

Azure Assignment 1

**Azure - Creating VM**

"ABC Corporates have decided to move their entire resources on Azure Cloud. The architect has estimated that they would need at least 255 IPs for each of their "Dev", "Prod" & "Tester" team.

Create Virtual Network called "ABCNetRajeev" and Subnets "Devnet", "Prodnet" & "Testernet".

Create Virtual Network with three subnets

Step 1. Select Virtual Network tab and create VN

Step 2. Use given resource group newrg

Step 3. Create VNet "ABCNetRajeev"

- o CIDR Range 10.2.0.0/16

255.255.0.255, 0.255→255\*255=65000

Step 4. Create three subnets

- o Devnet 10.1.1.0/24 -

- 255.255.255.0-255→255

- o Prodnet 10.2.2.0/24 -

- 255.255.255.0-255→255

- o Testernet 10.2.3.0/24-

- 255.255.255.0-255→255

## Create Virtual Network

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual networks > Virtual networks  
RavinSoftTech (ravinsofttech.com)

+ Create Manage view ...

Filter for any field...

Name ↑

No virtual networks to display

Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.

Create virtual network

Learn more

### Create virtual network

Basics IP Addresses Security Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation. [Learn more about virtual network](#)

Project details

Subscription \* ⓘ Manipal

Resource group \* ⓘ newrg  
[Create new](#)

Instance details

Name \* ABCNetRajeev

Region \* East US

Creating subnets:

Create subnet Devnet with CIDR range 10.2.1.0/24

Create subnet Testernet with CIDR range 10.2.2.0/24

Create subnet Prodnet with CIDR range 10.2.3.0/24

Search resources, services, and docs (G+)

RAJEEV.NITNAWRE@rav...  
RAVINSOFTTECH (RAVINSOFTTE...)

### Create virtual network

Basics IP Addresses Security Tags Review + create

The virtual network's address space, specified as one or more address prefixes in CIDR notation (e.g. 192.168.1.0/24).

IPv4 address space

10.2.0.0/16 10.2.0.0 - 10.2.255.255 (65536 addresses)

☐ Add IPv6 address space ⓘ

The subnet's address range in CIDR notation (e.g. 192.168.1.0/24). It must be contained by the address space of the virtual network.

+ Add subnet - Remove subnet

Subnet name	Subnet address range	NAT gateway
<input type="checkbox"/> Devnet	10.2.1.0/24	-
<input type="checkbox"/> Testernet	10.2.2.0/24	-
<input type="checkbox"/> Prodnet	10.2.3.0/24	-

**i** Use of a NAT gateway is recommended for outbound internet access from a subnet. You can deploy a NAT gateway and assign it to a subnet after you create the virtual network. [Learn more](#)

## Virtual Network created

Microsoft Azure

Search resources, services, and docs (G+)

Home >

Microsoft.VirtualNetwork-20211113195659 | Overview

Deployment

Search (Ctrl+J)

Delete Cancel Redeploy Refresh

We'd love your feedback! →

✓ Your deployment is complete

Deployment name: Microsoft.VirtualNetwork-2021111319... Start time: 11/13/2021, 8:08:01 PM  
Subscription: Manipal Correlation ID: 8cf8e9d2-e627-498e-9797-2ff4f455...  
Resource group: newrg

Deployment details (Download)

Next steps

Go to resource

Microsoft Secure y  
Go to Az  
Free Mik  
Start lea

Microsoft Azure

Search resources, services, and docs (G+)

Home >

All resources

RavinSoftTech (ravinsofttech.com)

Create Manage view Refresh Export to CSV Open query Assign tags Delete Feedback

Filter for any field... Subscription == all Resource group == all Type == all Location == all Add filter

Showing 1 to 29 of 29 records. Show hidden types

No grouping List view

Name	Type	Resource group	Location	Subscription
ABCNetRajeev	Virtual network	newrg	East US	Manipal

# Creating VM

Microsoft Azure

Search resources, services, and docs (G+)

RAJEEV.NITNAWRE@rav...  
RAVINSOFTTECH (RAVINSOFTTECH...)

Home > Virtual machines >


Virtual machines

RavinSoftTech (ravinsofttech.com)

+ Create ▾ ↻ Switch to classic ...

Filter for any field...

Name ↑↓ Subscription ↑↓



No virtual machines to display

Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.

[Learn more about Windows virtual machines](#)

[Learn more about Linux virtual machines](#)

Create a virtual machine ...

OS disk type	Standard HDD LRS
Use managed disks	Yes
Ephemeral OS disk	No

Networking

Virtual network	ABCNetRajeev
Subnet	Devnet (10.2.1.0/24)
Public IP	(new) RajeevVM-ip
NIC network security group	(new) RajeevVM-nsg
Accelerated networking	Off
Place this virtual machine behind an existing load balancing solution?	No

Management

Azure Security Center	None
Boot diagnostics	On
Enable OS guest diagnostics	Off
System assigned managed identity	Off
Login with Azure AD (Preview)	Off
Auto-shutdown	Off
Enable hotpatch (Preview)	Off
Patch orchestration options	Image Default

Advanced

Extensions	None
Cloud init	No
User data	No
Proximity placement group	None

Create < Previous Next > Download a template for automation

Generate new key pair

An SSH key pair contains both a public key and a private key. **Azure doesn't store the private key.** After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)

Download private key and create resource

Return to create a virtual machine

Microsoft Azure

Search resources, services, and docs (G+)

Home > CreateVM Canonical.UbuntuServer-18\_04-lts-gen2-20211113201058 >

**RajeevVM**

Virtual machine

Search (Ctrl+/)

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

Overview

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

Settings

- Networking
- Connect
- Disks
- Size
- Security
- Advisor recommendations
- Extensions
- Continuous delivery
- Availability + scaling
- Configuration
- Identity
- Properties
- Locks
- Operations
- Bastion
- Auto-shutdown
- Backup

Essentials

Resource group (Move) [newrg](#)

Status: Running

Location: East US

Subscription (Move) [Manipal](#)

Subscription ID: 3f75ed9e-ee81-4c15-a708-a5f09854b6ac

Tags (Edit)  
[Click here to add tags](#)

Operating system: Linux (ubuntu 18.04)

Size: Standard B1s (1 vcpus, 1 GiB memory)

Public IP address: 20.119.54.163

Virtual network/subnet: [ABCNetRajeev/Devnet](#)

DNS name: Not configured

JSON View

Properties Monitoring Capabilities (7) Recommendations Tutorials

**Virtual machine**

Computer name	RajeevVM
Health state	-
Operating system	Linux (ubuntu 18.04)
Publisher	Canonical
Offer	UbuntuServer
Plan	18_04-lts-gen2
VM generation	V2
Agent status	Ready
Agent version	2.5.0.2
Host group	<a href="#">None</a>
Host	-
Proximity placement group	-
Colocation status	N/A

**Networking**

Public IP address	20.119.54.163
Public IP address (IPv6)	-
Private IP address	10.2.1.4
Private IP address (IPv6)	-
Virtual network/subnet	<a href="#">ABCNetRajeev/Devnet</a>
DNS name	<a href="#">Configure</a>

**Size**

Size	Standard B1s
vCPUs	1
RAM	1 GiB

## All the created resources

Microsoft Azure

Search resources, services, and docs (G+)

Home >

**All resources**

RavinSoftTech (ravinsofttech.com)

Create Manage view Refresh Export to CSV Open query Assign tags Delete Feedback

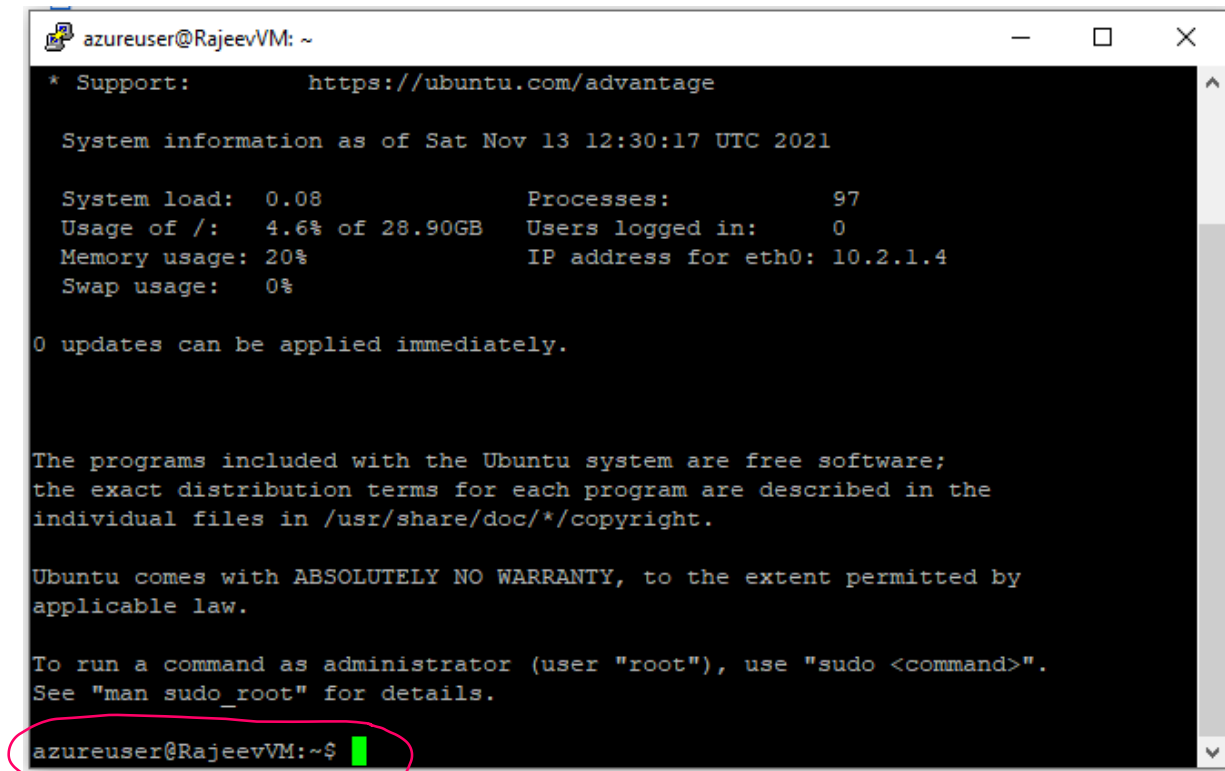
rajeev Subscription == all Resource group == all Type == all Location == all Add filter

Showing 1 to 7 of 7 records. Show hidden types

No grouping List view

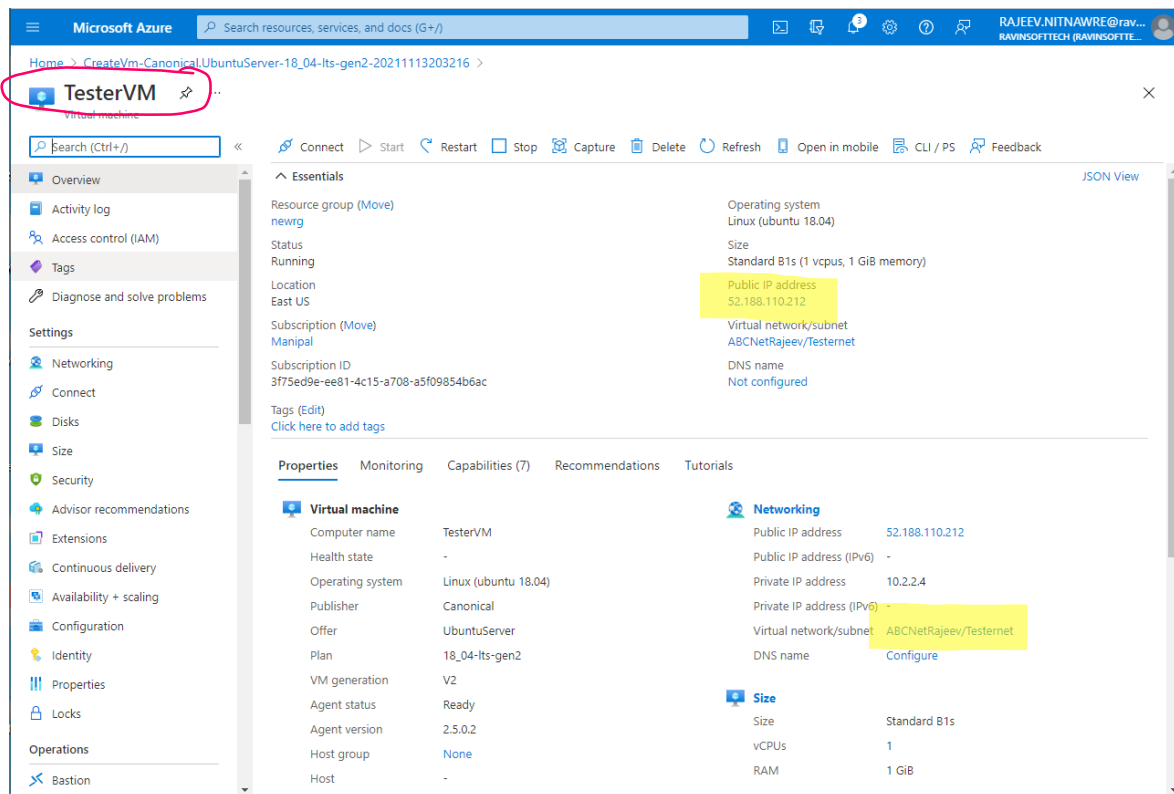
Name	Type	Resource group	Location	Subscription
<a href="#">ABCNetRajeev</a>	Virtual network	<a href="#">newrg</a>	East US	<a href="#">Manipal</a>
<a href="#">RajeevVM</a>	Virtual machine	<a href="#">newrg</a>	East US	<a href="#">Manipal</a>
<a href="#">RajeevVM-ip</a>	Public IP address	<a href="#">newrg</a>	East US	<a href="#">Manipal</a>
<a href="#">RajeevVM-nsg</a>	Network security group	<a href="#">newrg</a>	East US	<a href="#">Manipal</a>
<a href="#">rajeevwm228</a>	Network interface	<a href="#">newrg</a>	East US	<a href="#">Manipal</a>
<a href="#">RajeevVM_key</a>	SSH key	<a href="#">newrg</a>	East US	<a href="#">Manipal</a>
<a href="#">RajeevVM_OsDisk_1_4aa93b45635a46db69c2f3e195575fe</a>	Disk	<a href="#">NEWRG</a>	East US	<a href="#">Manipal</a>

Open Putty, by using .ppk file



```
azureuser@RajeevVM: ~  
* Support:      https://ubuntu.com/advantage  
  
System information as of Sat Nov 13 12:30:17 UTC 2021  
  
System load:  0.08      Processes:           97  
Usage of /:   4.6% of 28.90GB  Users logged in:    0  
Memory usage: 20%      IP address for eth0: 10.2.1.4  
Swap usage:   0%  
  
0 updates can be applied immediately.  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
azureuser@RajeevVM:~$
```

Create Tester VM



The screenshot shows the Microsoft Azure portal interface for a virtual machine named "TesterVM". The VM is in a "Running" state. The left sidebar contains navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Networking, Connect, Disks, Size, Security, Advisor recommendations, Extensions, Continuous delivery, Availability + scaling, Configuration, Identity, Properties, Locks, Operations, and Bastion.

**Essentials**

- Resource group (Move): newrg
- Status: Running
- Location: East US
- Subscription (Move): Manipal
- Subscription ID: 3f75ed9e-ee81-4c15-a708-a5f09854b6ac
- Tags (Edit): Click here to add tags

**Operating system**

- Linux (ubuntu 18.04)

**Size**

- Standard B1s (1 vcpu, 1 GiB memory)

**Public IP address**

- 52.188.110.212

**Virtual network/subnet**

- ABCNetRajeev/Testnet

**DNS name**

- Not configured

**Properties**

Property	Value
Computer name	TesterVM
Health state	-
Operating system	Linux (ubuntu 18.04)
Publisher	Canonical
Offer	UbuntuServer
Plan	18_04-lts-gen2
VM generation	V2
Agent status	Ready
Agent version	2.5.0.2
Host group	None
Host	-

**Networking**

Property	Value
Public IP address	52.188.110.212
Public IP address (IPv6)	-
Private IP address	10.2.2.4
Private IP address (IPv6)	-
Virtual network/subnet	ABCNetRajeev/Testnet
DNS name	Configure

**Size**

Property	Value
Size	Standard B1s
vCPUs	1
RAM	1 GiB

## Create Prod VM

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo, a search bar, and the user profile 'RAJEEV.NITNAWRE@rav...'. The main content area displays the details for a virtual machine named 'ProdVM'. The left sidebar contains a navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Networking, Connect, Disks, Size, Security, Advisor recommendations, Extensions, Continuous delivery, Availability + scaling, Configuration, Identity, Properties, Locks, Operations, and Bastion. The 'ProdVM' details page shows a warning that the virtual machine agent status is not ready. The 'Essentials' section provides a summary of the VM's configuration, including its resource group, status, location, subscription, and operating system. The 'Properties' section lists detailed information about the VM, such as its computer name, health state, operating system, publisher, offer, plan, VM generation, agent status, and agent version. The 'Networking' section shows the public and private IP addresses, the virtual network/subnet, and the DNS name. The 'Size' section indicates the VM's size and the number of vCPUs.

**ProdVM**  
Virtual machine

Search (Ctrl+F)

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

ProdVM virtual machine agent status is not ready. Troubleshoot the issue →

**Essentials** [JSON View](#)

Resource group (Move) **newrg**

Operating system: Linux

Status: Running

Size: Standard B1s (1 vcpu, 1 GiB memory)

Location: East US

Public IP address: 20.115.12.133

Virtual network/subnet: ABCNetRajeev/Devnet

DNS name: Not configured

Subscription (Move) **Manipal**

Subscription ID: 3f75ed9e-ee81-4c15-a708-a5f09854b6ac

Tags (Edit) [Click here to add tags](#)

**Properties** Monitoring Capabilities (7) Recommendations Tutorials

**Virtual machine**

Computer name	ProdVM
Health state	-
Operating system	Linux
Publisher	Canonical
Offer	UbuntuServer
Plan	18_04-lts-gen2
VM generation	V2
Agent status	Not Ready
Agent version	Unknown

**Networking**

Public IP address	20.115.12.133
Public IP address (IPv6)	-
Private IP address	10.2.1.5
Private IP address (IPv6)	-
Virtual network/subnet	ABCNetRajeev/Devnet
DNS name	<a href="#">Configure</a>

**Size**

Size	Standard B1s
vCPUs	1

## All 3 VMs created

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo, a search bar, and the user profile 'RAJEEV.NITNAWRE@rav...'. The main content area displays the 'Recent resources' table, which lists the resources created in the last 35 minutes. The table has three columns: Name, Type, and Last Viewed. The resources listed are 'ProdVM' (Virtual machine), 'newrg' (Resource group), 'TesterVM' (Virtual machine), 'RajeevVM-ip' (Public IP address), 'RajeevVM' (Virtual machine), and 'ABCNetRajeev' (Virtual network). The 'ProdVM' resource is circled in red.

**Azure services**

Create a resource Virtual machines All resources Virtual networks Function App Storage accounts Logic apps Resource groups Azure SQL More services

**Recent resources**

Name	Type	Last Viewed
ProdVM	Virtual machine	a few seconds ago
newrg	Resource group	a few seconds ago
TesterVM	Virtual machine	6 minutes ago
RajeevVM-ip	Public IP address	15 minutes ago
RajeevVM	Virtual machine	18 minutes ago
ABCNetRajeev	Virtual network	35 minutes ago

## Attaching a new disk to the VM

**RajeevVM | Disks**  
Virtual machine

Search (Ctrl+/) Save Discard Refresh Additional settings Feedback Troubleshoot

**OS disk**

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max thr
RajeevVM_OsDisk_1_4aa9...	Standard HDD LRS	30	500	60

**Data disks**

Filter by name

Showing 0 of 0 attached data disks

+ Create and attach a new disk Attach existing disks

LUN	Disk name	Storage type	Size (GiB)	Max IOPS
No data disks attached				

Currently 30 GB disk size is Standard HDD

Microsoft Azure Search resources, services, and docs (G+/)

Home > RajeevVM

**RajeevVM | Disks**  
Virtual machine

Search (Ctrl+/) Save Discard Refresh Additional settings Feedback Troubleshoot

**OS disk**

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption	Host caching
RajeevVM_OsDisk_1_4aa93b45635a466db69c	Standard HDD LRS	30	500	60	SSE with PMK	Read/write

**Data disks**

Filter by name

Showing 1 of 1 attached data disks

+ Create and attach a new disk Attach existing disks

LUN	Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption	Host caching
0	AddonDisk	Standard HDD LRS	32	500	60	Platform-managed key	None

Creating disk 'AddonDisk'...

A new "AddonDisk" of size 32GB of storage type Standard HDD is added.

Home > RajeevVM

**RajeevVM | Disks**  
Virtual machine

Search (Ctrl+/) Save Discard Refresh Additional settings Feedback Troubleshoot

**OS disk**

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption	Host caching
RajeevVM_OsDisk_1_4aa93b45635a466db69c	Standard HDD LRS	30	500	60	SSE with PMK	Read/write

**Data disks**

Filter by name

Showing 1 of 1 attached data disks

+ Create and attach a new disk Attach existing disks

LUN	Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption	Host caching
0	AddonDisk	Standard HDD LRS	32	500	60	SSE with PMK	Read/write



## Creating Storage Account

Home > [rajeevstorage13\\_1636807759131](#) >

**rajeevstorage13**  
Storage account

Search (Ctrl+/)

Open in Explorer Delete Move Refresh Feedback

Microsoft recommends upgrading to the new alerts platform to ensure no interruptions in your alerts. Classic alerts will be retired starting in 2021. Upgrade to the new alerts platform. [Learn more](#)

Essentials [JSON View](#)

Resource group (change)	Performance/Access tier
<a href="#">newrg</a>	Standard/Hot
Location	Replication
East US	Locally-redundant storage (LRS)
Subscription (change)	Account kind
<a href="#">Manipal</a>	StorageV2 (general purpose v2)
Subscription ID	Provisioning state
3f75ed9e-ee81-4c15-a708-a5f09854b6ac	Succeeded
Disk state	Created
Available	11/13/2021, 8:49:36 PM

Tags (change)

Properties Monitoring Capabilities (7) Recommendations Tutorials Developer Tools

<b>Blob service</b>	<b>Security</b>
Hierarchical namespace <a href="#">Disabled</a>	Require secure transfer for REST API operations <a href="#">Enabled</a>
Default access tier <a href="#">Hot</a>	Storage account key access <a href="#">Enabled</a>
Blob public access <a href="#">Enabled</a>	Minimum TLS version <a href="#">Version 1.2</a>
Blob soft delete <a href="#">Disabled</a>	Infrastructure encryption <a href="#">Disabled</a>
Container soft delete	

Microsoft Azure Search resources, services, and docs (G+)

RAJEEV.NITNAWRE@rav... RAVINSOFTTECH (RAVINSOFTTECH...)

### Azure services

Create a resource Storage accounts Virtual machines All resources Virtual networks Function App Logic apps Resource groups Azure SQL More services

### Recent resources

Name	Type	Last Viewed
<a href="#">rajeevstorage13</a>	Storage account	a few seconds ago
<a href="#">newrg</a>	Resource group	a few seconds ago
<a href="#">ProdVM</a>	Virtual machine	8 minutes ago
<a href="#">TesterVM</a>	Virtual machine	13 minutes ago
<a href="#">RajeevVM-ip</a>	Public IP address	22 minutes ago
<a href="#">RajeevVM</a>	Virtual machine	25 minutes ago
<a href="#">ABCNetRajeev</a>	Virtual network	42 minutes ago