Mid Term Submission

SUBJECT: CLOUD PERFORMANCE TUNING SUBJECT CODE:

CSEG3015

SUBMITTED TO:

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School of Computer Science

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Video Link : https://drive.google.com/file/d/1-1JMv-Dk5Suq9fQhbEP_RboPbKuTkVzC/view?usp=drivesdk

What is Cloud Computing?

Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

What is cloud performance tuning?

Cloud performance tuning is the process of optimizing the speed, efficiency, and reliability of cloud-based applications and services. It requires a combination of technical skills, analytical tools, and best practices to identify and resolve bottlenecks, errors, and resource wastage.

Difference Between AWS and Microsoft Azure

Both Amazon Web Services (AWS) and Microsoft Azure are leading cloud service providers, and they offer various services and tools for cloud performance tuning. While the specific differences between them can change over time as they introduce new features and updates, here are some key points to consider when comparing AWS and Azure in terms of cloud performance tuning:

1. **Cost**: The choice between AWS and Microsoft Azure in terms of cost depends on your specific needs. Both cloud providers have competitive pricing, but the most cost-effective option for you will depend on the services you use, where you use them, and how you use them. It is like comparing prices at different stores – it depends on what you are buying and where you are buying it. To find the best fit, you'll need to analyze your usage, consider any long-term commitments, and keep an eye on data transfer

costs according to me Azure is costly as here if use AMI's the using cost is high here and give less memory for using in free tier as compare to AWS.

2. **Storage:** AWS and Microsoft Azure both offer robust storage solutions. AWS provides Amazon S3, EBS, and Glacier, while Azure offers Blob Storage and Azure Files. The choice depends on your specific storage needs and preferences. Consider factors like performance, scalability, and pricing to determine the best fit for your use case. Largest instance AWS offer 256 GB Ram + 16v CPU while Azure offers 224 GB + 16 vCPUs.
3. **Availability Zone:** Availability Zone: Aws was the first on of its kind which means Aws is hosting in hosting in multiple locations worldwide and it's true for Azure as well but differences occur in the numbers of regions and availability zones talking of numbers Aws has 55 availability zones worldwide with eight more on its weight whereas Azure is having 44 availability zones.
4. **Services:** Aws and Azure both covers 100 plus services like compute, Database, Storage, Security, Networking, and many more Some of the services that Aws covers (Ec2, AWS RDS S3, IAM, VPC, CloudWatch and cloud9 Similarly in Azure covers Vm, SQL, blob Storage, virtual network and Azure monitor and visual studio and many more.
5. **Open Source Integration:** Aws has quite better relations with open source communities leading to more open integration with Aws which includes open source tools like Jenkins Docker, ansible, GitHub and its very friendly when it comes to Linux servers while in Azure it offers native Integrations for windows development tools such as VBS, SQL and more as you all know Microsoft hasn't always embraced this model but recently they have been catching with it and organization can run on RedHat and Hadoop clusters in azure

Project Name: - Platform for Video Conferencing

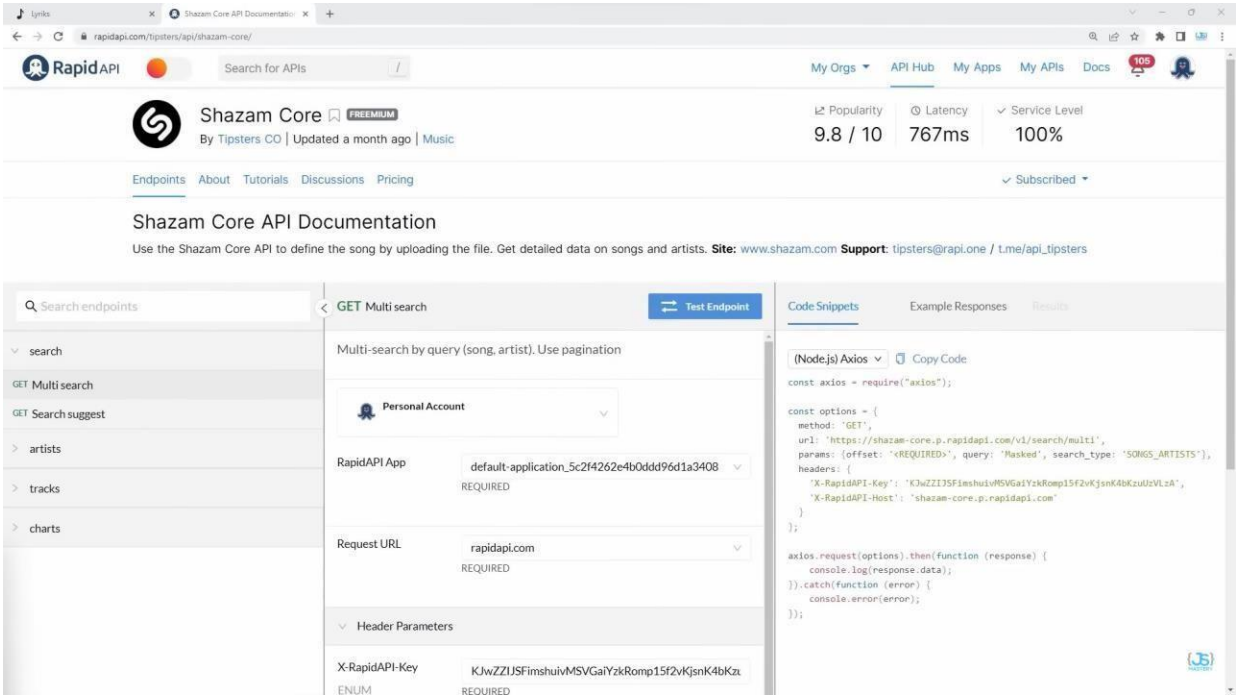
Deploying my project on **Azure**, on **Windows and Ubuntu Virtual Machine** and analyzing performance metrics, **CPU, and Memory Utilization** on Windows and Ubuntu Virtual Machines in OS-specific tools like Task Manager (Windows) or top/htop (Ubuntu).

Project Implementation:

CODE:

```
337 function on_message(self, message_id, message, sender)
338     -- check if we received a contact point message
339     if message_id == msg_contact_point_response then
340         -- check that the object is something we consider geometry
341         if message.group == group_geometry then
342             --switch player from flying mode if collides with geometry (TO-UPDATE)
343             player_state = state_normal
344             gravity = max_gravity
345             handle_geometry_contact(self, message.normal, message.distance)
346         elseif message.group == group_platform then
347             -- If the message normal is pointing up and we didn't have
348             -- platform contact from below last frame then we have fallen on top
349             -- of a platform and need to treat it like geometry contact
350             -- Any other contact with "platform" is considered as contact where the
351             -- player is passing through the platform from below
352             if message.normal.y > 0 then
353                 if not self.platform_contact_from_below_last_frame then
354                     print(message.normal)
355                     handle_geometry_contact(self, message.normal, message.distance)
356                     self.platform_contact_from_below = false
357                 else
358                     self.platform_contact_from_below = true
359                 end
360             else
361                 self.platform_contact_from_below= true
362             end
363         end
364     elseif message_id == hash("booster") then
365         --booster jump
```

Sources for some help:



Index.html:

```
10  ****************************************
11  */
12  import React, {useContext} from 'react';
13  import {View, Text, TouchableOpacity, StyleSheet} from 'react-native';
14  import chatContext, {controlMessageEnum} from './ChatContext';
15  import ColorContext from './ColorContext';
16  import SecondaryButton from '../atoms/SecondaryButton';
17
18  const HostControlView = () => {
19    const {sendControlMessage} = useContext(chatContext);
20    const {primaryColor} = useContext(ColorContext);
21    return (
22      <>
23        <Text style={style.heading}>Host Controls</Text>
24        <View>
25          <View style={style.btnContainer}>
26            <SecondaryButton
27              onPress={() => sendControlMessage(controlMessageEnum.muteAudio)}
28              text={'Mute all audios'}
29            />
30          </View>
31          <View style={style.btnContainer}>
32            <SecondaryButton
33              onPress={() => sendControlMessage(controlMessageEnum.muteVideo)}
34              text={'Mute all videos'}
35            />
36          </View>
37          <Text style={style.heading}>Create a Poll</Text>
38          <View>
```

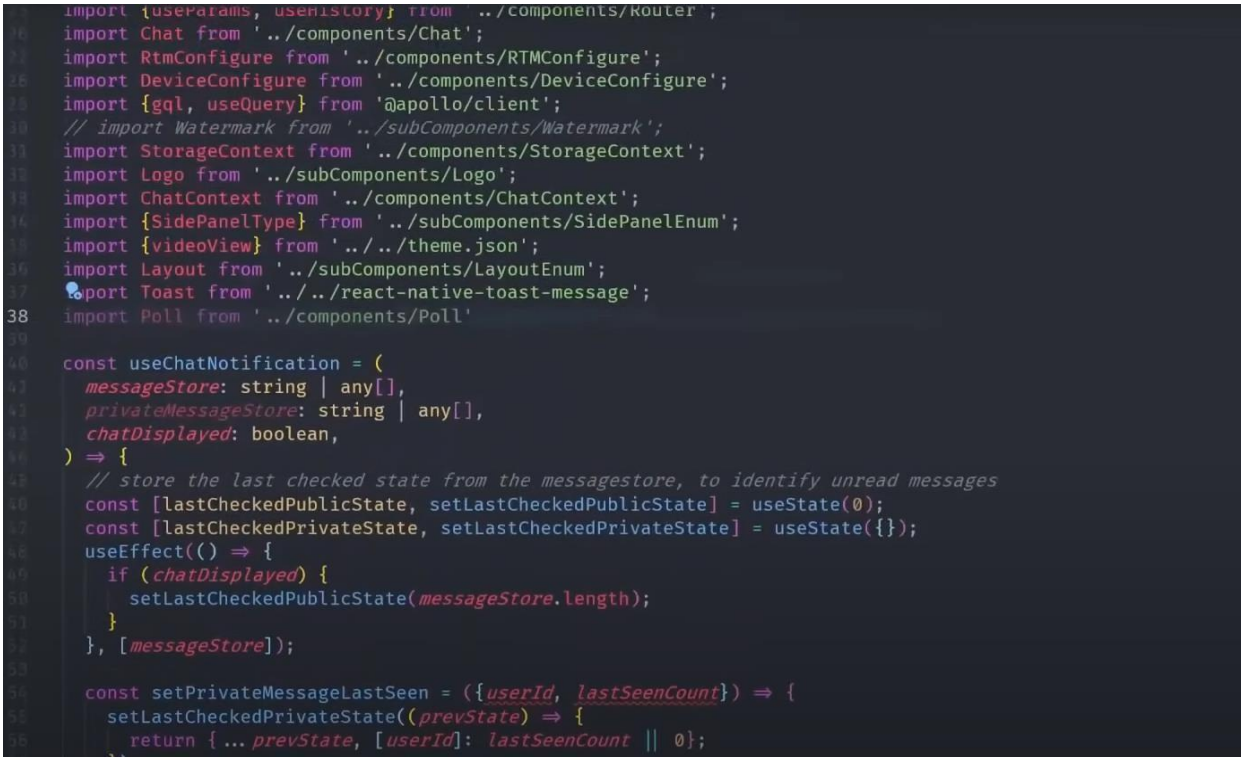
```
jsmchatapp > src > components > HostControlView.tsx > HostControlView
16  import SecondaryButton from '../atoms/SecondaryButton';
17
18  const HostControlView = () => {
19    const {sendControlMessage} = useContext(chatContext);
20    const {primaryColor} = useContext(ColorContext);
21    return (
22      <>
23        <Text style={style.heading}>Host Controls</Text>
24        <View>
25          <View style={style.btnContainer}>
26            <SecondaryButton
27              onPress={() => sendControlMessage(controlMessageEnum.muteAudio)}
28              text={'Mute all audios'}
29            />
30          </View>
31          <View style={style.btnContainer}>
32            <SecondaryButton
33              onPress={() => sendControlMessage(controlMessageEnum.muteVideo)}
34              text={'Mute all videos'}
35            />
36          </View>
37          <Text style={style.heading}>Create a Poll</Text>
38          <View>
39            <TextInput
40              value={}
41              onChange
42            />
43          </View>
44        </View>
45      </>
46    );
47  };
```

onChangeText

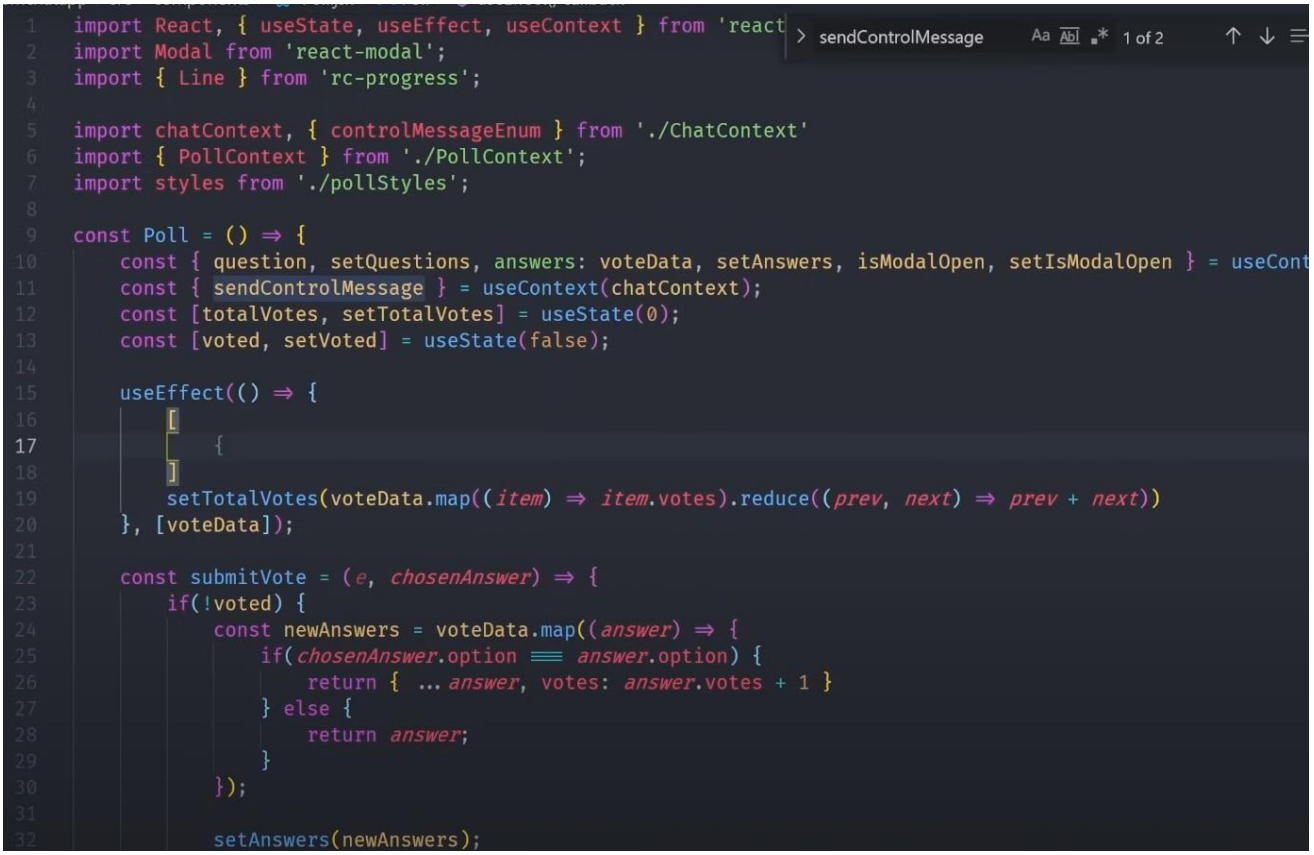
tabnine

```
  const {sendControlMessage} = useContext(chatContext);
  const {primaryColor} = useContext(ColorContext);
  return (
    <>
      <Text style={style.heading}>Host Controls</Text>
      <View>
        <View style={style.btnContainer}>
          <SecondaryButton
            onPress={() => sendControlMessage(controlMessageEnum.muteAudio)}
            text={'Mute all audios'}
          />
        </View>
        <View style={style.btnContainer}>
          <SecondaryButton
            onPress={() => sendControlMessage(controlMessageEnum.muteVideo)}
            text={'Mute all videos'}
          />
        </View>
        <Text style={style.heading}>Create a Poll</Text>
        <View>
          {/* <TextInput
            value={}
            onChangeText={}
            placeholder="Poll Question"
          /> */}
        </View>
      </View>
    </>
  );
};

const style = StyleSheet.create({
```

```
import React, { useState, useEffect, useContext } from 'react';
import Modal from 'react-modal';
import { Line } from 'rc-progress';

import { PollContext } from './PollContext';
import styles from './pollStyles';

const Poll = () => {
    const { question, setQuestions, answers: voteData, setAnswers, isModalOpen, setIsModalOpen } = useCont
    const [totalVotes, setTotalVotes] = useState(0);
    const [voted, setVoted] = useState(false);

    const closeModal = () => {
        setIsModalOpen(false);
        setTotalVotes(0);
        setVoted(false);
        setQuestions('');
        setAnswers([
            { option: '', votes: 0 },
            { option: '', votes: 0 },
            { option: '', votes: 0 },
            { option: '', votes: 0 },
        ]);
    }

    return (
        <Modal
            isOpen={isModalOpen}
            onRequestClose={closeModal}
            content="Poll Modal"
            style={styles.customStyles}
        >
```

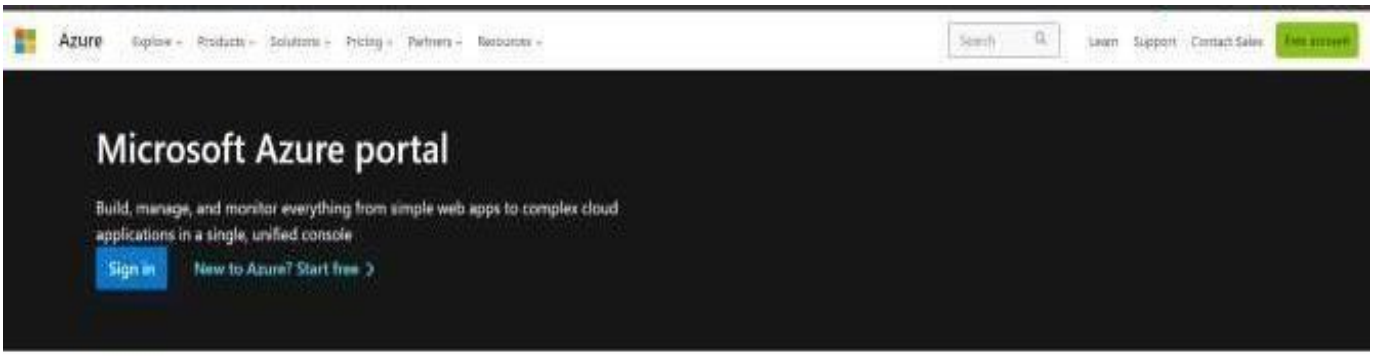


```
import {useParams, useHistory} from '../components/Router';
import Chat from '../components/Chat';
import RtmConfigure from '../components/RTMConfigure';
import DeviceConfigure from '../components/DeviceConfigure';
import {gql, useQuery} from '@apollo/client';
// import Watermark from '../subComponents/Watermark';
import StorageContext from '../components/StorageContext';
import Logo from '../subComponents/Logo';
import ChatContext from '../components/ChatContext';
import {SidePanelType} from '../subComponents/SidePanelEnum';
import {videoView} from '../../theme.json';
import Layout from '../subComponents/LayoutEnum';
import Toast from '../../react-native-toast-message';
import Poll from '../components/Poll'

const useChatNotification = (
  messageStore: string | any[],
  privateMessageStore: string | any[],
  chatDisplayed: boolean,
) => {
  // store the last checked state from the messagestore, to identify unread messages
  const [lastCheckedPublicState, setLastCheckedPublicState] = useState(0);
  const [lastCheckedPrivateState, setLastCheckedPrivateState] = useState({});
  useEffect(() => {
    if (chatDisplayed) {
      setLastCheckedPublicState(messageStore.length);
    }
  }, [messageStore]);

  const setPrivateMessageLastSeen = ({userId, lastSeenCount}) => {
    setLastCheckedPrivateState((prevState) => {
      return {...prevState, [userId]: lastSeenCount || 0};
```



DEPLOYMENT: FOR

WINDOWS: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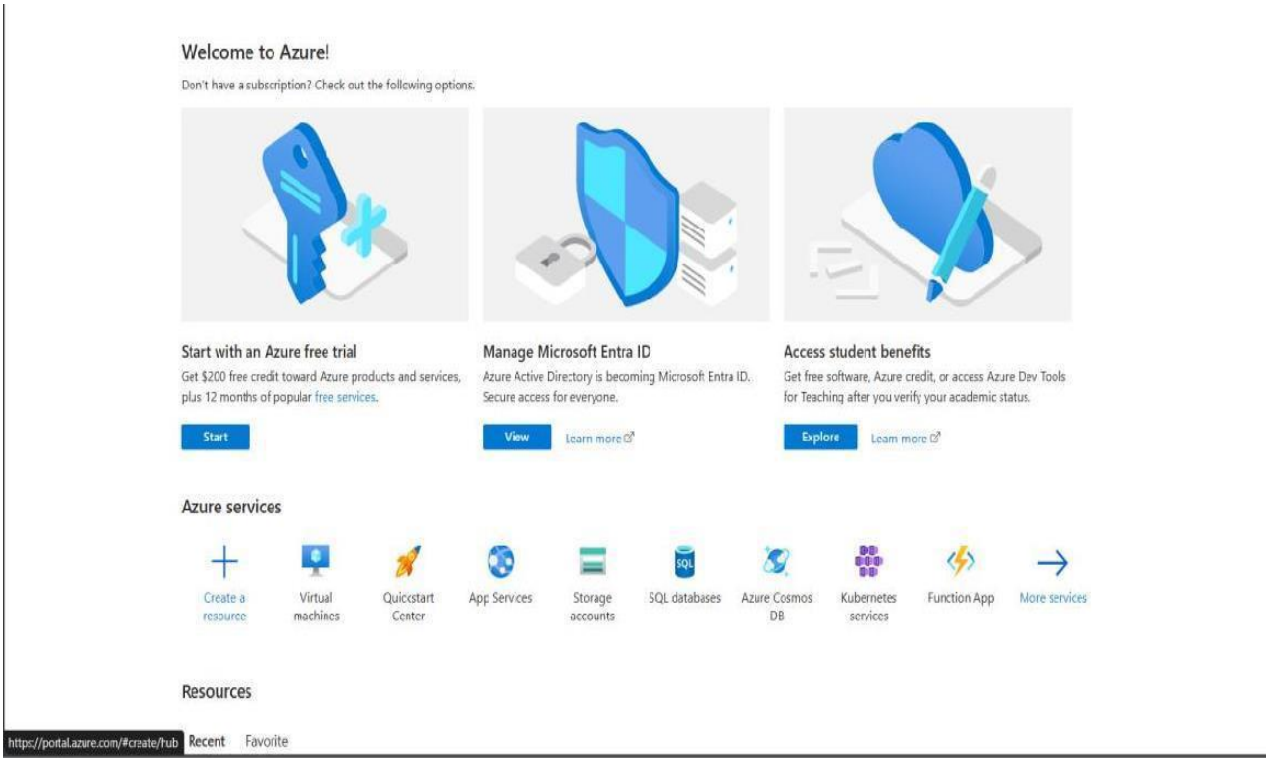
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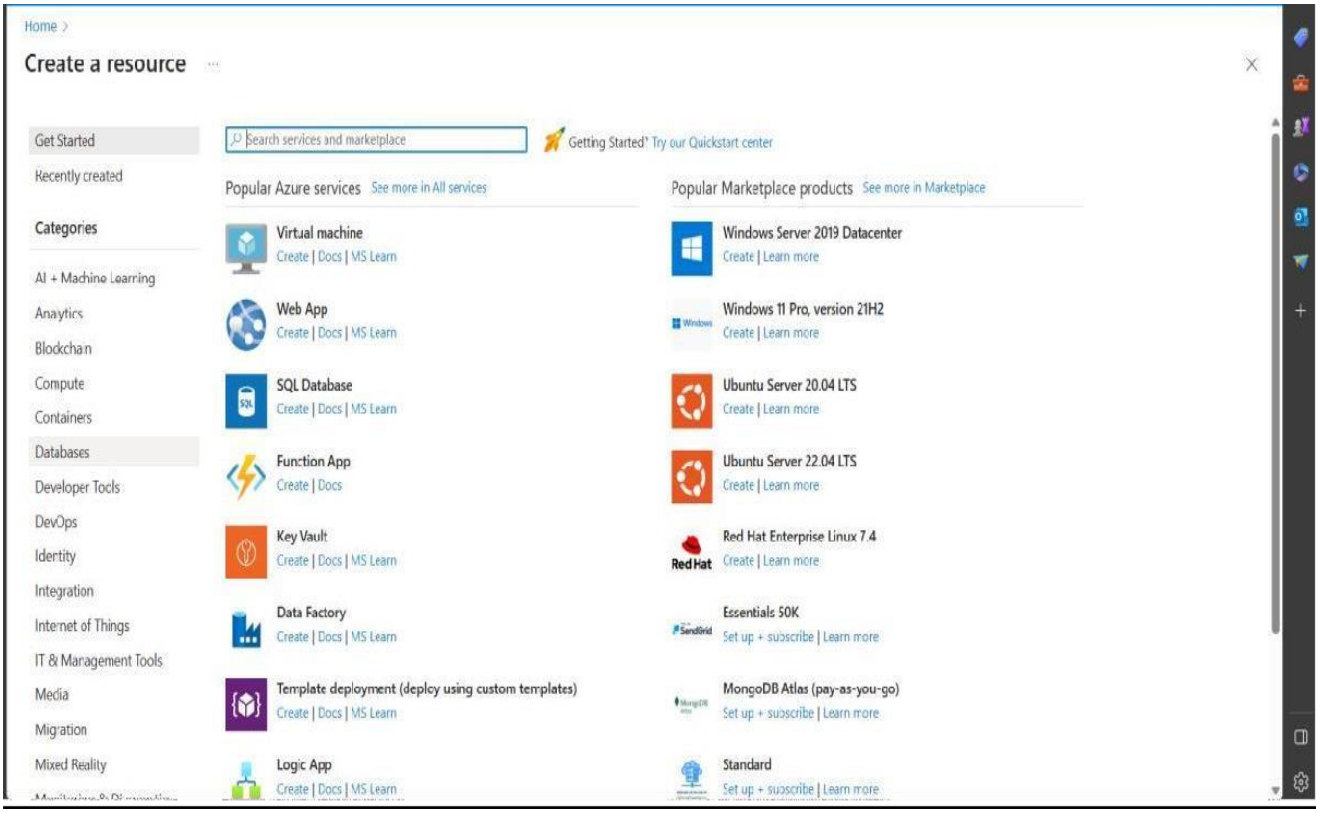
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Migration
Mixed Reality
Search services and marketplace
Getting Started Try our Quickstart center
Popular Azure services See more in All services
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Web App
Create | Docs | MS Learn
SQL Database
Create | Docs | MS Learn
Function App
Create | Docs
Key Vault
Create | Docs | MS Learn
Data Factory
Create | Docs | MS Learn
Template deployment (deploy using custom templates)
Create | Docs | MS Learn
Logic App
Create | Docs | MS Learn
Popular Marketplace products See more in Marketplace
Windows Server 2019 Datacenter
Create | Learn more
Windows 11 Pro, version 21H2
Create | Learn more
Ubuntu Server 20.04 LTS
Create | Learn more
Ubuntu Server 22.04 LTS
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Essentials 50K
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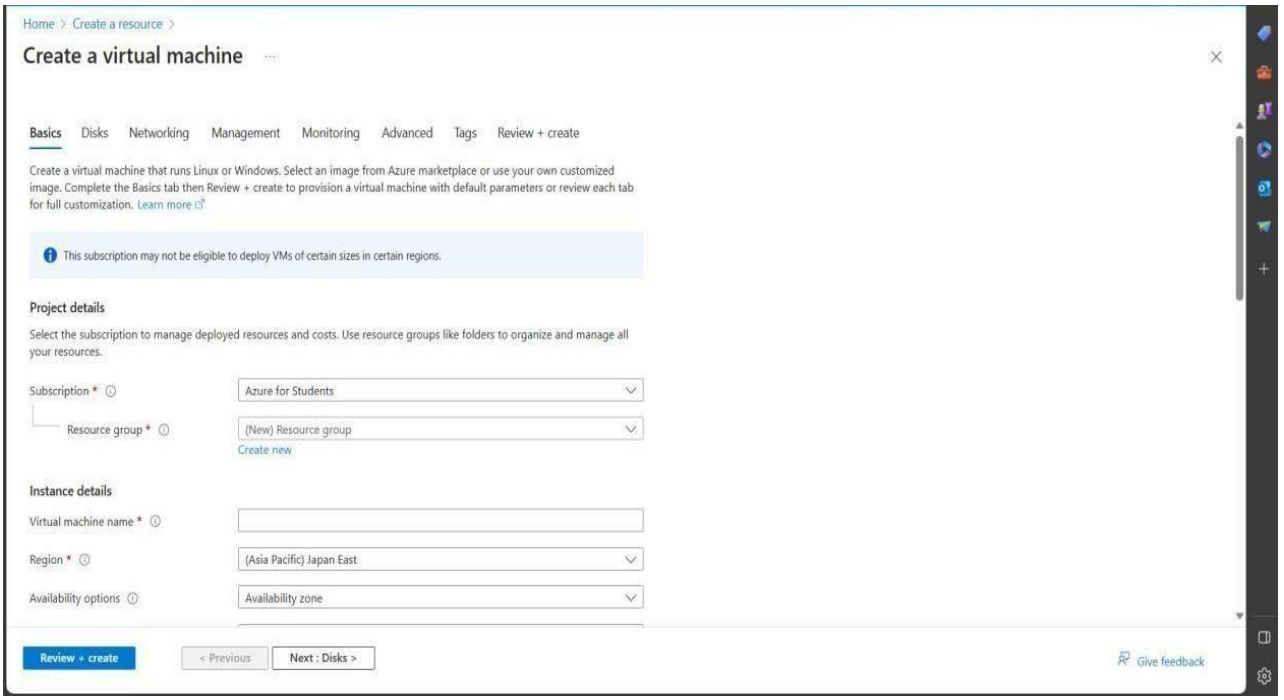
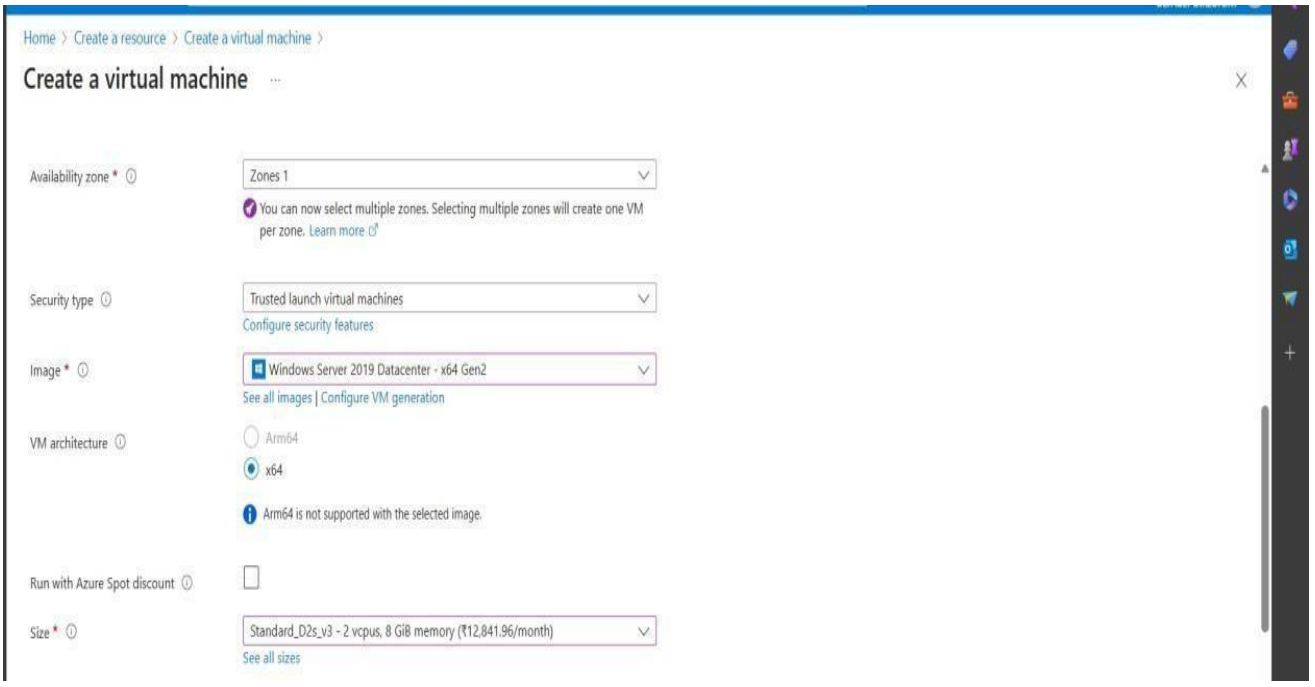
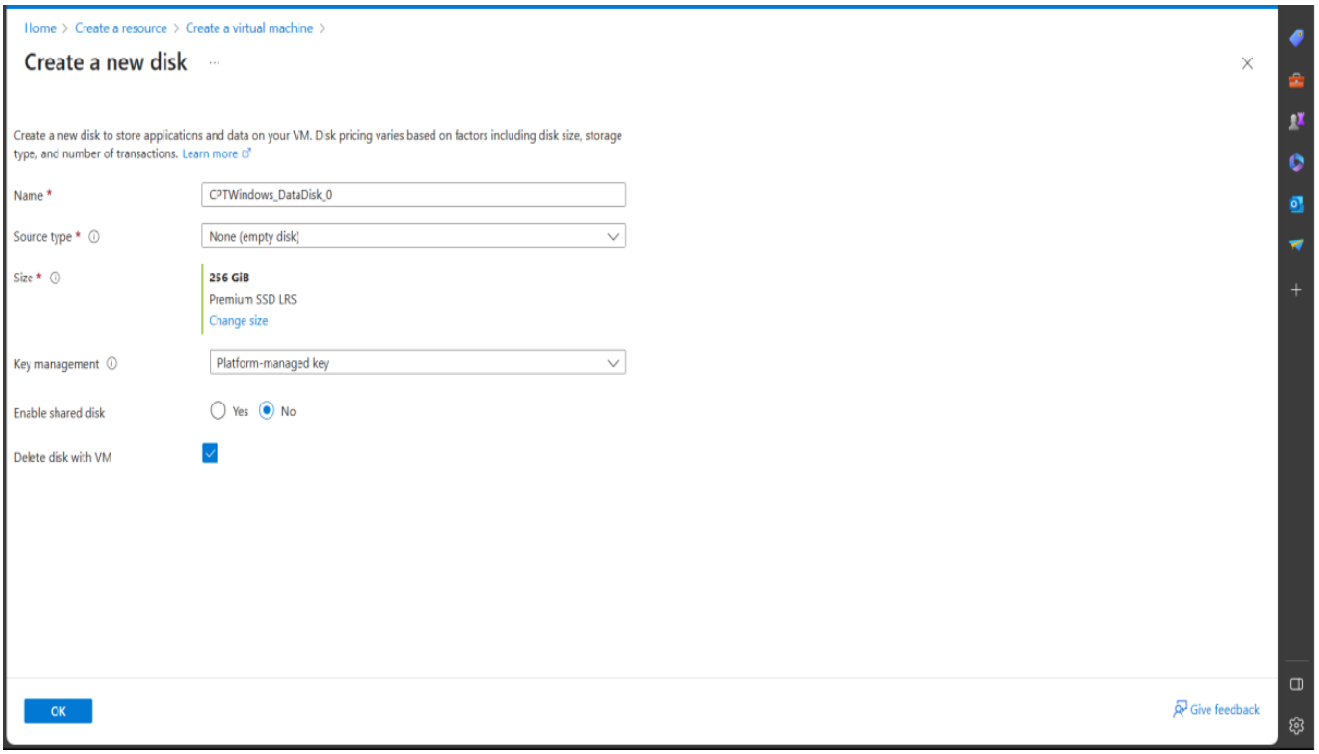
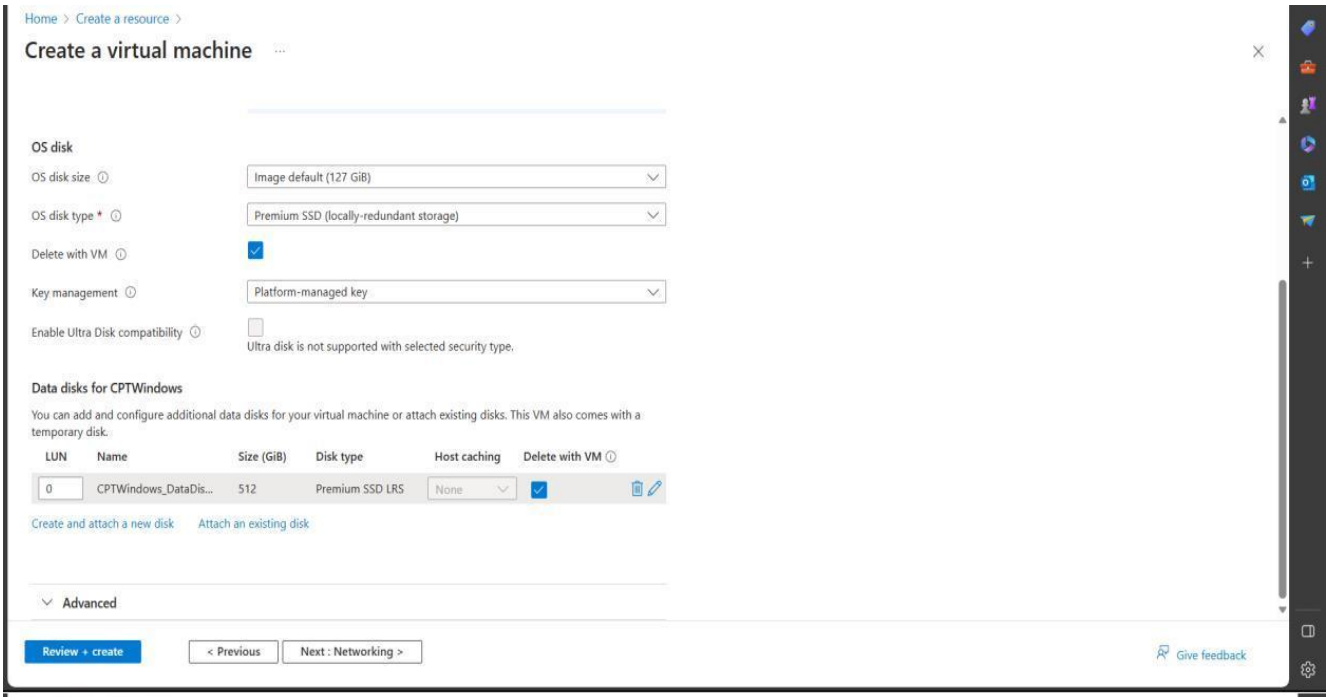
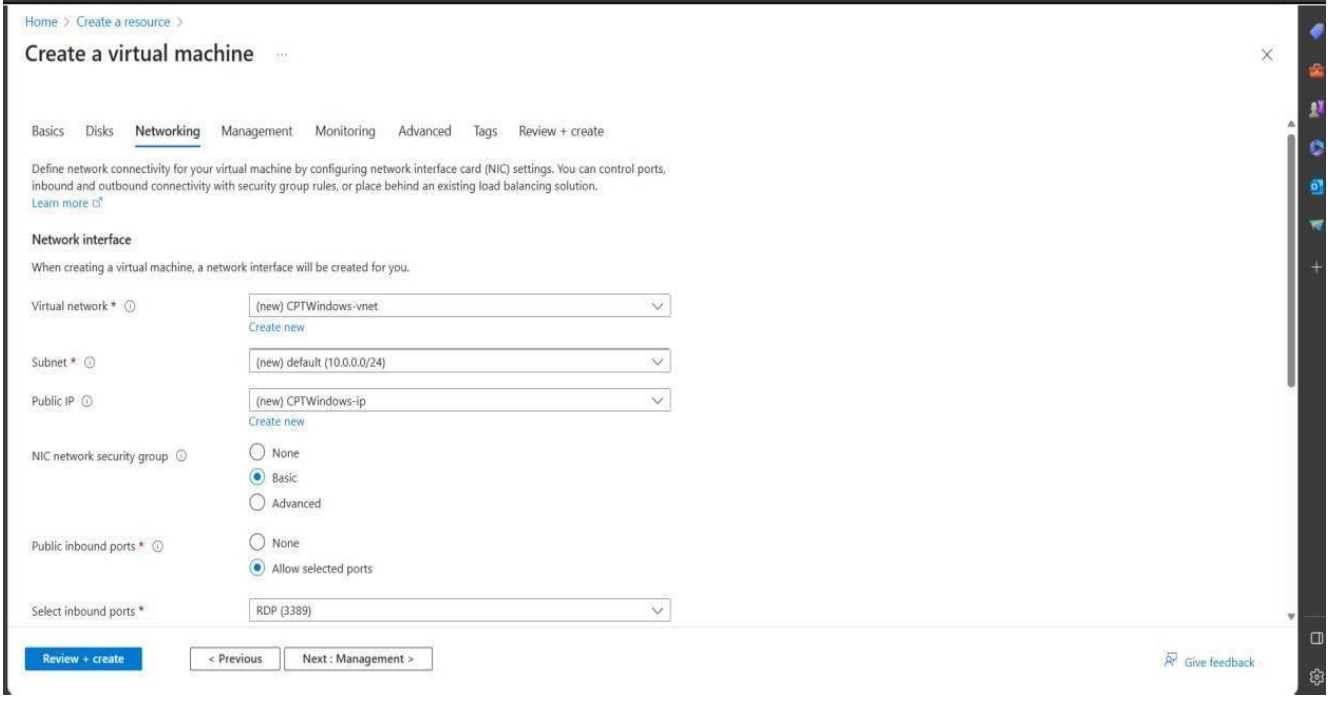
Standard
Set up + subscribe | Learn more

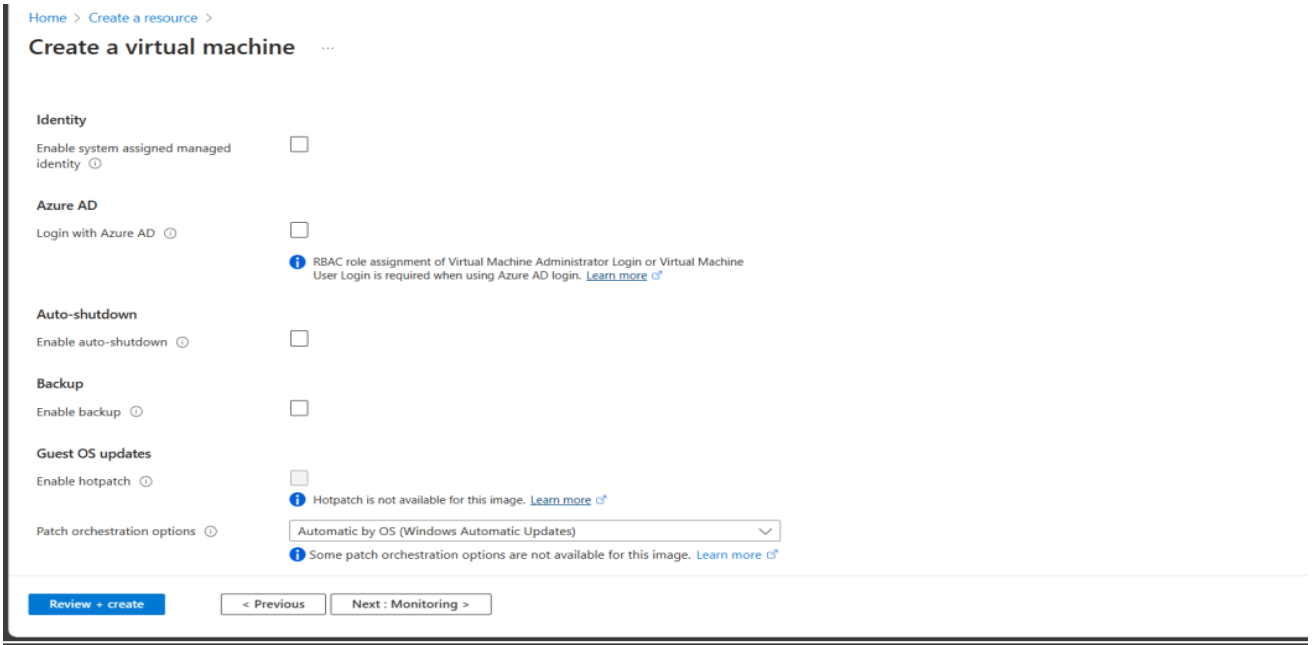

Home > Create a resource >
Create a virtual machine
Basics Disks Networking Management Monitoring Advanced Tags Review + create
Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to 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 * (New) Resource group
Create new
Instance details
Virtual machine name *
Region * (Asia Pacific) Japan East
Availability options Availability zone
Review + create
< Previous
Next : Disks >
Give feedback

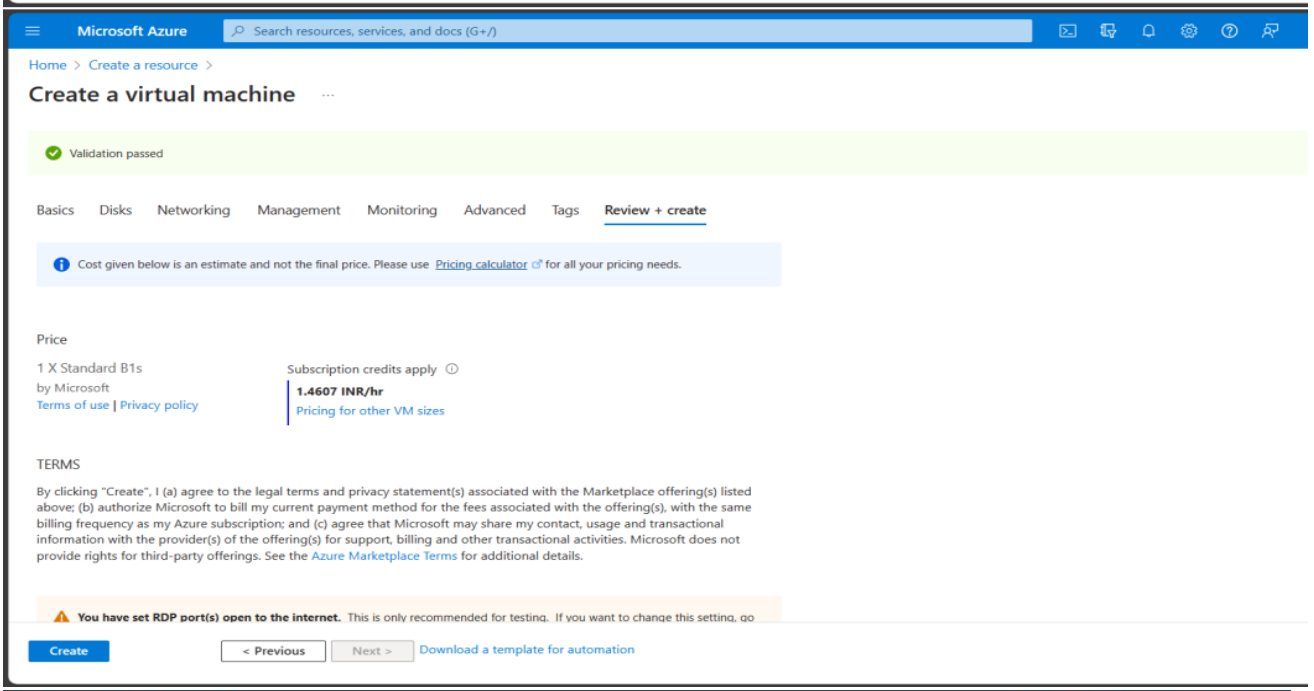

Home > Create a resource > Create a virtual machine >
Create a virtual machine
Availability zone * Zones 1
You can now select multiple zones. Selecting multiple zones will create one VM per zone. Learn more
Security type Trusted launch virtual machines
Configure security features
Image * Windows Server 2019 Datacenter - x64 Gen2
See all images | Configure VM generation
VM architecture Arm64
x64
Arm64 is not supported with the selected image.
Run with Azure Spot discount
Size * Standard_D2s_v3 - 2 vcpus, 8 GiB memory (₹12,841.96/month)
See all sizes


Home > Create a resource > Create a virtual machine >
Create a new disk
Create a new disk to store applicaticns and data on your VM. Dsk pricing varies based on factors including disk size, storage type, and number of transactions. Learn more
Name *
CPTWindows_DataDisk_0
Source type *
None (empty disk)
Size *
256 GiB
Premium SSD LRS
Change size
Key management
Platform-managed key
Enable shared disk
Yes
No
Delete disk with VM
CK
Give feedback


Home > Create a resource >
Create a virtual machine
OS disk
OS disk size
Image default (127 GiB)
OS disk type *
Premium SSD (locally-redundant storage)
Delete with VM
Key management
Platform-managed key
Enable Ultra Disk compatibility
Ultra disk is not supported with selected security type.
Data disks for CPTWindows
You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.
LUN
Name
Size (GiB)
Disk type
Host caching
Delete with VM
0
CPTWindows_DataDis...
512
Premium SSD LRS
None
Create and attach a new disk
Attach an existing disk
Advanced
Review + create
< Previous
Next : Networking >
Give feedback


Home > Create a resource >
Create a virtual machine
Basics
Disks
Networking
Management
Monitoring
Advanced
Tags
Review + create
Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution.
Learn more
Network interface
When creating a virtual machine, a network interface will be created for you.
Virtual network *
(new) CPTWindows-vnet
Create new
Subnet *
(new) default (10.0.0.0/24)
Public IP
(new) CPTWindows-ip
Create new
NIC network security group
None
Basic
Advanced
Public inbound ports *
None
Allow selected ports
Select inbound ports *
RDP (3389)
Review + create
< Previous
Next : Management >
Give feedback


Home > Create a resource >
Create a virtual machine ...
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
Backup
Enable backup
Guest OS updates
Enable hotpatch
Hotpatch is not available for this image. Learn more
Patch orchestration options
Automatic by OS (Windows Automatic Updates)
Some patch orchestration options are not available for this image. Learn more
Review + create
< Previous
Next : Monitoring >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Search resources, services, and docs (G+/)
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Create a virtual machine ...
Validation passed
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Cost given below is an estimate and not the final price. Please use Pricing calculator for all your pricing needs.
Price
1 X Standard B1s
by Microsoft
Terms of use | Privacy policy
Subscription credits apply
1.4607 INR/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 billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.
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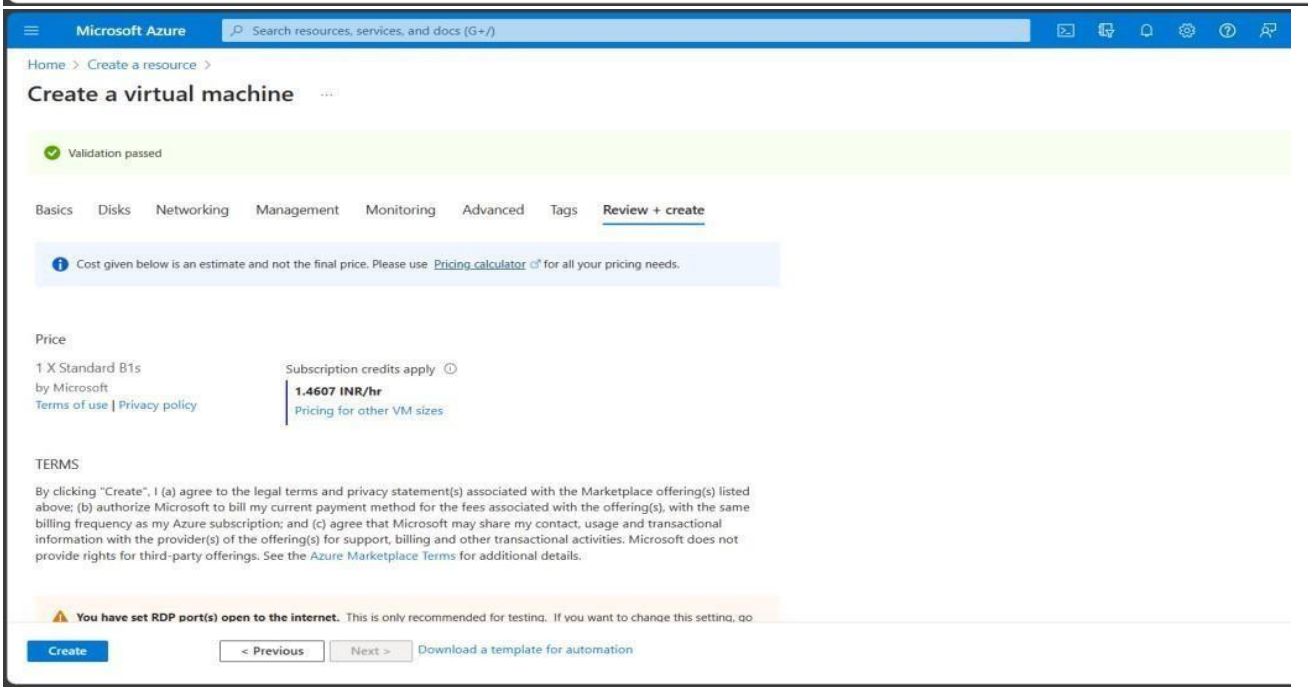
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Search resources, services, and docs (G+/)
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By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.
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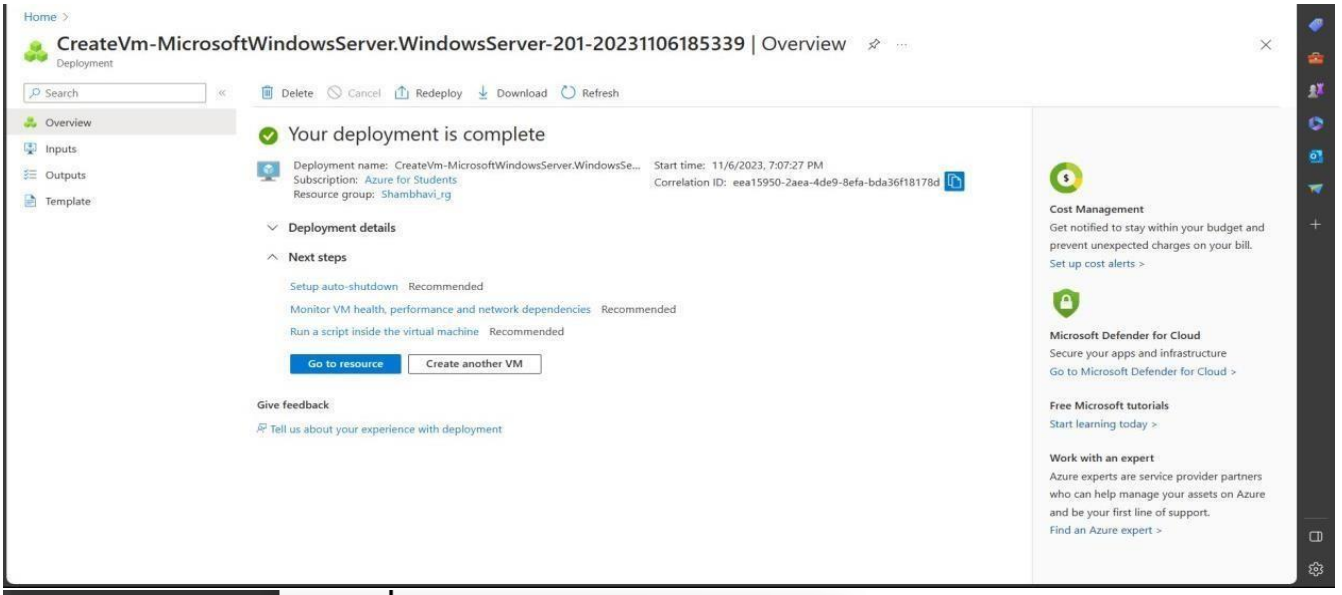
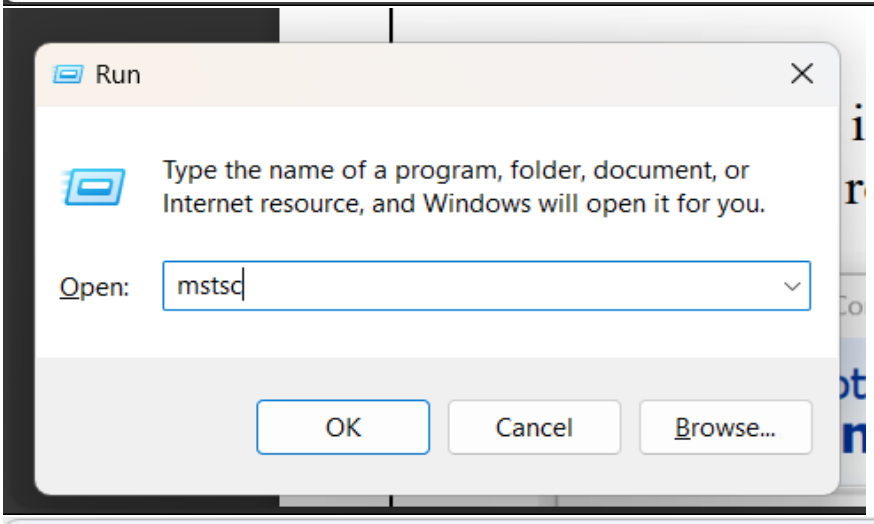
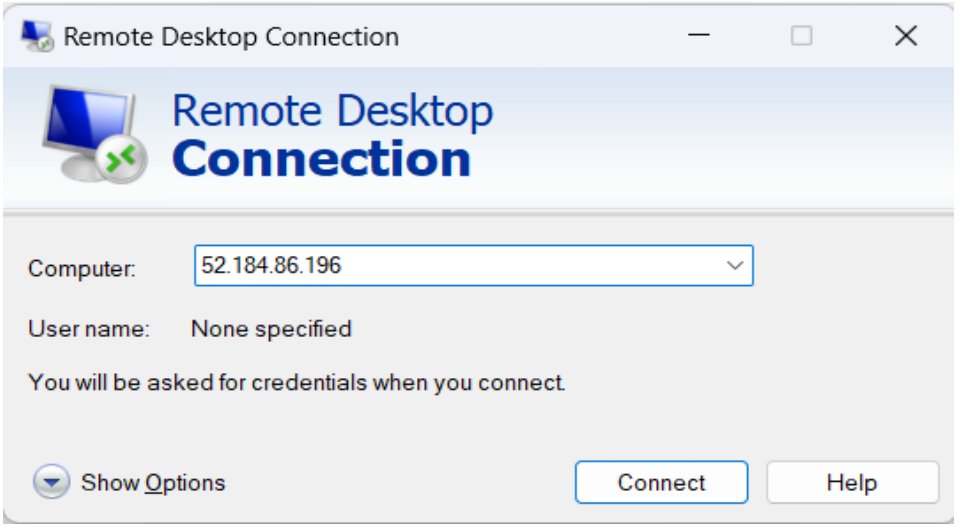
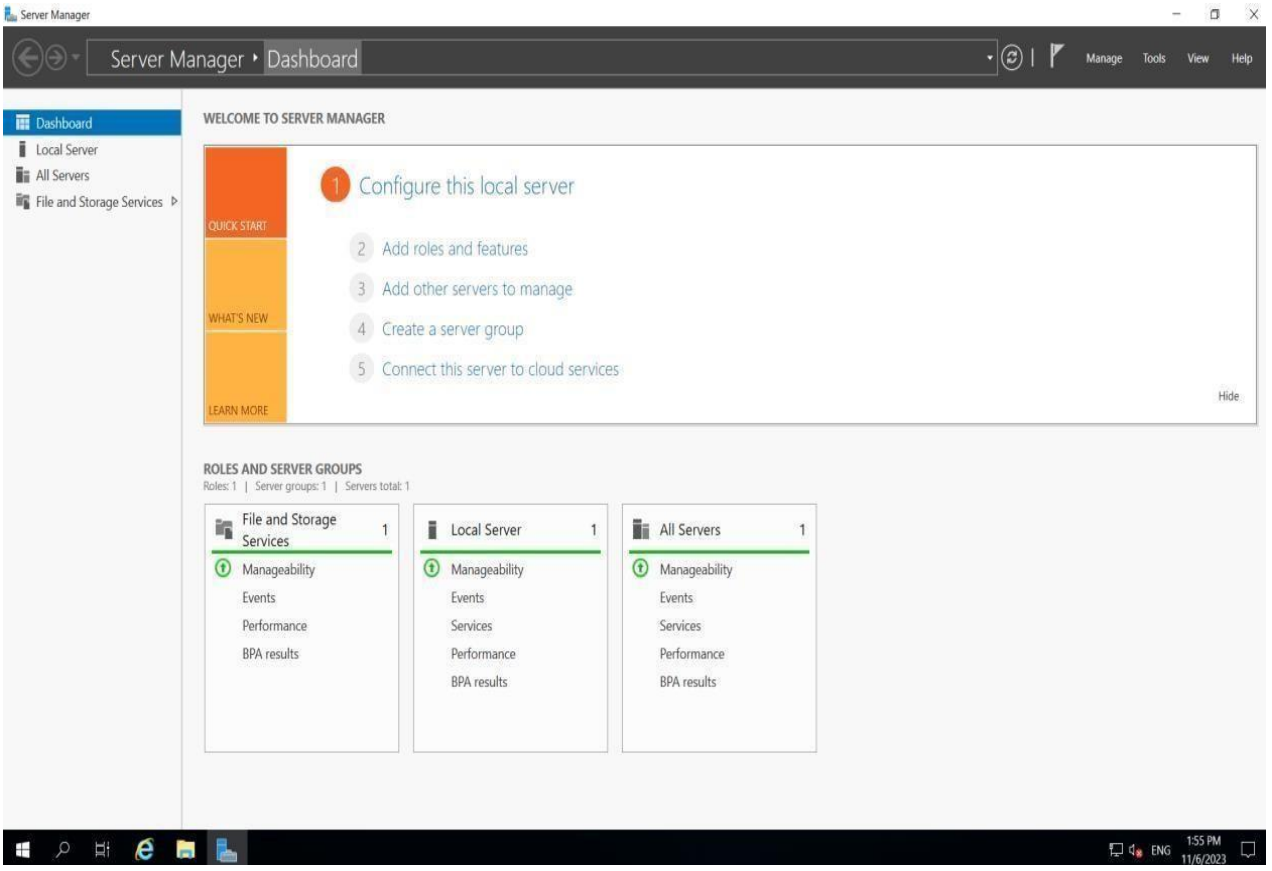
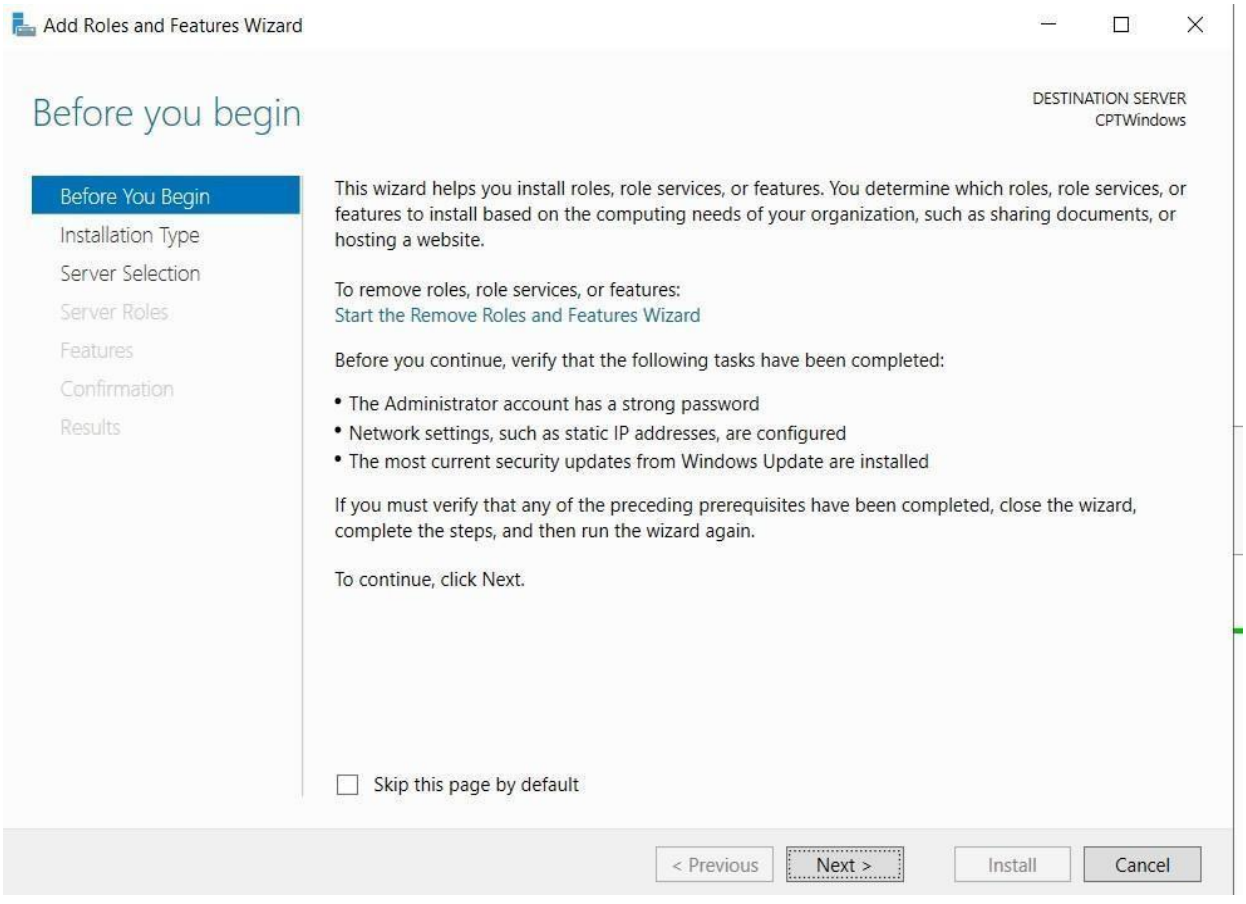

Home
CreateVm-MicrosoftWindowsServer.WindowsServer-201-20231106185339 | Overview
Deployment
Search
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Download
Refresh
Your deployment is complete
Deployment name: CreateVm-MicrosoftWindowsServer.WindowsSe...
Subscription: Azure for Students
Resource group: Shambhavi_rg
Start time: 11/6/2023, 7:07:27 PM
Correlation ID: eea15950-2aea-4de9-8efa-bda36f18178d
Deployment details
Next steps
Setup auto-shutdown Recommended
Monitor VM health, performance and network dependencies Recommended
Run a script inside the virtual machine Recommended
Go to resource
Create another VM
Give feedback
Tell us about your experience with deployment
Cost Management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >
Microsoft Defender for Cloud
Secure your apps and infrastructure
Go to Microsoft Defender for Cloud >
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 >

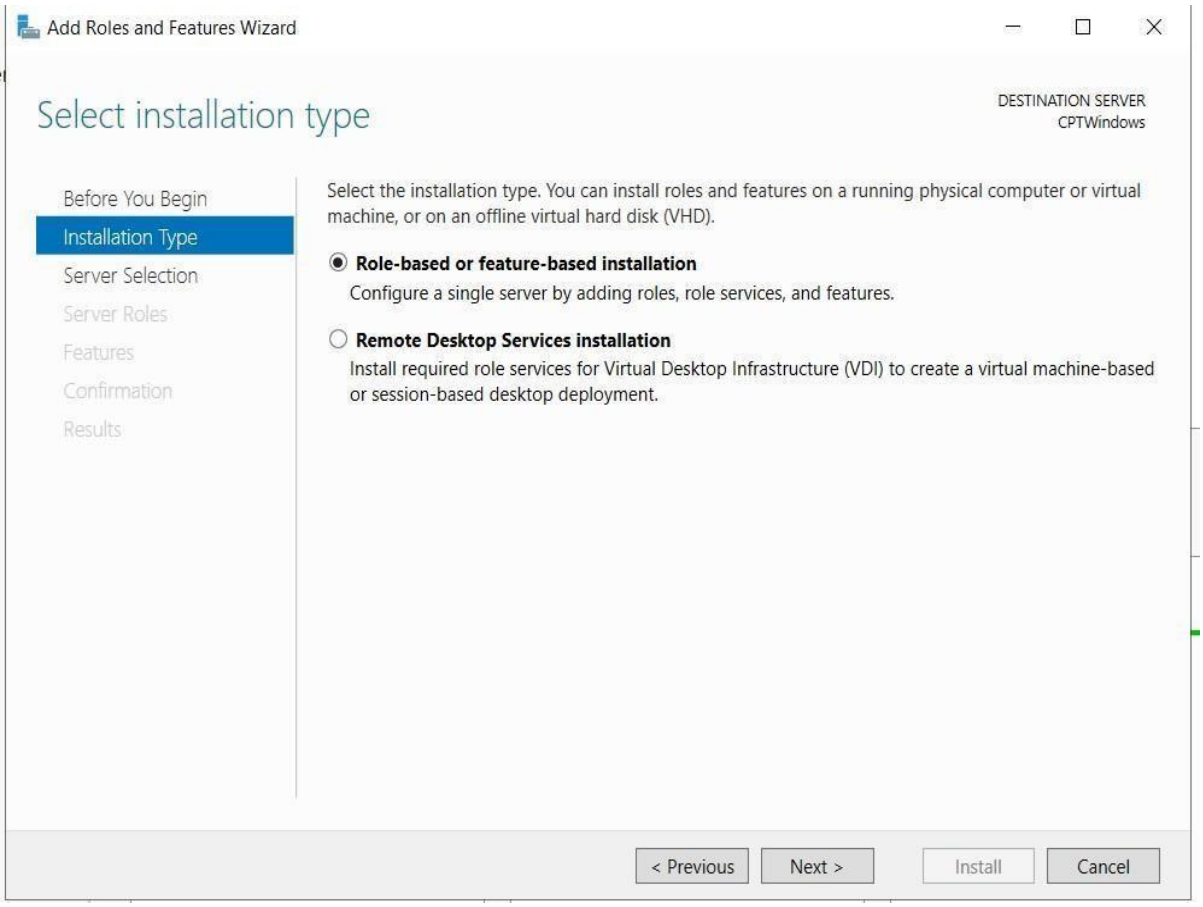

Run
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:
mstsc
OK
Cancel
Browse...

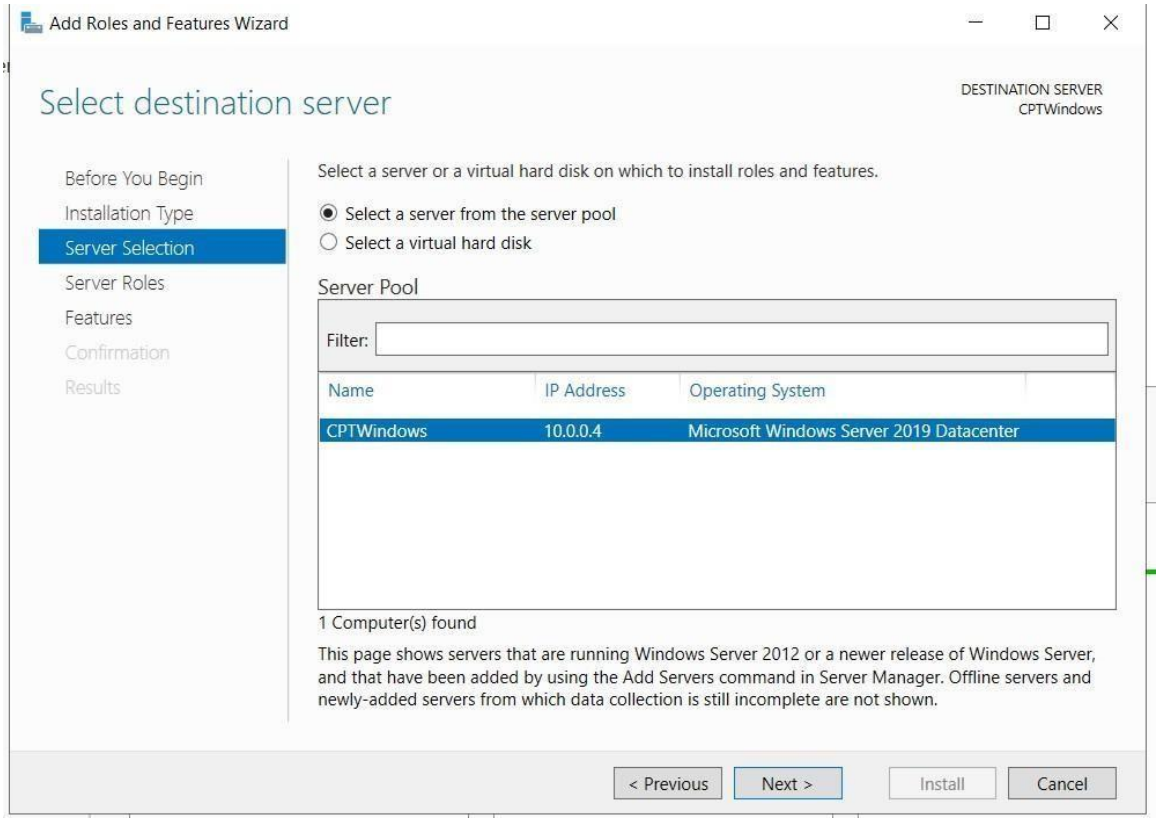

Remote Desktop Connection
Remote Desktop Connection
Computer:
52.184.86.196
User name:
None specified
You will be asked for credentials when you connect.
Show Options
Connect
Help

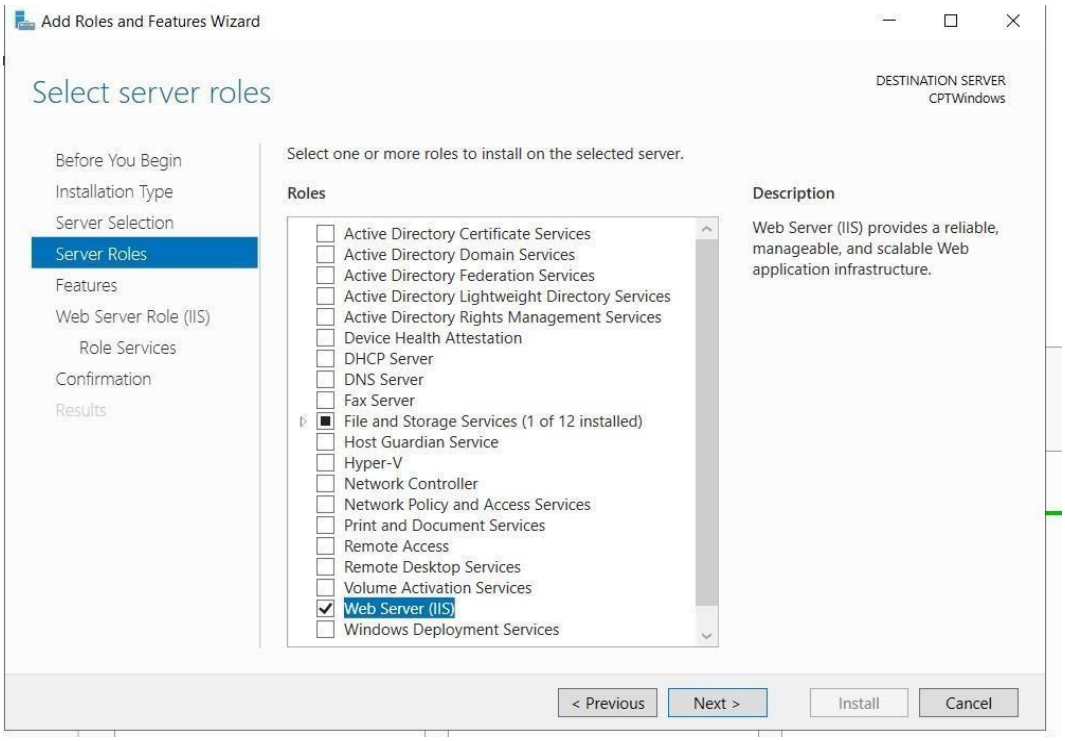
abc

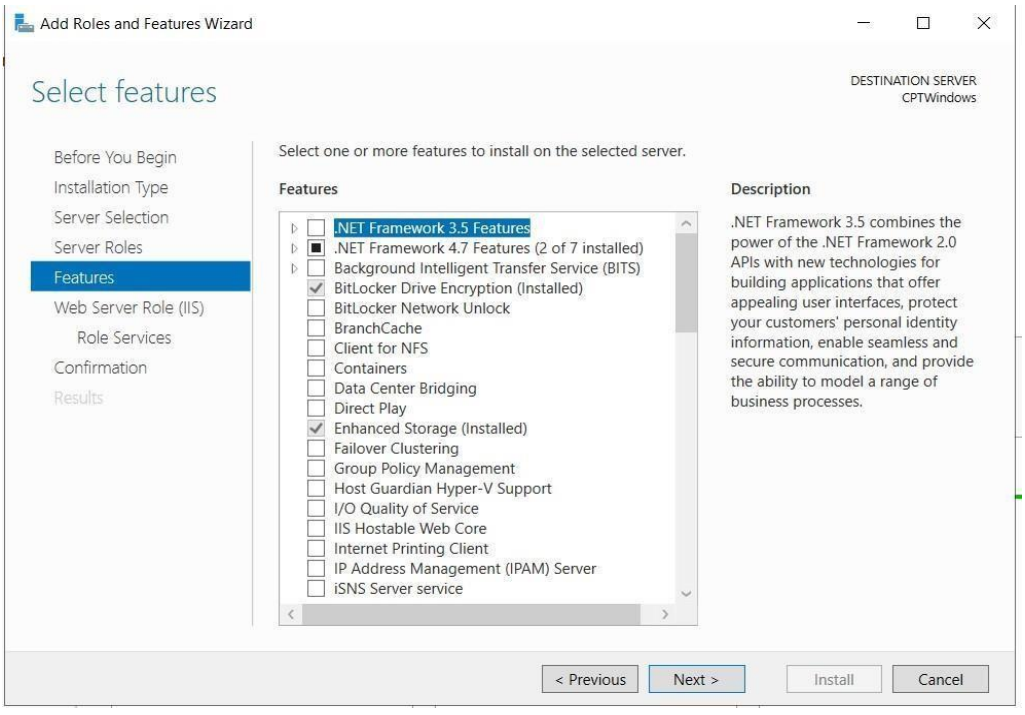

Server Manager
Server Manager • Dashboard
Manage
Tools
View
Help
Dashboard
Local Server
All Servers
File and Storage Services
WELCOME TO SERVER MANAGER
QUICK START
WHAT'S NEW
LEARN MORE
1 Configure this local server
2 Add roles and features
3 Add other servers to manage
4 Create a server group
5 Connect this server to cloud services
Hide
ROLES AND SERVER GROUPS
Roles: 1 | Server groups: 1 | Servers total: 1
File and Storage Services 1
Manageability
Events
Performance
BPA results
Local Server 1
Manageability
Events
Services
Performance
BPA results
All Servers 1
Manageability
Events
Services
Performance
BPA results
ENG
1:55 PM
11/6/2023

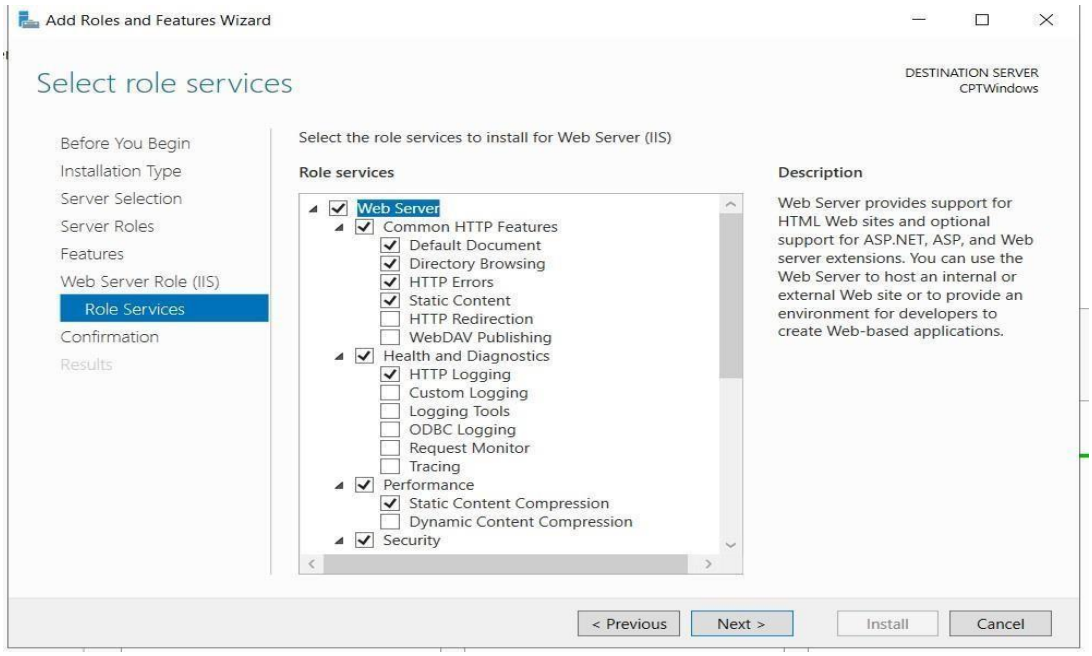

Add Roles and Features Wizard
Before you begin
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results
This wizard helps you install roles, role services, or features. You determine which roles, role services, or features to install based on the computing needs of your organization, such as sharing documents, or hosting a website.
To remove roles, role services, or features:
Start the Remove Roles and Features Wizard
Before you continue, verify that the following tasks have been completed:
• The Administrator account has a strong password
• Network settings, such as static IP addresses, are configured
• The most current security updates from Windows Update are installed
If you must verify that any of the preceding prerequisites have been completed, close the wizard, complete the steps, and then run the wizard again.
To continue, click Next.
Skip this page by default
< Previous
Next >
Install
Cancel

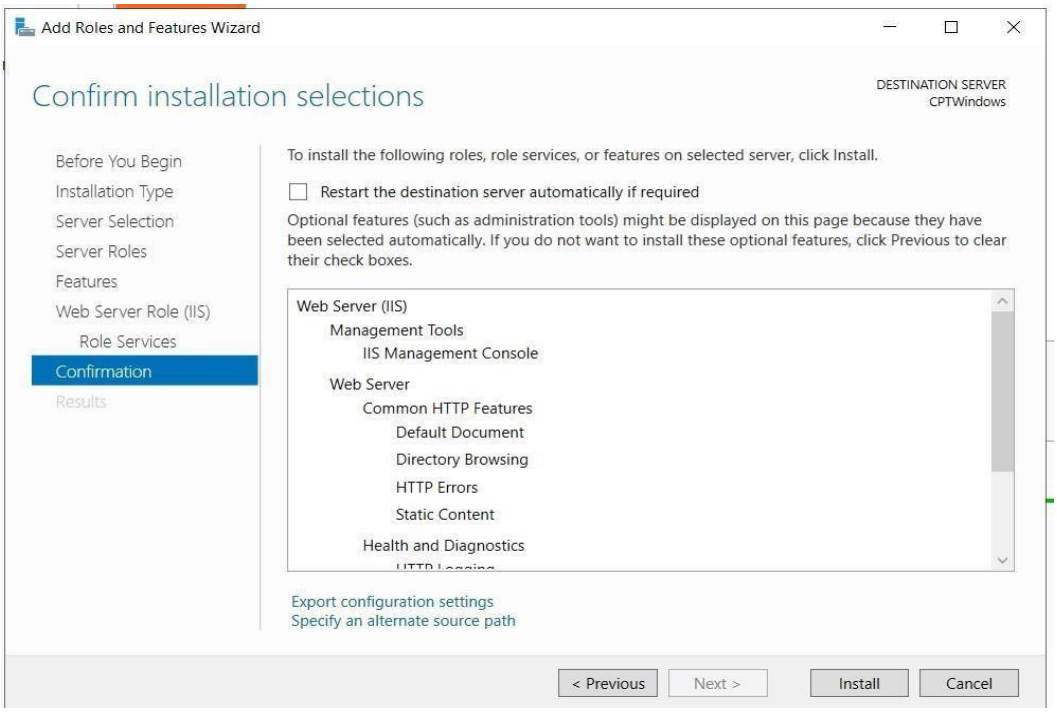

Add Roles and Features Wizard
Select installation type
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results
Select the installation type. You can install roles and features on a running physical computer or virtual machine, or on an offline virtual hard disk (VHD).
Role-based or feature-based installation
Configure a single server by adding roles, role services, and features.
Remote Desktop Services installation
Install required role services for Virtual Desktop Infrastructure (VDI) to create a virtual machine-based or session-based desktop deployment.
< Previous
Next >
Install
Cancel

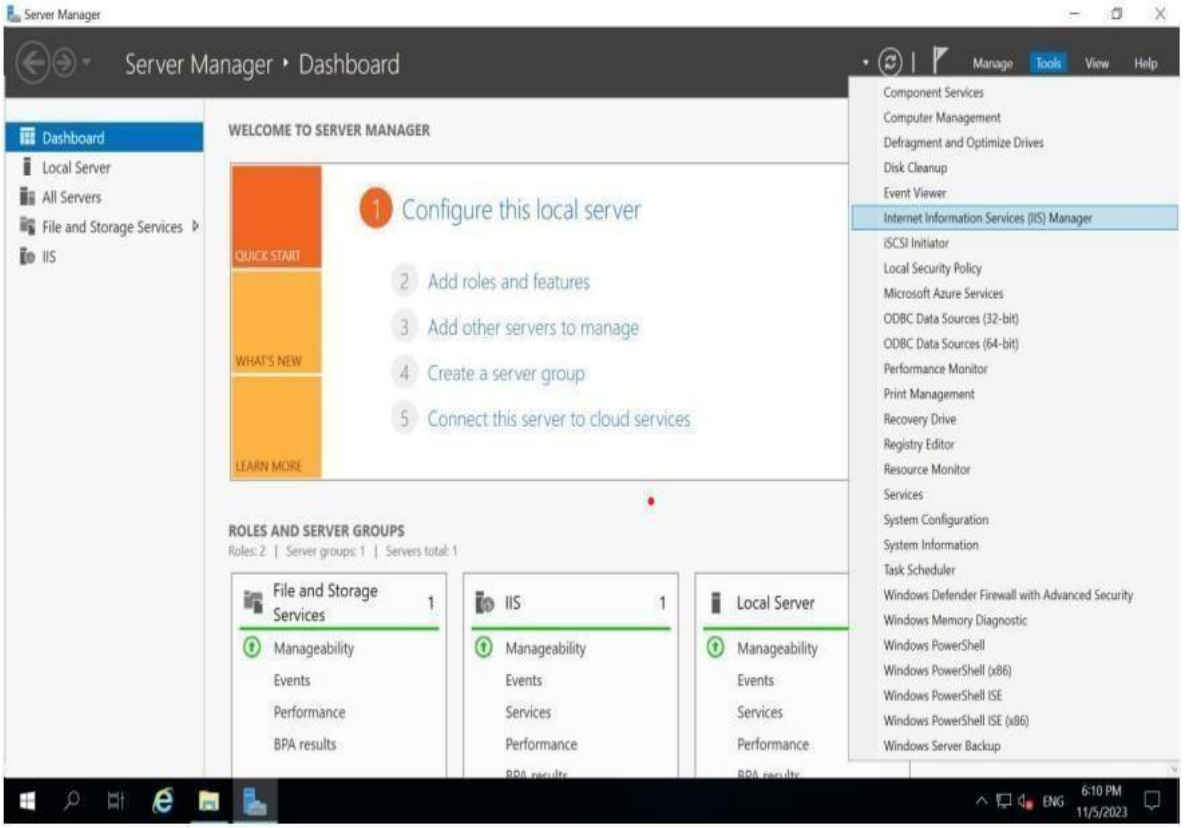

Add Roles and Features Wizard
Select destination server
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results
Select a server or a virtual hard disk on which to install roles and features.
Select a server from the server pool
Select a virtual hard disk
Server Pool
Filter:
Name
IP Address
Operating System
CPTWindows
10.0.0.4
Microsoft Windows Server 2019 Datacenter
1 Computer(s) found
This page shows servers that are running Windows Server 2012 or a newer release of Windows Server, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.
< Previous
Next >
Install
Cancel


Add Roles and Features Wizard
Select server roles
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
Select one or more roles to install on the selected server.
Roles
Active Directory Certificate Services
Active Directory Domain Services
Active Directory Federation Services
Active Directory Lightweight Directory Services
Active Directory Rights Management Services
Device Health Attestation
DHCP Server
DNS Server
Fax Server
File and Storage Services (1 of 12 installed)
Host Guardian Service
Hyper-V
Network Controller
Network Policy and Access Services
Print and Document Services
Remote Access
Remote Desktop Services
Volume Activation Services
Web Server (IIS)
Windows Deployment Services
Description
Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.
< Previous
Next >
Install
Cancel


Add Roles and Features Wizard
Select features
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
Select one or more features to install on the selected server.
Features
.NET Framework 3.5 Features
.NET Framework 4.7 Features (2 of 7 installed)
Background Intelligent Transfer Service (BITS)
BitLocker Drive Encryption (Installed)
BitLocker Network Unlock
BranchCache
Client for NFS
Containers
Data Center Bridging
Direct Play
Enhanced Storage (Installed)
Failover Clustering
Group Policy Management
Host Guardian Hyper-V Support
I/O Quality of Service
IIS Hostable Web Core
Internet Printing Client
IP Address Management (IPAM) Server
iSNS Server service
Description
.NET Framework 3.5 combines the power of the .NET Framework 2.0 APIs with new technologies for building applications that offer appealing user interfaces, protect your customers' personal identity information, enable seamless and secure communication, and provide the ability to model a range of business processes.
< Previous
Next >
Install
Cancel


Add Roles and Features Wizard
Select role services
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
Select the role services to install for Web Server (IIS)
Role services
Web Server
Common HTTP Features
Default Document
Directory Browsing
HTTP Errors
Static Content
HTTP Redirection
WebDAV Publishing
Health and Diagnostics
HTTP Logging
Custom Logging
Logging Tools
ODBC Logging
Request Monitor
Tracing
Performance
Static Content Compression
Dynamic Content Compression
Security
Description
Web Server provides support for HTML Web sites and optional support for ASP.NET, ASP, and Web server extensions. You can use the Web Server to host an internal or external Web site or to provide an environment for developers to create Web-based applications.
< Previous
Next >
Install
Cancel


Add Roles and Features Wizard
Confirm installation selections
DESTINATION SERVER
CPTWindows
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
To install the following roles, role services, or features on selected server, click Install.
Restart the destination server automatically if required
Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.
Web Server (IIS)
Management Tools
IIS Management Console
Web Server
Common HTTP Features
Default Document
Directory Browsing
HTTP Errors
Static Content
Health and Diagnostics
Export configuration settings
Specify an alternate source path
< Previous
Next >
Install
Cancel


Server Manager
Server Manager • Dashboard
Manage
Tools
View
Help
Dashboard
Local Server
All Servers
File and Storage Services
IIS
WELCOME TO SERVER MANAGER
QUICK START
WHAT'S NEW
LEARN MORE
1 Configure this local server
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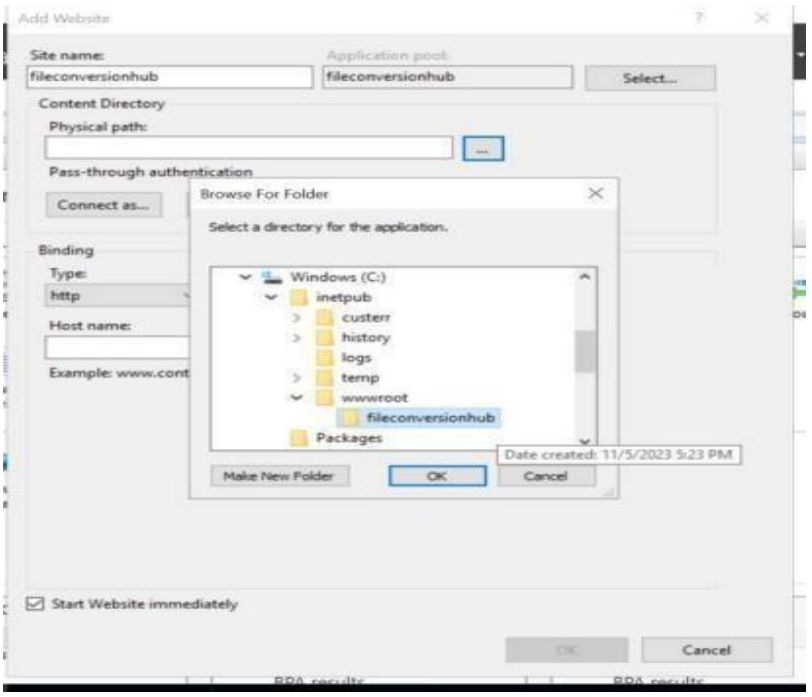
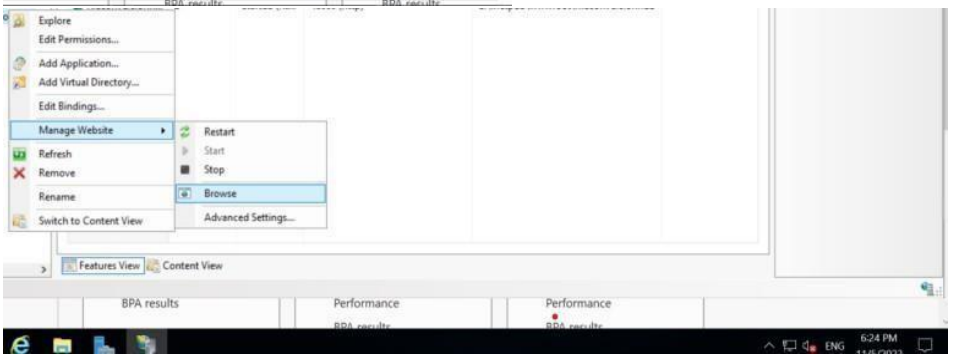
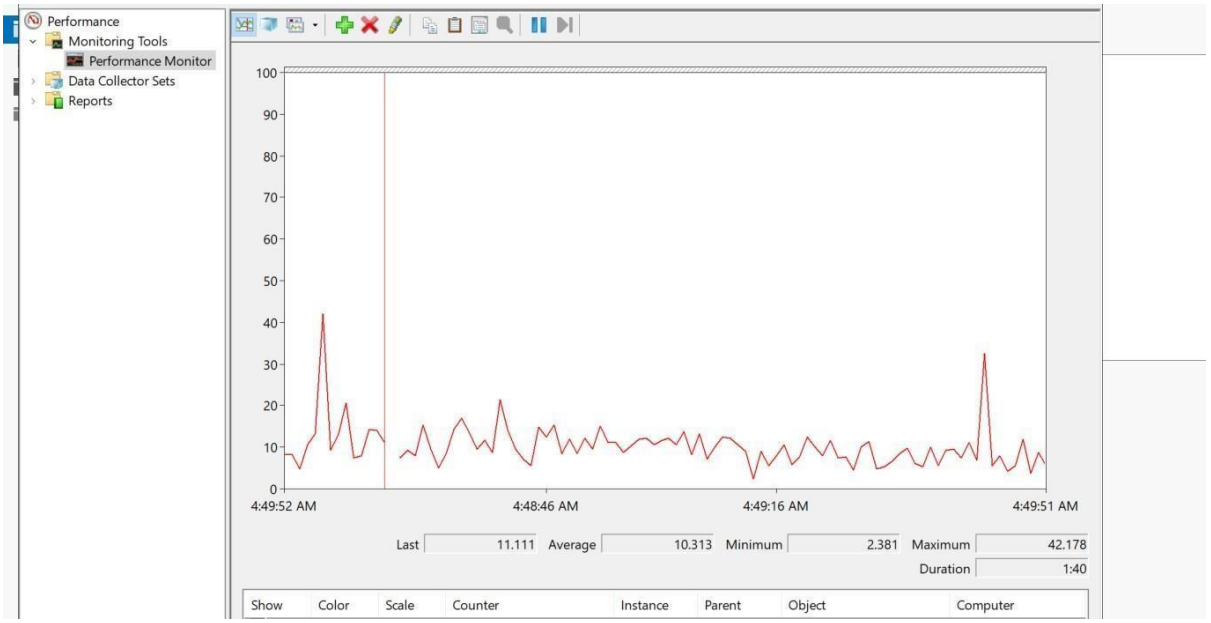
ROLES AND SERVER GROUPS
Roles: 2 | Server groups: 1 | Servers total: 1
File and Storage Services 1
Manageability
Events
Performance
BPA results
IIS 1
Manageability
Events
Services
Performance
Local Server
Manageability
Events
Services
Performance
Component Services
Computer Management
Defragment and Optimize Drives
Disk Cleanup
Event Viewer
Internet Information Services (IIS) Manager
iSCSI Initiator
Local Security Policy
Microsoft Azure Services
ODBC Data Sources (32-bit)
ODBC Data Sources (64-bit)
Performance Monitor
Print Management
Recovery Drive
Registry Editor
Resource Monitor
Services
System Configuration
System Information
Task Scheduler
Windows Defender Firewall with Advanced Security
Windows Memory Diagnostic
Windows PowerShell
Windows PowerShell (x86)
Windows PowerShell ISE
Windows PowerShell ISE (x86)
Windows Server Backup
ENG
6:10 PM
11/5/2023


Add Website
Site name:
fileconversionhub
Application pool:
fileconversionhub
Select...
Content Directory
Physical path:
Pass-through authentication
Connect as...
Browse For Folder
Select a directory for the application.
Windows (C:)
inetpub
custerr
history
logs
temp
wwwroot
fileconversionhub
Packages
Date created: 11/5/2023 5:23 PM
Make New Folder
OK
Cancel
Binding
Type:
http
Host name:
Example: www.cont
Start Website immediately
OK
Cancel

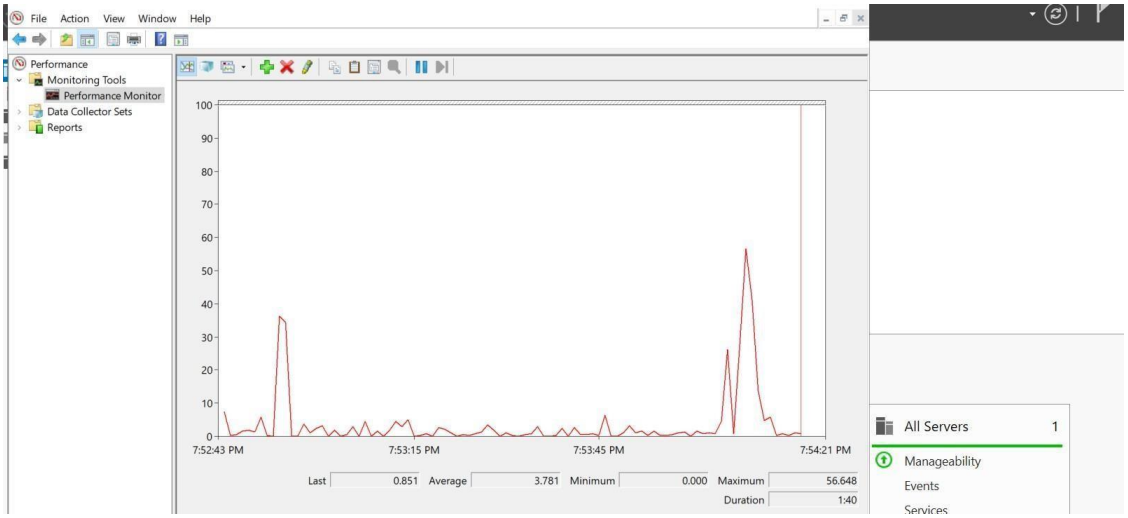

Binding
Type:
IP address:
Port:
http
All Unassigned
8080
Host name:
Example: www.contoso.com or marketing.contoso.com
Start Website immediately
OK
Cancel


Explore
Edit Permissions...
Add Application...
Add Virtual Directory...
Edit Bindings...
Manage Website
Refresh
Remove
Rename
Switch to Content View
Restart
Start
Stop
Browse
Advanced Settings...
Features View
Content View
BPA results
Performance
Performance
6:24 PM

Checking Performance using **Performance Monitor**

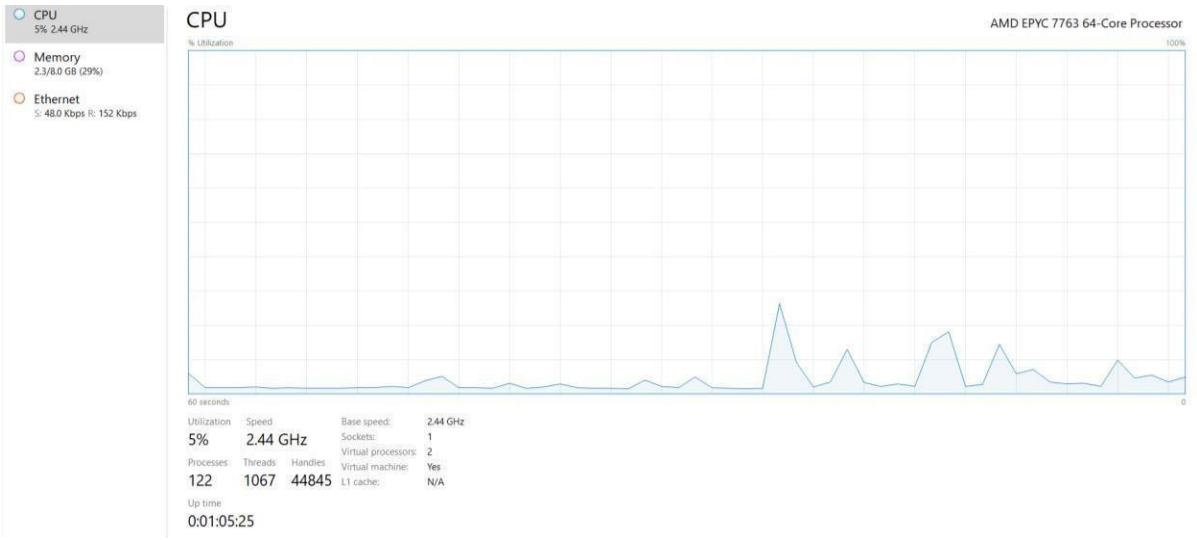


After Removing Deployed Website:

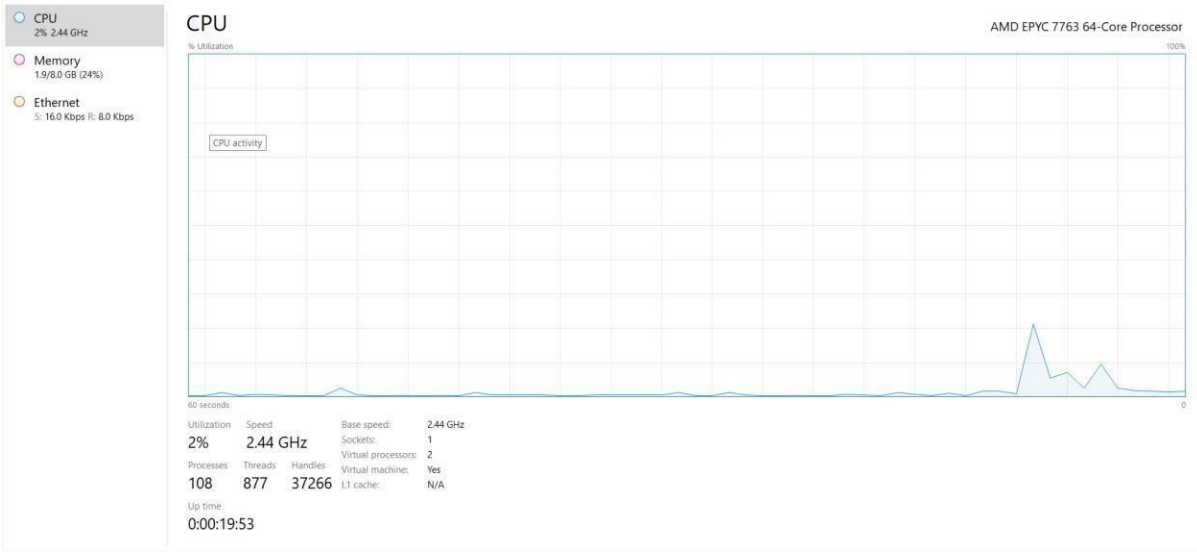


CPU Utilization

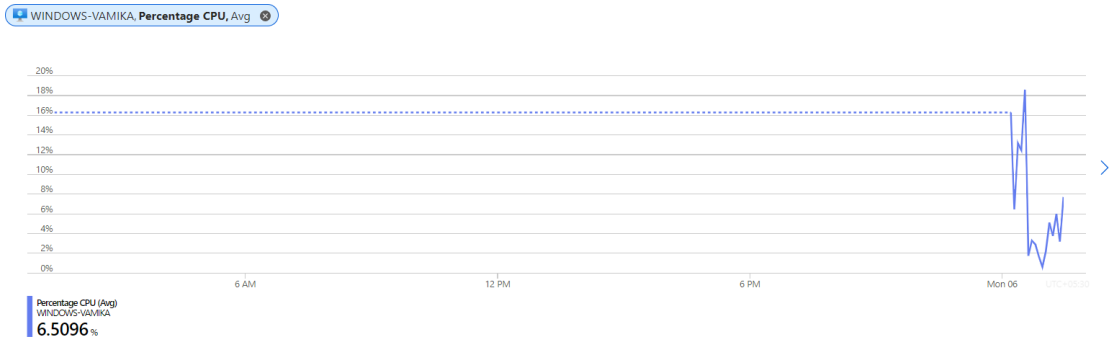
Graph 1: Inside VM



After Removing Deployed Website.

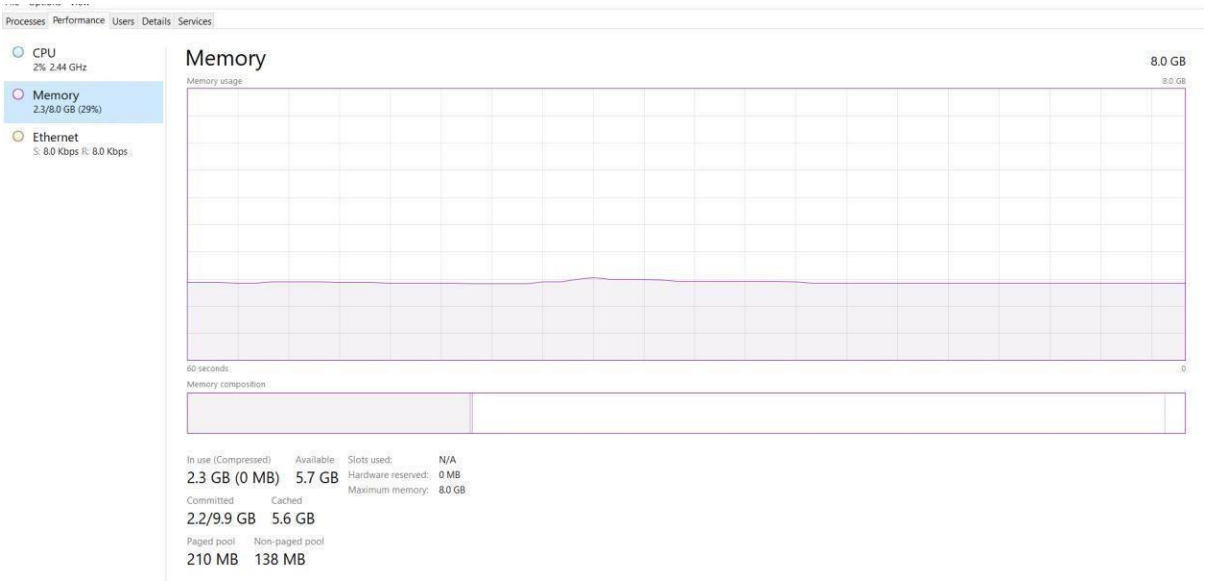


Graph 2: Azure's Graph

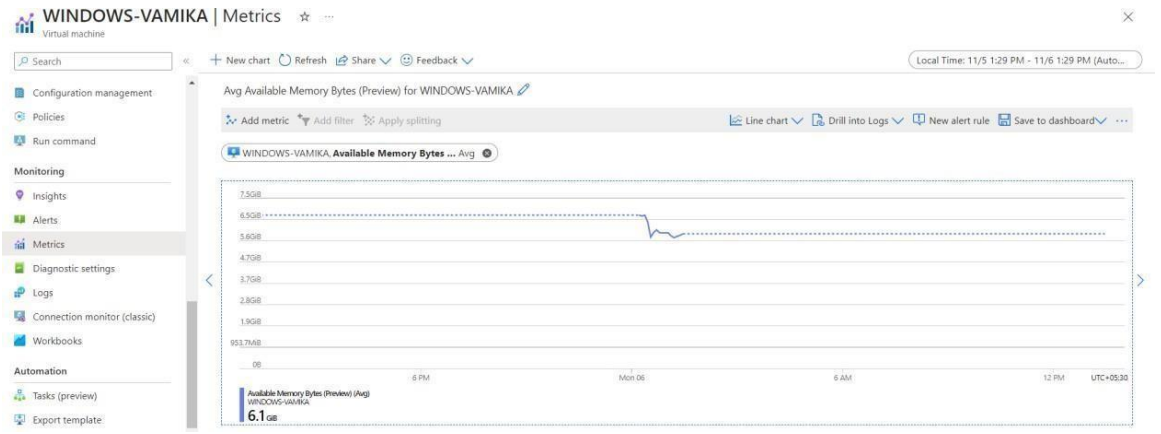


Memory Utilization

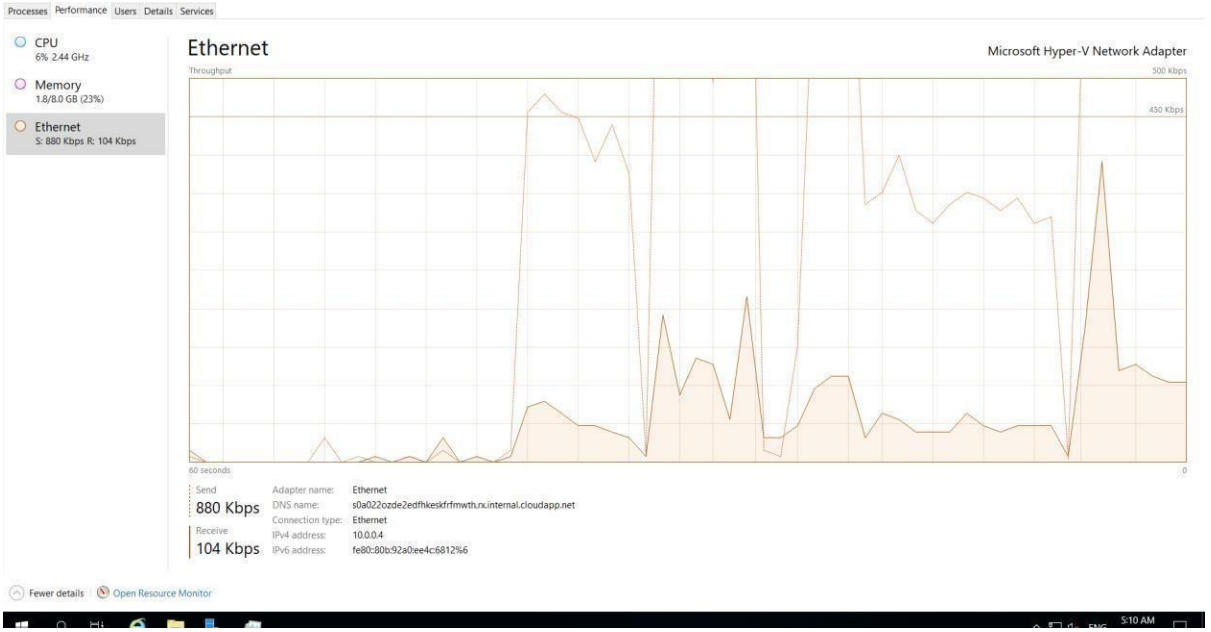
Graph 1: Inside VM

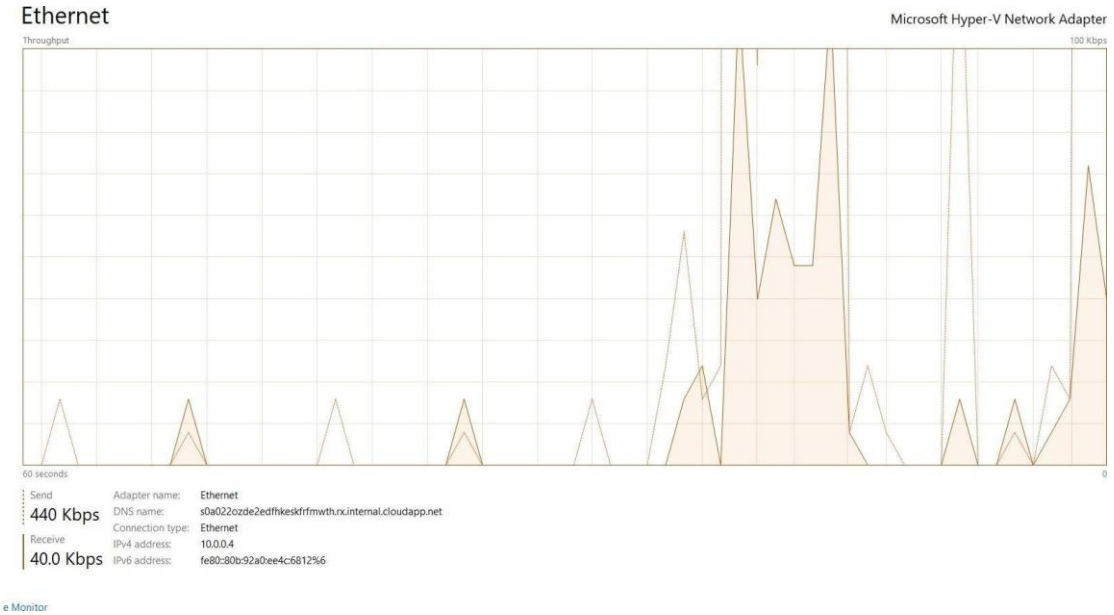


Graph 2: Azure's Graph

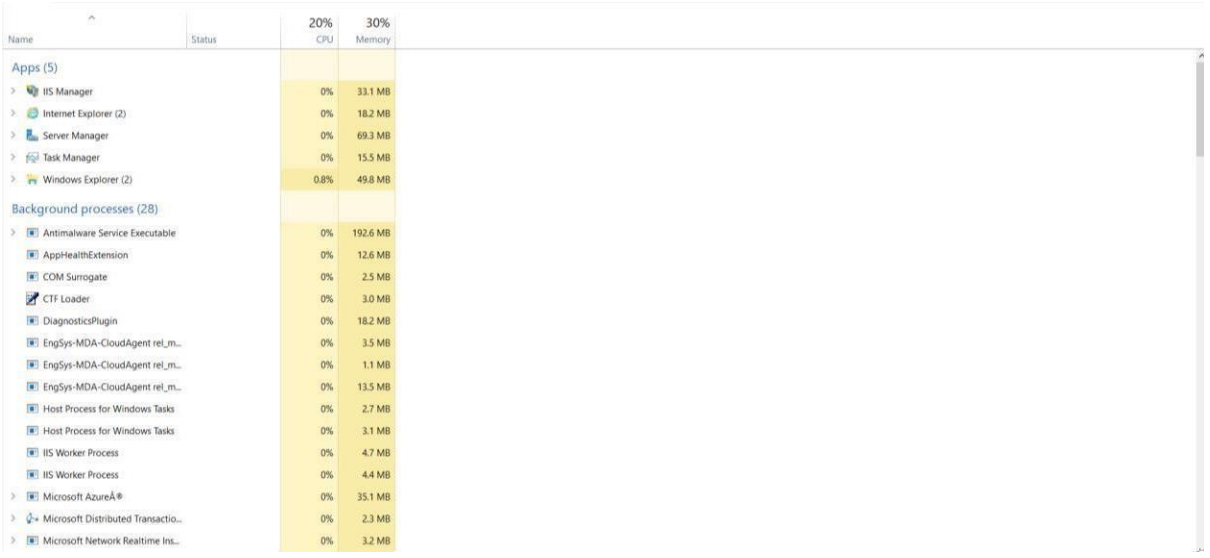


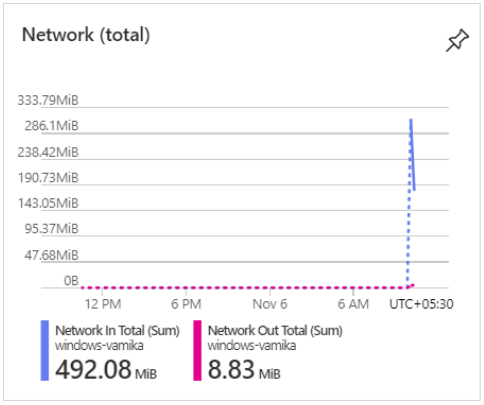
Network Monitoring:

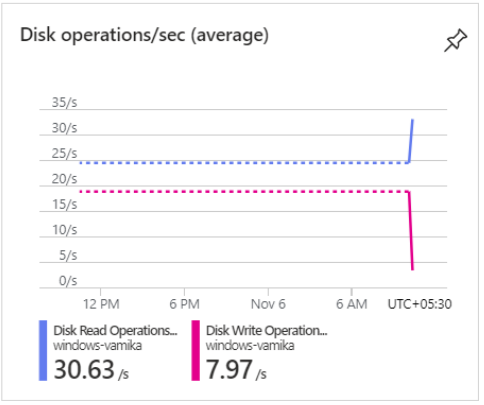




Other metrics:







Response Time: For Web Server Response Time:

1. Start Time (t1): Note the time when the request is initiated. This is the starting point.

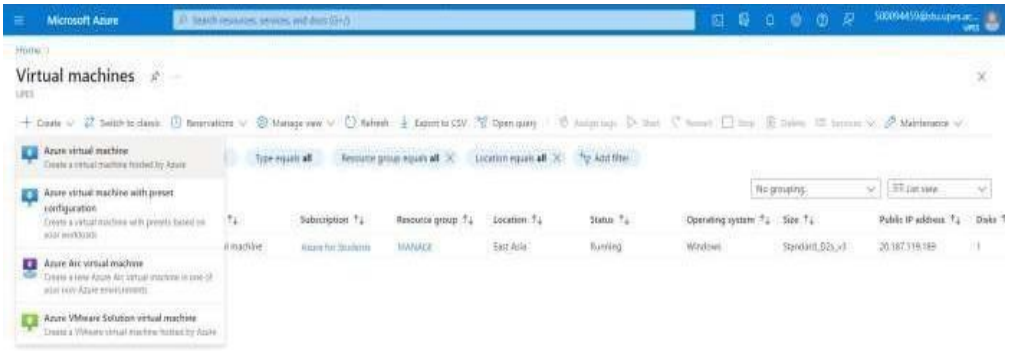
2. End Time (t2): Note the time when the response is fully received or when the requested operation is completed.

3. Response Time Calculation: Response Time = t2 - t1

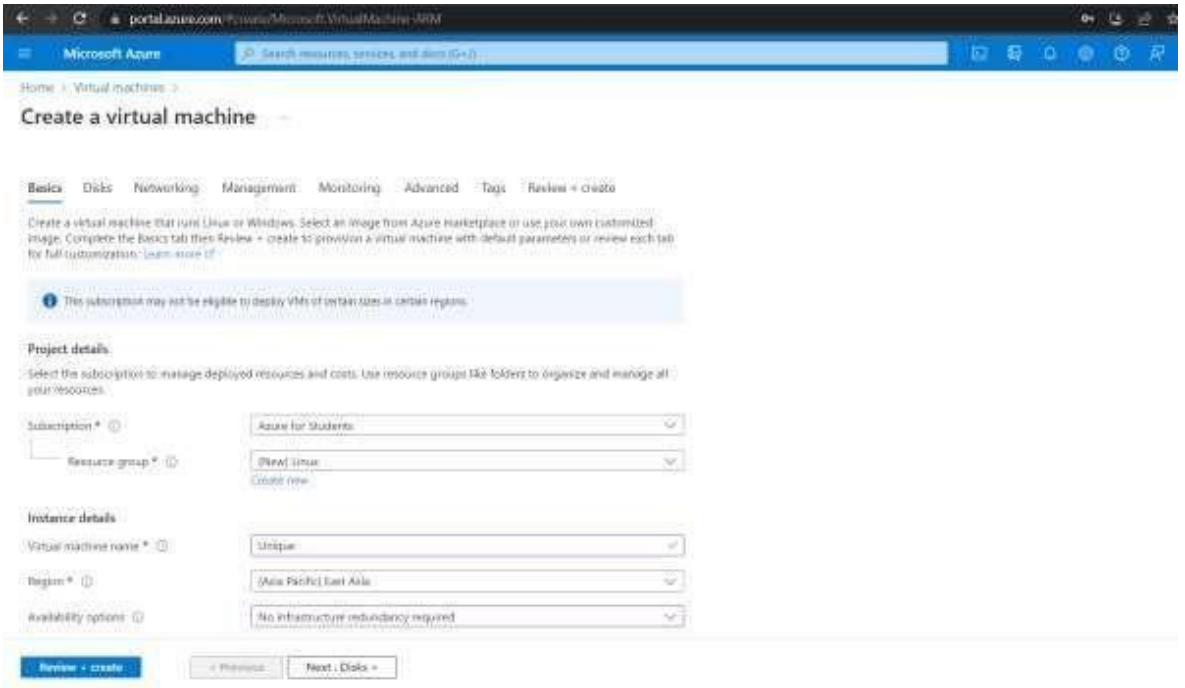
15 minutes 47 seconds.

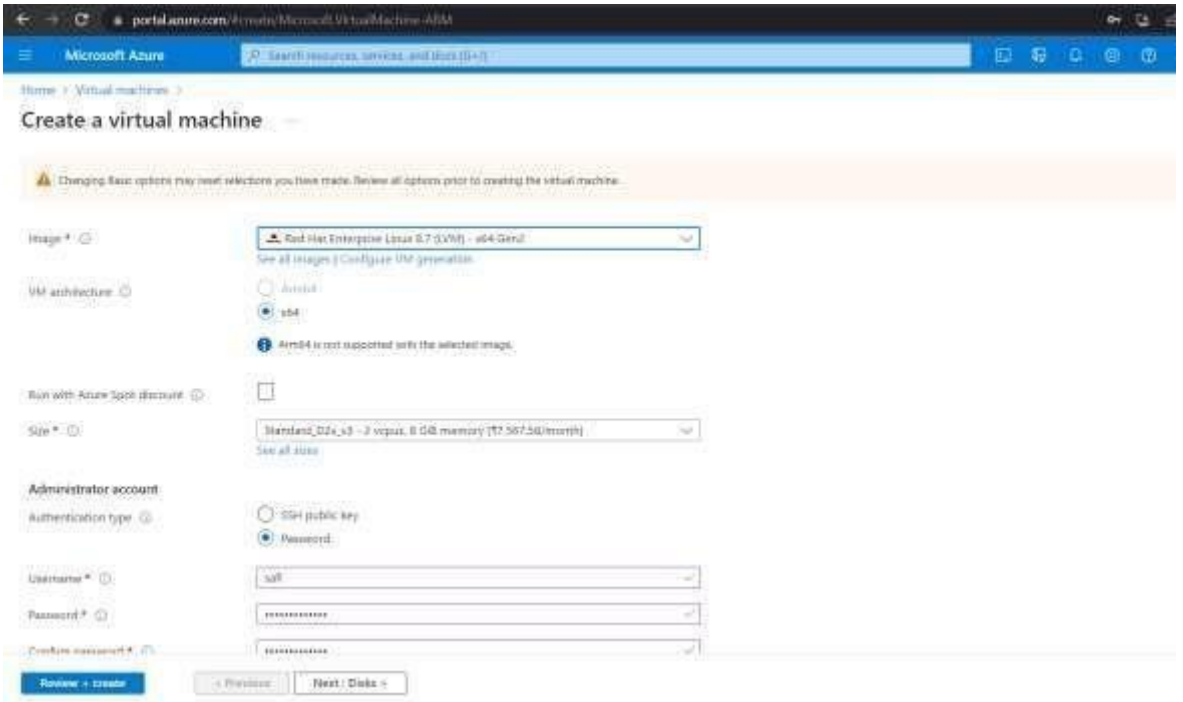
Deploying on ubuntu VM

Click on new Virtual machine.

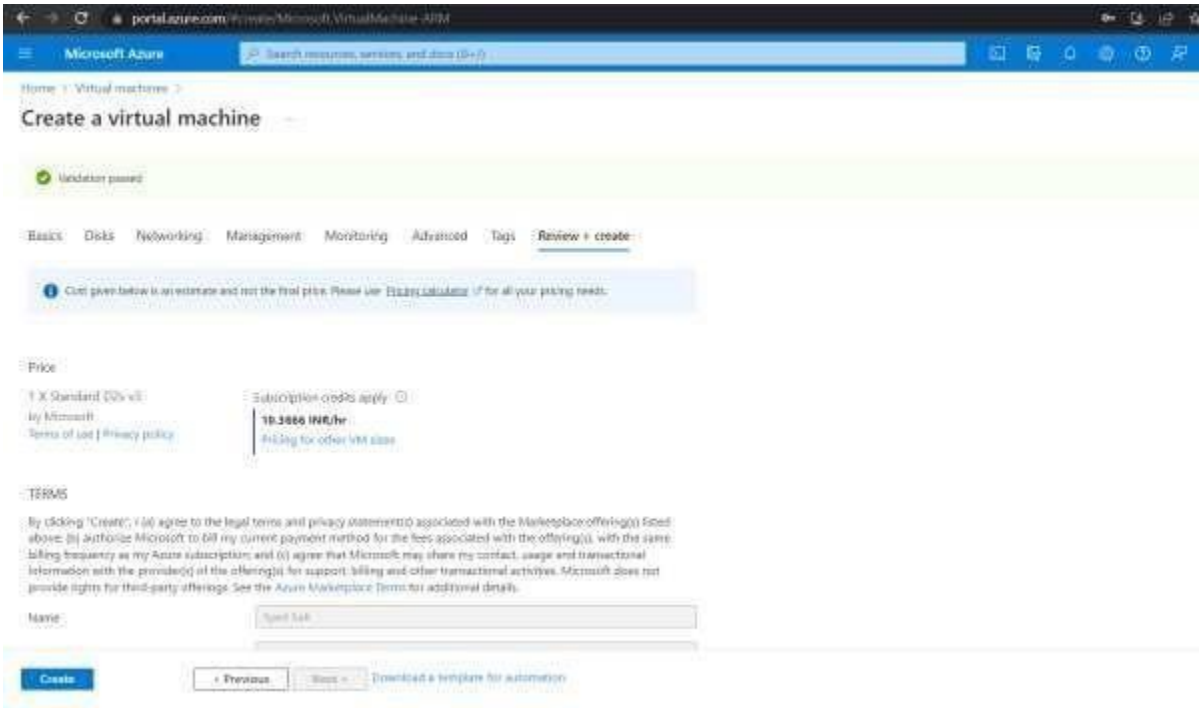


Enter the required details for the machine.

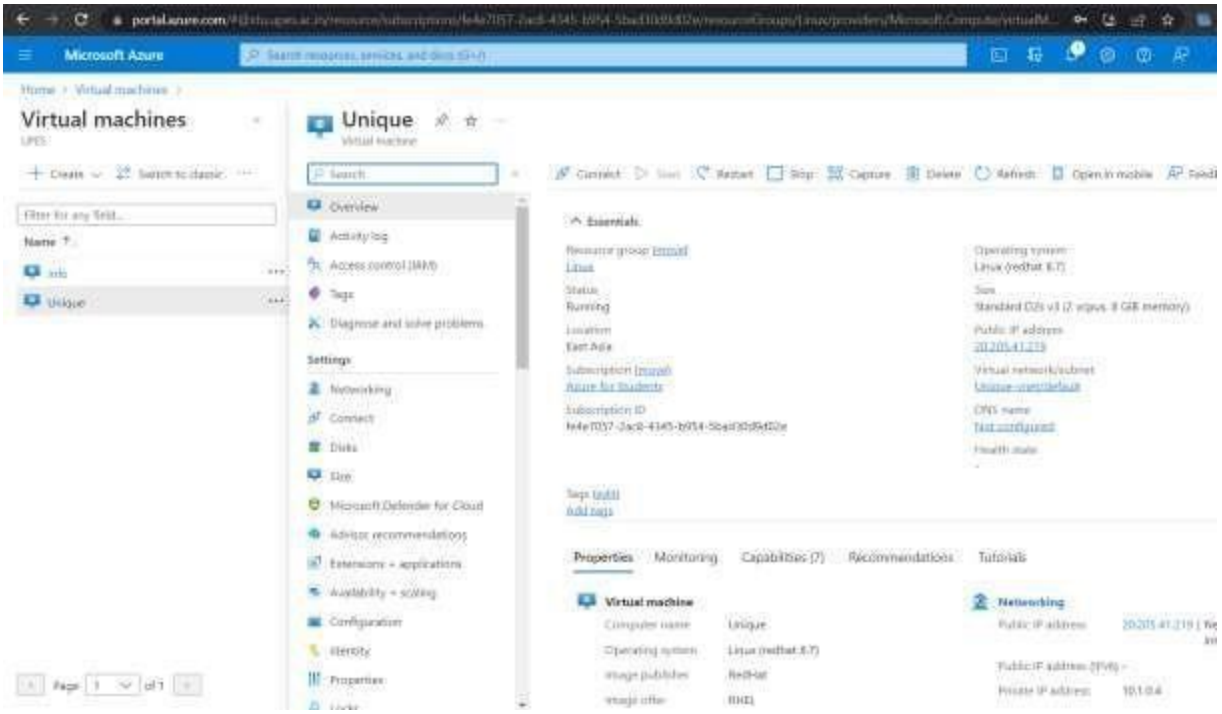




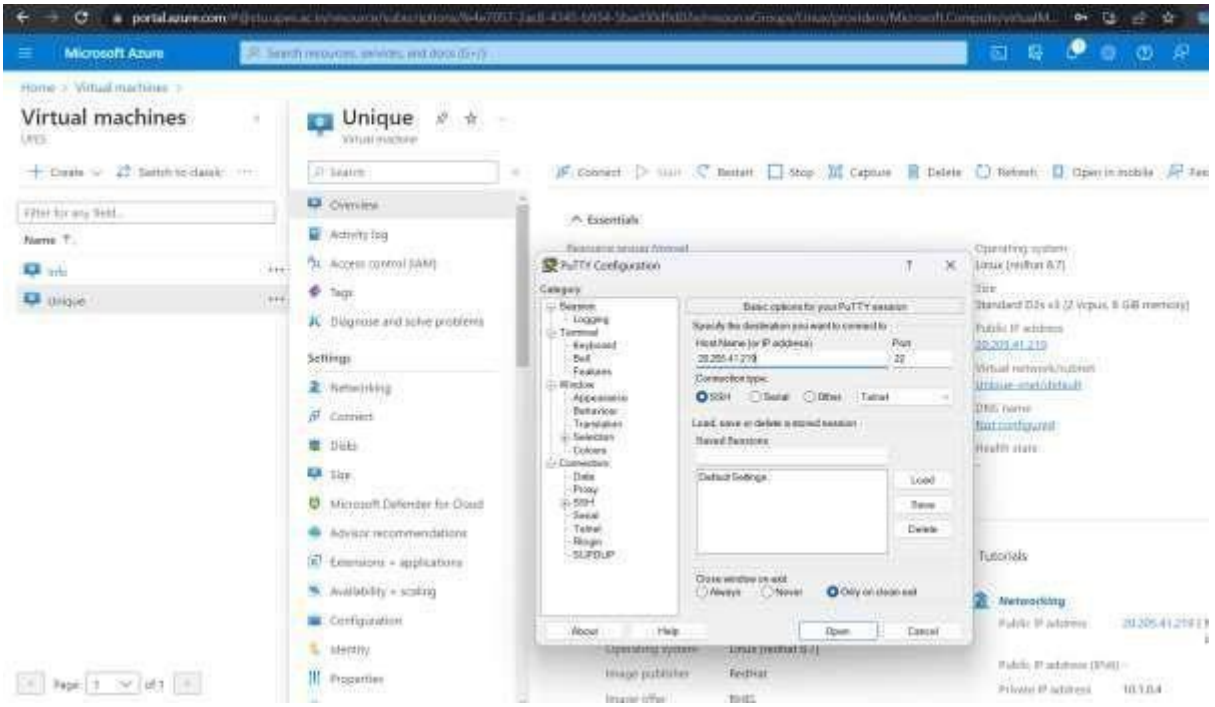
Review the details.



Virtual machine is created and open it.



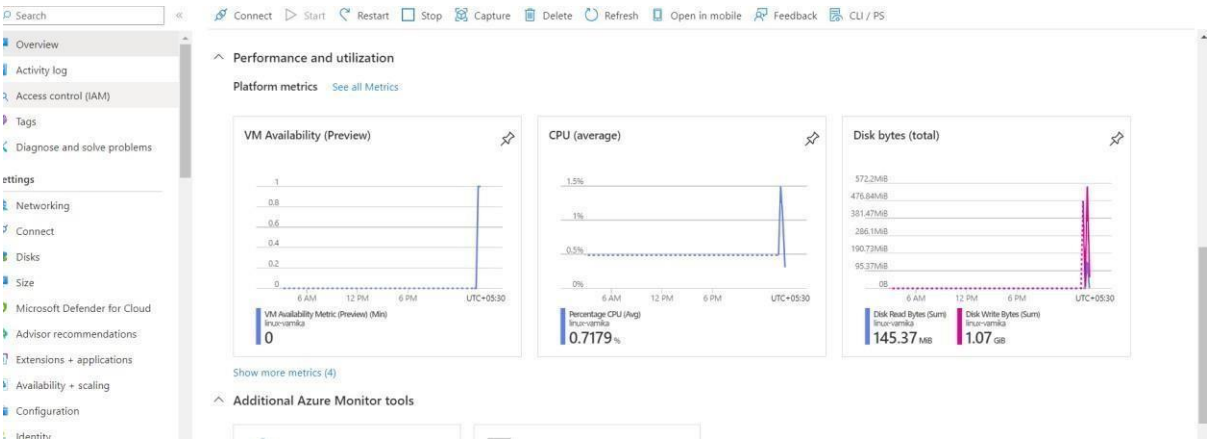
Copy the IP address and paste it on putty software.

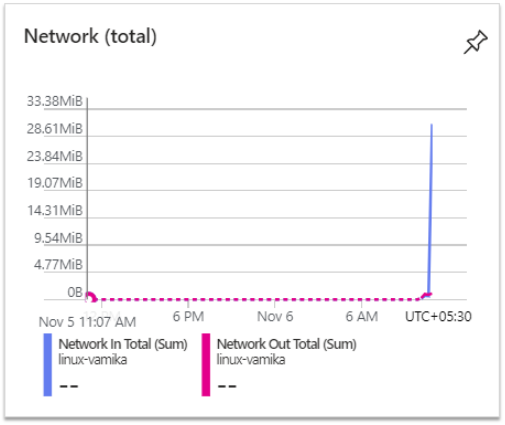


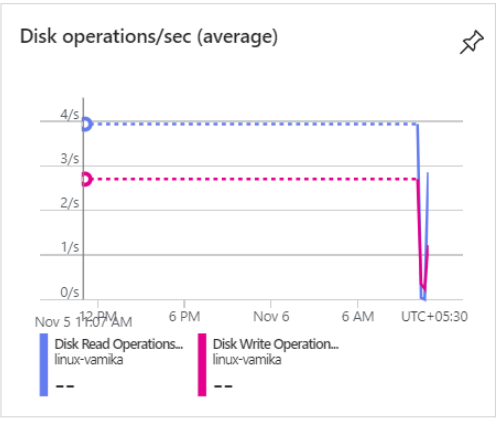
Memory utilization

Graph for Azure:

All 3 graphs in Azure in Monitoring Metrics Tab.







Response Time: For Web Server Response Time:

1. Start Time (t1): Note the time when the request is initiated. This is the starting point.

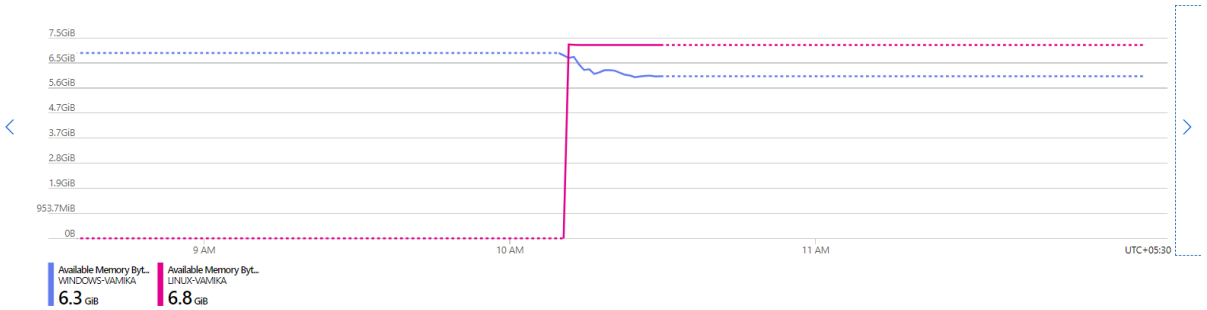
2. End Time (t2): Note the time when the response is fully received or when the requested operation is completed.

3. Response Time Calculation: Response Time = t2 - t1

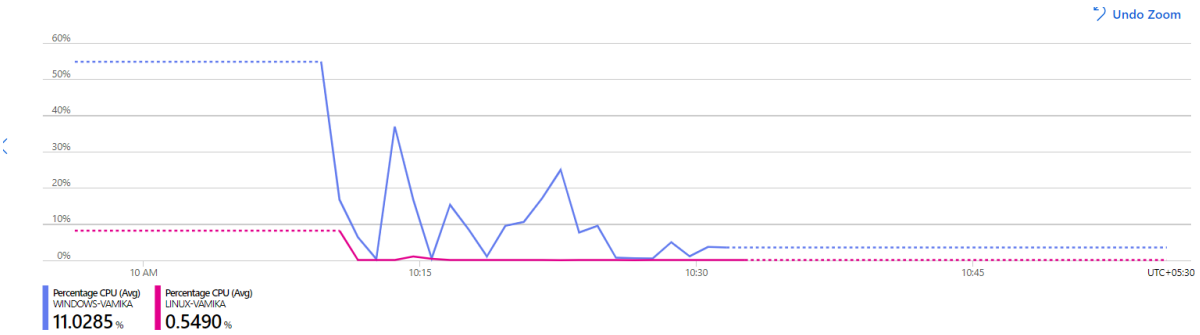
Response Time: 12 minutes and 34 seconds.

Comparison between both Virtual Machines

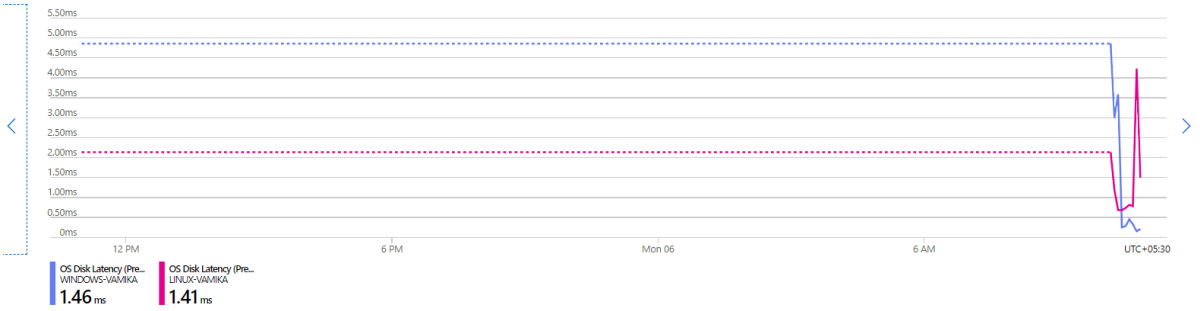
Memory Utilization: Linux uses **less memory** thus has more available space than windows.



CPU Utilization: Linux has **less CPU Utilization**.



Performance: Linux is faster than Windows and has **less latency**.



The choice between Linux and Windows for virtual machines (VMs) and their respective response times depends on various factors, including your specific use case, requirements, and familiarity with the operating systems. Both Linux and Windows can be optimized for performance, but the optimal choice may differ.

1. **Resource Efficiency**: Linux is often considered more resource-efficient than Windows. Linux distributions typically have lower system requirements and consume fewer resources, which can contribute to better performance, especially on VMs with limited resources.

2. **Specific Application Requirements**: Consider the specific applications or workloads you plan to run on the VM. Some applications are better suited for a particular operating system. For example, if you are running applications that are designed for Windows, then a Windows VM would be the logical choice.

3. **Cost**: Linux is often chosen for VMs in cloud environments due to its open-source nature, which can result in lower licensing costs compared to Windows. If cost is a significant factor, this might influence your decision.

4. **Administration and Management:** Choose an operating system that your team is familiar with in terms of administration and management. If your team has expertise in Linux, it might be more efficient to stick with Linux VMs.

: Both Linux and Windows have robust security features, but the security landscape can vary.

In summary, there is not a one-size-fits-all answer to whether Linux or Windows will have better response time for VMs. The choice depends on your specific needs and considerations. After Testing on both operating systems:

Response Time:

Both Linux and Windows can provide good response times. but Linux, due to its efficiency and minimal resource usage, we have seen in this case Linux have less response time compared to windows.

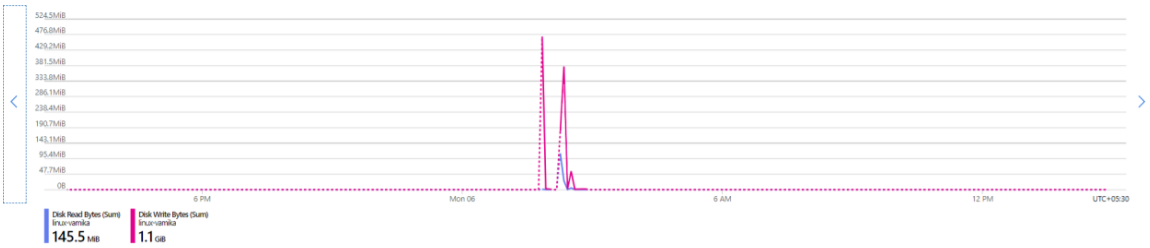
Response Time Windows: 15 minutes and 47 seconds.

Response Time Linux: 12 minutes and 34 seconds.

Fast OS Performance: Linux ubuntu are often known for their fast performance due to their lightweight nature and efficient resource handling. They generally have lower overhead and tend to **be very responsive, making them favourable in terms of quick performance**.

CPU Utilization: As we have seen in both the cases, the **CPU Utilization is less in Ubuntu in comparison to Windows**. Windows might tend to use more CPU resources for its background services and GUI, potentially leading to slightly higher CPU utilization in some cases.

Memory Utilization: Ubuntu generally has a reputation for efficient memory management. It tends to use less memory for the operating system itself, leaving more available for applications and services. **So, Ubuntu uses less memory as compared to Windows.**


524.5MiB
476.8MiB
429.2MiB
381.5MiB
333.8MiB
286.1MiB
238.4MiB
190.7MiB
143.1MiB
95.4MiB
47.7MiB
0B
6 PM
Mon 06
6 AM
12 PM
UTC+05:30
Disk Read Bytes (Sum)
linux-vamika
145.5 MiB
Disk Write Bytes (Sum)
linux-vamika
1.1 GiB