

11. Aim: To change the hardware compatibility of VM either by clone / create a new virtual machine.

Procedure

- Open VM work station.
- select a VM and right click it
- Add hardware at a select ~~se~~ ~~si~~ ~~f~~ Click here.
- Click on ^{Present} ~~new~~ virtual disk.
- Give the name :
- Give maximum RAM size.
- Change no. of processors.
- Choose the maximum disk capacity.
- Click on the finish.
- The Hardware compatibility is changed compare with other.

Output:

memory	2GB	memory	6GB
Processors	1	Processors	8
Hard disk	20GB	Hard Disk	40GB
CD/DVD	Auto	CD/DVD	Auto
network Adapters	Present	network adapters	Present
USB controllers	Auto	USB controllers	Auto

Result: we have changed the hardware compatibility successfully.

Clone of uday

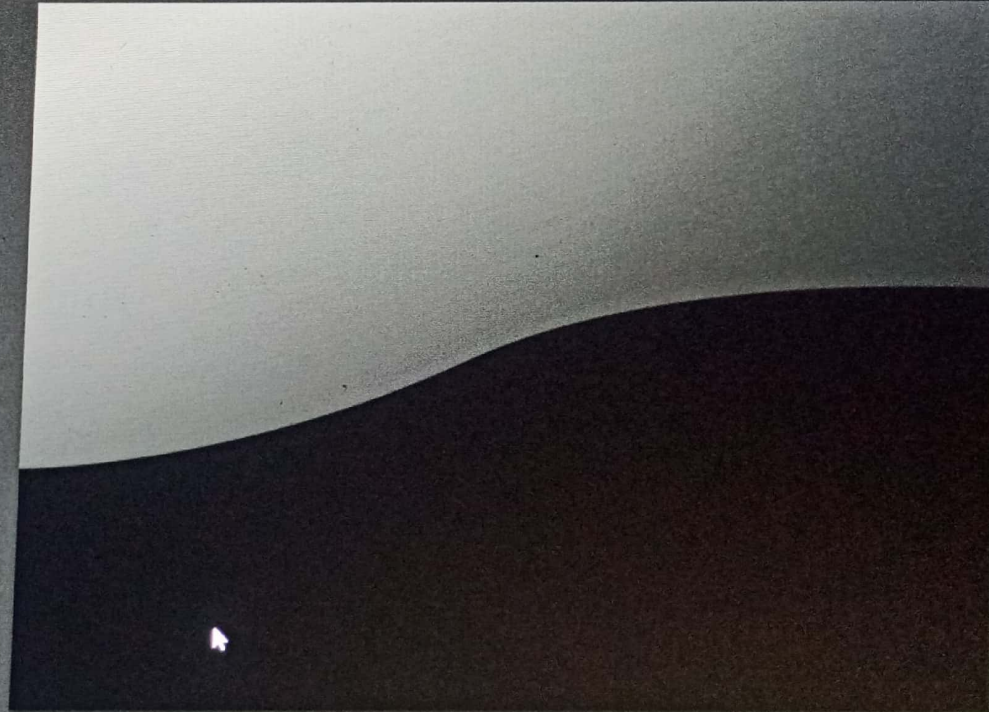
- ▶ Power on this virtual machine
- ✎ Edit virtual machine settings
- ⬇ Upgrade this virtual machine

▼ Devices

Memory	12.1 GB
Processors	1
Hard Disk (SCSI)	21 GB
CD/DVD (SATA)	Auto detect
Network Adapter	NAT
USB Controller	Present
Sound Card	Auto detect
Printer	Present
Display	Auto detect

▼ Description

Type here to enter a description of this virtual machine.



▼ Virtual Machine Details

State: Powered off
Configuration file: C:\Users\Bhargav\Documents\Virtual Machines\Clone of uday\Clone of uday.vmx
Clone of: C:\Users\Bhargav\Documents\Virtual Machines\uday\uday.vmx
Hardware compatibility: Workstation 15.x virtual machine
Primary IP address: Network information is not available

12. Aim: To demonstrate infrastructure as a service
creating a resource group by using public
cloud service providers.

Procedure

- Create an account in Microsoft Azure. By E-mail (Student)
- Click on Resources & create a group.
- Give necessary info & create a new VM with your username & password.
- create virtual machine with suitable OS, whether ~~as~~ windows or Linux.
- Click on create and finish creating virtual machine.

Output

Today virtual machine.

Connect	Start	Stop	Restart	Delete
Computer's name	Uday		Host	
OS	windows		Size	Standard
VM generation	3		VCPU	3
			RAM	10GB
Host group	none			

Result: We have created ~~IAAS~~ virtual machine in Azure and executed as IAAS.

→ Move Delete Refresh Give feedback

^ Essentials

Resource group (move) : [uday_group](#)

Location : Central India

Subscription (move) : [Azure for Students](#)

Subscription ID : 3c742b6c-5922-47f1-8dbc-053995e61ddf

Tags (edit) : owner : uday

Custom security rules : 1 inbound, 0 outbound

Associated with : 0 subnets, 1 network interfaces

Filter by name

Port == all

Protocol == all

Source == all

Destination == all

Action == all

Priority ↑↓

Name ↑↓

Port ↑↓

Protocol ↑↓

Source ↑↓

Destination ↑↓

Action ↑↓

✓ Inbound Security Rules

300	SSH	22	TCP	Any	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerIn...	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

✓ Outbound Security Rules

65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowInternetOutBound	Any	Any	Any	Internet	Allow
65500	DenyAllOutBound	Any	Any	Any	Any	Deny

B. Aim: To create infrastructure as a service by creating a virtual machine using a public cloud service provider.

Procedure:

- open microsoft.azure.com
- login to the free student account. By E-mail.
- click on resource and create resource group
- click on new virtual machine to create a new VM.
- now give user name & password. and other all necessary information. and click on create.
- this VM is created.
- now connect the virtual machine & password for VM and download the file for the new windows VM.

output:

Uday virtual machine	Restart	Delete	Stop	Capture
Connect	Start			
Properties:				
Computer name: uday				Disks
OS: windows				OS disk: disk3
Host: none				Encryption: none
VM generation: 2.2				Data disks: 2
Agent status: Ready (done).				

Result: By using azure we created VM. By To create IaaS and executed it successfully.

Connect Start Restart Stop Capture Delete Refresh Open in mobile Feedback CLI / PS

Advisor (1 of 10): Virtual machines should encrypt temp disks, caches, and data flows between Compute and Storage resources →

Essentials

Resource group (move) : [uday_group](#)

Status : Stopped (deallocated)

Location : Central India

Subscription (move) : [Azure for Students](#)

Subscription ID : 3c742b6c-5922-47f1-8dbc-053995e61ddf

Health state : -

Tags (edit) : owner : uday

Operating system : Linux

VM availability status : -

Size : Standard D2s v3 (2 vcpus, 8 GiB memory)

Public IP address : [20.192.5.126](#)

Virtual network/subnet : [uday-vnet/default](#)

DNS name : [Not configured](#)

JSON View

Properties Monitoring Capabilities (7) Recommendations (10) Tutorials

Virtual machine

Computer name : uday

Operating system : Linux

Image publisher : canonical

Image offer : 0001-com-ubuntu-server-focal

Image plan : 20_04-lts-gen2

VM generation : V2

Networking

Public IP address : [20.192.5.126](#) (Network interface uday595)

Public IP address (IPv6) : -

Private IP address : 10.0.0.4

Private IP address (IPv6) : -

Virtual network/subnet : [uday-vnet/default](#)

DNS name : [Configure](#)



Search



ENG
IN

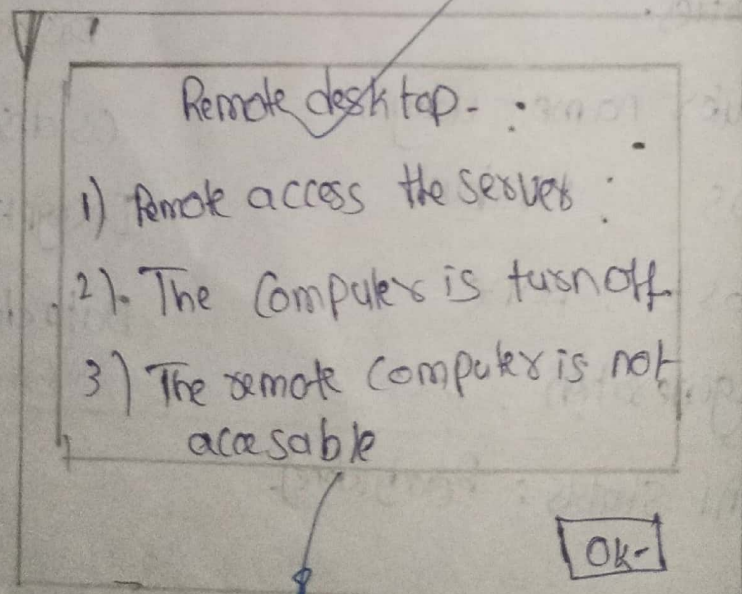
23:11:22
23-08-2023

14 Aim: To demonstrate a infrastructure as a service by establishing remote connection. Launch the VM image and Remote in your desktop.

Procedure:

- Open microsoft-azure.com
- login to the free student ~~com~~ account by B-mail.
- Create a new virtual network by click network option.
- And create a new virtual machine with needed spec data and click on create option.
- New VM will be created.
- Create an image through console. And the image created should have the correct specifications.
- launch VM By image we created and we can access ~~output~~ VM remotely.

Output:



Result: we have created and launched VM image remotely in desktop and demonstrated IaaS successfully.



Local machine Azure portal

SSH using Azure CLI

Quickly connect in browser. Supports Azure AD authentication. Private key not required.

Using public IP address (20.192.5.126)

Select



Local machine

Native SSH

No additional software needed. Private key required for connection. Best for those with existing SSH tools.

Using public IP address (20.192.5.126)

Select

More ways to connect (3)



Local machine Azure portal

Bastion basic or standard

Advanced capabilities including custom inbound port, RDP on desktop, and host scaling.

Go to Bastion



Local machine

Remote desktop protocol

Most Linux machines do not have RDP enabled. Use SSH or install a desktop environment like xRDP.

[Learn about RDP on Linux](#)



Azure portal

Serial console

Troubleshooting with access independent of the network or operating system state.

Go to serial console



Search



is. Aim: To demonstrate PaaS Services & create
Configure a new VM image in cloud service.

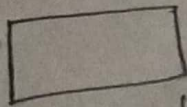
Procedure:

- Open microsoft azure.com.
- login with student free account using-mail.
- Create a new resource then create new web
Page app by click on + create webapp.
- give any name for the webapp
- give the program type Java or python
- specify the OS type.
- and give all other details and click on
create option the web app will be created
- choose run time stack & configure setting.
- we can deploy web app code to the
azure.
- Now deployment is done and you receive
URL so you can access the web page

Output:

~~Snapshot manager~~

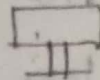
output



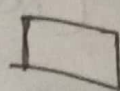
Recycle bin.



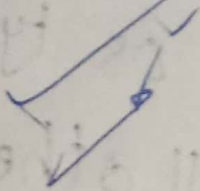
e



Aug 5



Result: We have create a ~~can~~ configured vm image and demonstrated PAAS services and executed successfully.



Search

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

Settings

- Networking
- Connect
- Disks
- Size
- Microsoft Defender for Cloud
- Advisor recommendations
- Extensions + applications
- Availability + scaling
- Configuration
- Identity
- Properties

Connect Start Restart ☐ Stop Capture Delete Refresh Open in mobile Feedback CLI / PS

Advisor (1 of 10): Log Analytics agent should be installed on virtual machines →

^ Essentials

JSON View

Resource group (move)	: uday_group	Operating system	: Linux
Status	: Stopped (deallocated)	VM availability status	: -
Location	: Central India	Size	: Standard D2s v3 (2 vcpus, 8 GiB memory)
Subscription (move)	: Azure for Students	Public IP address	: 20.192.5.126
Subscription ID	: 3c742b6c-5922-47f1-8dbc-053995e61ddf	Virtual network/subnet	: uday-vnet/default
Health state	: -	DNS name	: Not configured
Tags (edit)	: owner : uday		

Properties Monitoring Capabilities (7) Recommendations (10) Tutorials

Virtual machine

Computer name	uday
Operating system	Linux
Image publisher	canonical
Image offer	0001-com-ubuntu-server-focal
Image plan	20_04-lts-gen2
VM generation	V2

Networking

Public IP address	20.192.5.126 (Network interface uday595)
Public IP address (IPv6)	-
Private IP address	10.0.0.4
Private IP address (IPv6)	-
Virtual network/subnet	uday-vnet/default
DNS name	Configure