01 under rg01, With allowing the port numbers 80(http) and 22(ssh)



fig(2)

Nginx Web Server : Nginx is used to host and serve web pages to users over the internet. This setup allows the virtual machine to function as a basic web server in the Azure cloud.

- Now using the mobaxterm, logged in to the virtual machine and installed the nginx web server.

- The fig(3) shows that the nginx is successfully installed in the virtual machine vm01.

```

Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 68452 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.5_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.5) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.5_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.5) ...
Setting up nginx-common (1.24.0-2ubuntu7.5) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.
Setting up nginx (1.24.0-2ubuntu7.5) ...
 * Upgrading binary nginx
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for ufw (0.36.2-6) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

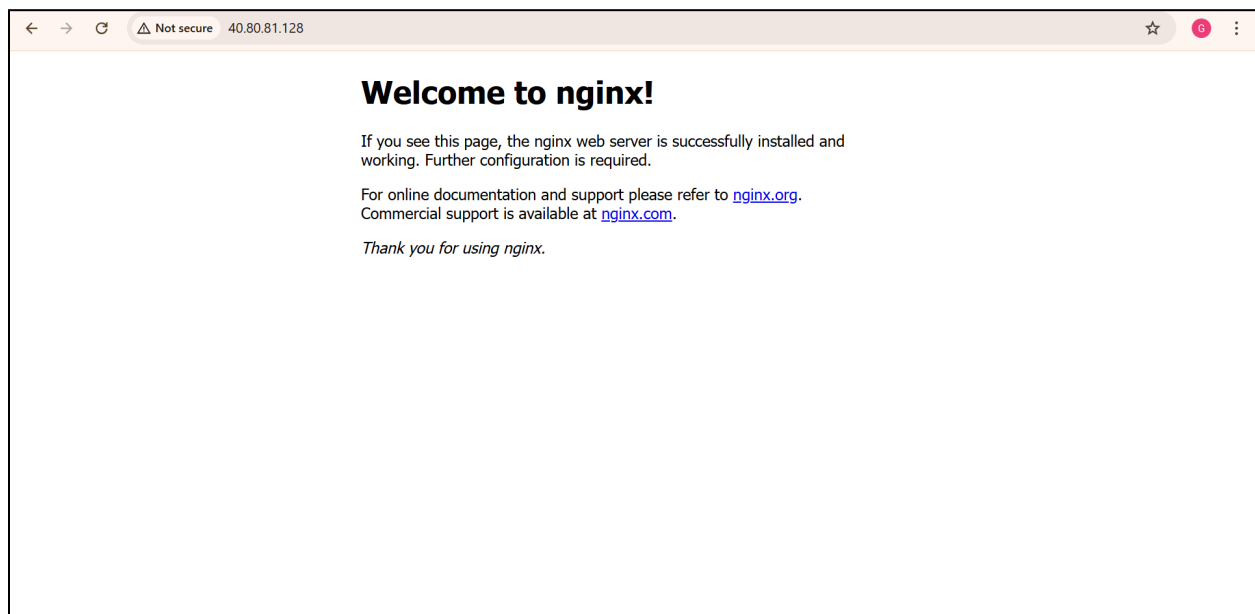
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@VM01:/home/azureadmin# nginx --version
nginx: invalid option: '-'
root@VM01:/home/azureadmin# nginx -version
nginx version: nginx/1.24.0 (Ubuntu)
root@VM01:/home/azureadmin#
  
```

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fig(3)

- To validate the installation we can check it by opening the virtual machine in the browser using its public ip address.



fig(4)