# CSA1518-CLOUD COMPUTING AND BIG DATA ANALYTICS
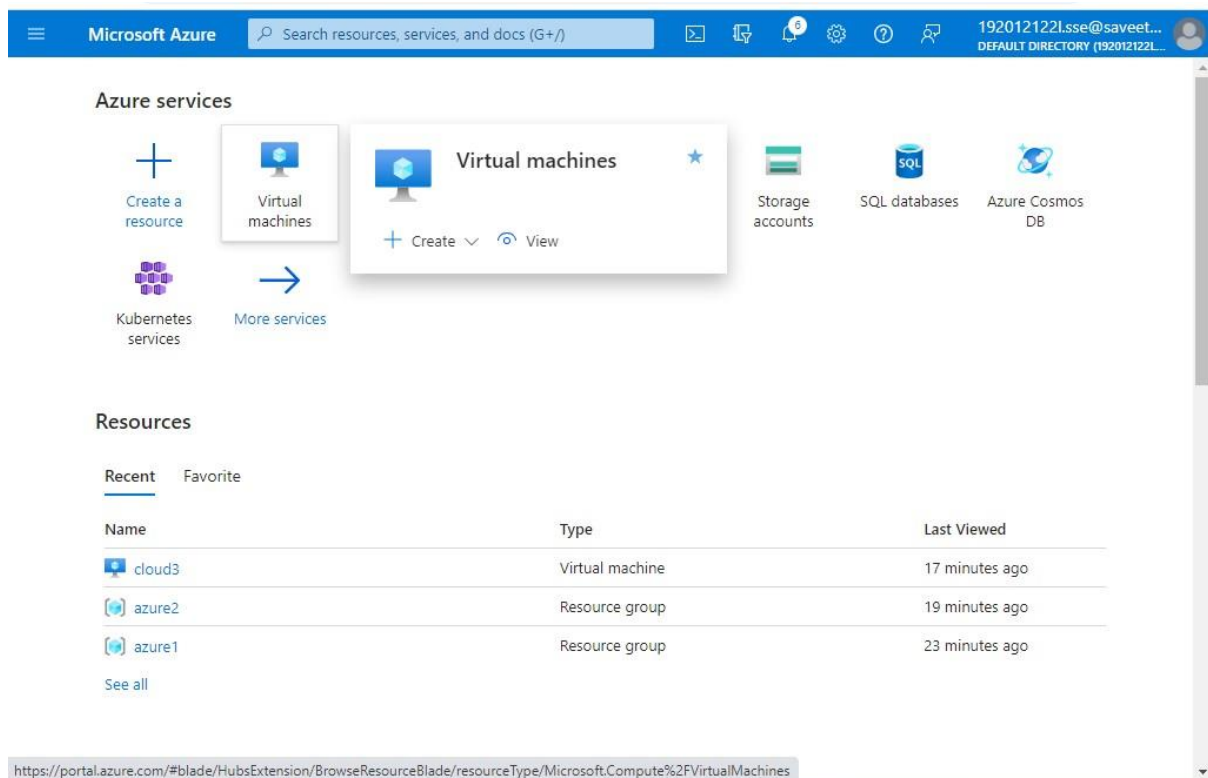
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## EXPERIMENT:13

Demonstrate Infrastructure as a Service (IaaS) by creating a Virtual Machine using a Public Cloud Service Provider (Azure), configure with required memory and CPU.

IMPLEMENTATION:

STEP 1:SELECT VIRTUAL MACHINE

# STEP 2:CLICK ON CREATE



# STEP 3:SELECT AZURE VIRTUAL MACHINE

# STEP 4:FILL THE DETAILS IN MANDATORY COLUMNS

## STEP 5:CLICK ON NETWORKING



### OS disk

| | |
|---|---|
| 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 cloud4

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 ⓘ |
|---|---|---|---|---|---|

Create and attach a new disk    Attach an existing disk

∨ Advanced

[ Review + create ]    [ < Previous ]    [ Next : Networking > ]    ⚲ Give feedback

## CREATE DISK

Home > Virtual machines > Create a virtual machine >

# Create a new disk  ⋯                                           ✕

Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. Learn more ☐

| | |
|---|---|
| Name * | cloud4_DataDisk_0 |
| Source type * ⓘ | None (empty disk) ▽ |
| Size * ⓘ | **64 GiB** Premium SSD LRS Change size |
| Key management ⓘ | Platform-managed key ▽ |
| Enable shared disk | ◯ Yes  ⦿ No |
| Delete disk with VM | ☐ |

[ OK ]

# STEP 6:CLICK NEXT: MANAGEMENT

Home > Virtual machines >

## Create a virtual machine ···

                ⊙ Allow selected ports

Select inbound ports *

                 SSH (22)

⚠ **This will allow all IP addresses to access your virtual machine.** This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

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 ⧉

Place this virtual machine behind an existing load balancing solution? ☐

[ Review + create ]  [ < Previous ] [ Next : Management > ]  ⤺ Give feedback

# STEP 7:CLICK NEXT:MONITORING

## Create a virtual machine ···

### 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 ⧉

ⓘ Azure AD login now uses SSH certificate-based authentication. You will need to use an SSH client that supports OpenSSH certificates. You can use Azure CLI or Cloud Shell from the Azure Portal. Learn more ⧉

### Auto-shutdown

Enable auto-shutdown ⓘ ☐

### Backup

Enable backup ⓘ ☐

### Guest OS updates

Patch orchestration options ⓘ     Image default

ⓘ Some patch orchestration options are not available for this image. Learn more ⧉

[ Review + create ]  [ < Previous ] [ Next : Monitoring > ]  ⤺ Give feedback

# CLICK ON ADVANCED

## Create a virtual machine  ...

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

Configure monitoring options for your VM.

**Alerts**

Enable recommended alert rules  ⓘ      ☐

**Diagnostics**

Boot diagnostics  ⓘ      ⦿  Enable with managed storage account (recommended)
                        ◯  Enable with custom storage account
                        ◯  Disable

Enable OS guest diagnostics  ⓘ      ☐

[ **Review + create** ]      [ < Previous ]    [ Next : Advanced > ]            🗨 Give feedback

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## CLICK ON TAGS

Home > Virtual machines >

## Create a virtual machine  ...                                    ✕

**Host**

Azure Dedicated Hosts allow you to provision and manage a physical server within our data centers that are dedicated to your Azure subscription. A dedicated host gives you assurance that only VMs from your subscription are on the host, flexibility to choose VMs from your subscription that will be provisioned on the host, and the control of platform maintenance at the level of the host. Learn more ☍

Host group  ⓘ          [ No host groups found                          ⌄ ]

**Capacity reservations**

Capacity reservations allow you to reserve capacity for your virtual machine needs. You get the same SLA as normal virtual machines with the security of reserving the capacity ahead of time. Learn more ☍

Capacity reservation group  ⓘ     [ None                                ⌄ ]

**Proximity placement group**

Proximity placement groups allow you to group Azure resources physically closer together in the same region. Learn more ☍

Proximity placement group  ⓘ      [ No proximity placement groups found    ⌄ ]

[ **Review + create** ]      [ < Previous ]    [ Next : Tags > ]            🗨 Give feedback

## STEP 8:ASSIGN NAME AND VALUE

# Create a virtual machine  ⋯

✕

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

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. Learn more about tags ⧉

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

| Name ⓘ | | Value ⓘ | Resource |
|---|---|---|---|
| ubuntu2 | : | 15 | 13 selected ∨  🗑 |
|  | : | 15 | 13 selected ∨ |

| **Review + create** | | < Previous | Next : Review + create > | | ℛ Give feedback |

## STEP 9:VALIDATION IS PASSED.CLICK ON CREATE

# Create a virtual machine  ⋯

✕

✅ Validation passed

**Tags**

| ubuntu2 | 15 (Auto-shutdown schedule) |
|---|---|
| ubuntu2 | 15 (Availability set) |
| ubuntu2 | 15 (Disk) |
| ubuntu2 | 15 (Network interface) |
| ubuntu2 | 15 (Network security group) |
| ubuntu2 | 15 (Public IP address) |
| ubuntu2 | 15 (Recovery Services vault) |
| ubuntu2 | 15 (SQL Virtual Machine) |
| ubuntu2 | 15 (SSH key) |
| ubuntu2 | 15 (Storage account) |
| ubuntu2 | 15 (Virtual machine) |
| ubuntu2 | 15 (Virtual machine extension) |
| ubuntu2 | 15 (Virtual network) |

| **Create** | | < Previous | Next > | Download a template for automation | | ℛ Give feedback |

## STEP 10:DEPLOYMENT IS COMPLETED