

Virtual Machine Scale Set on Azure with Linux

Introduction:

Azure virtual machine scale set helps you on creating a group of virtual machines and managing them on auto-scaling with load balancing features. By this document you will come to know about how to deploy a linux virtual machine on azure with load balancer.

Azure virtual machine scale set can be deployed using multiple ways like Azure CLI 2.0, Azure Powershell and Azure Resource Manager portal.

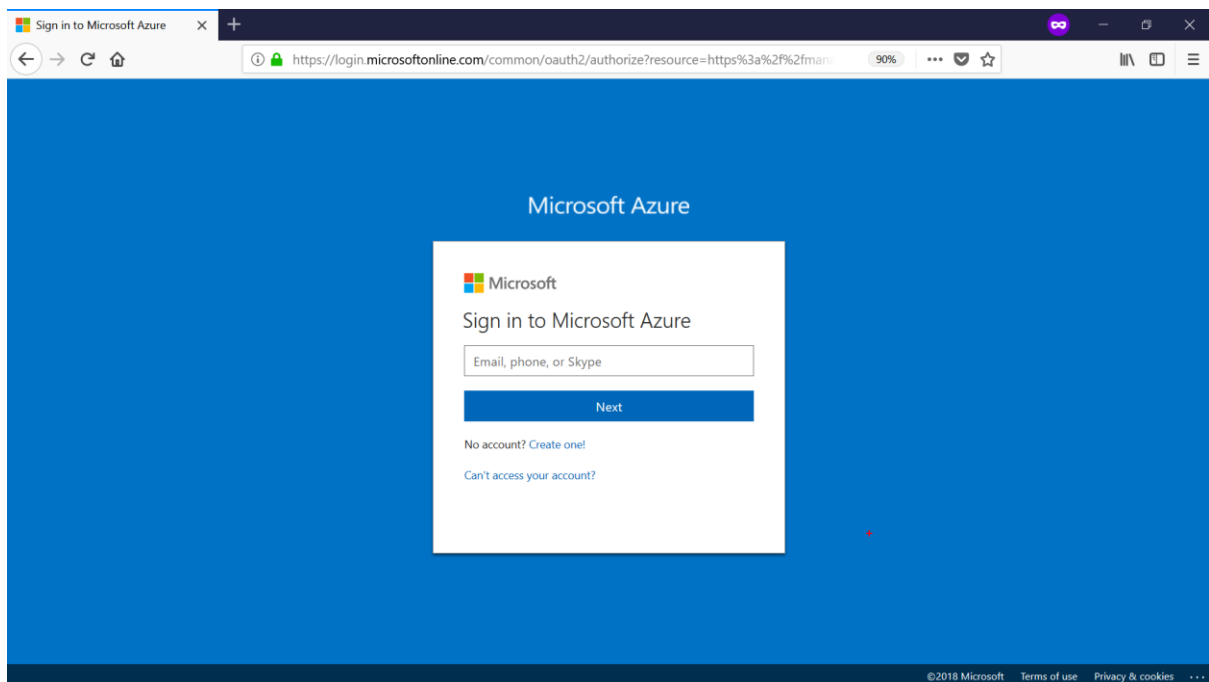
Requirements:

- Azure subscription

Follow the below steps to create a virtual machine scale set on azure using linux images:

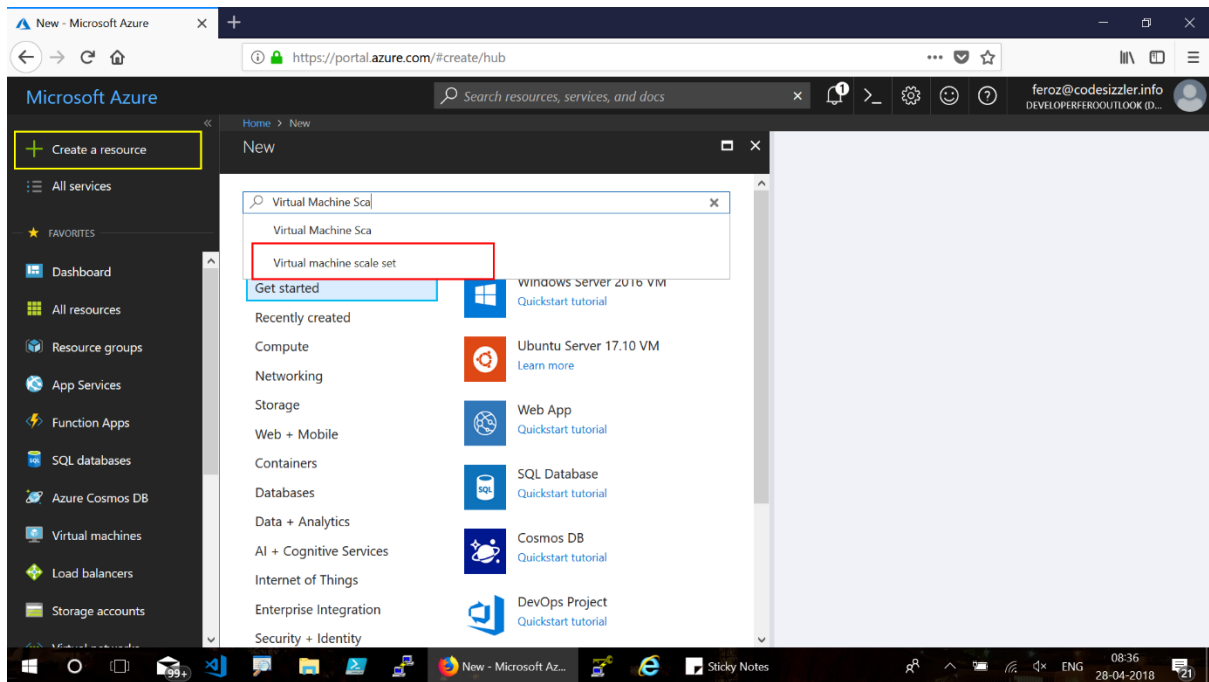
Step – 01:

Goto azure resource manager portal using <http://portal.azure.com/> and sign in for your azure account.



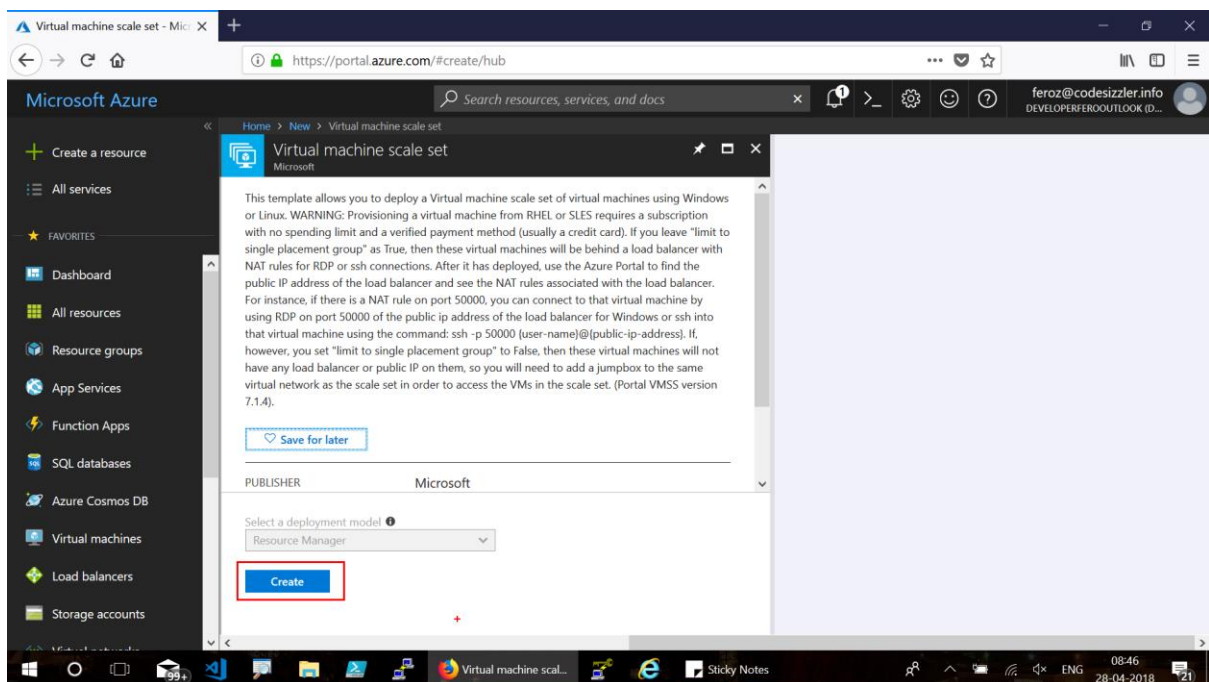
Step – 02:

Click on Create a resource → search for Virtual Machine Scale Set.



Step – 03:

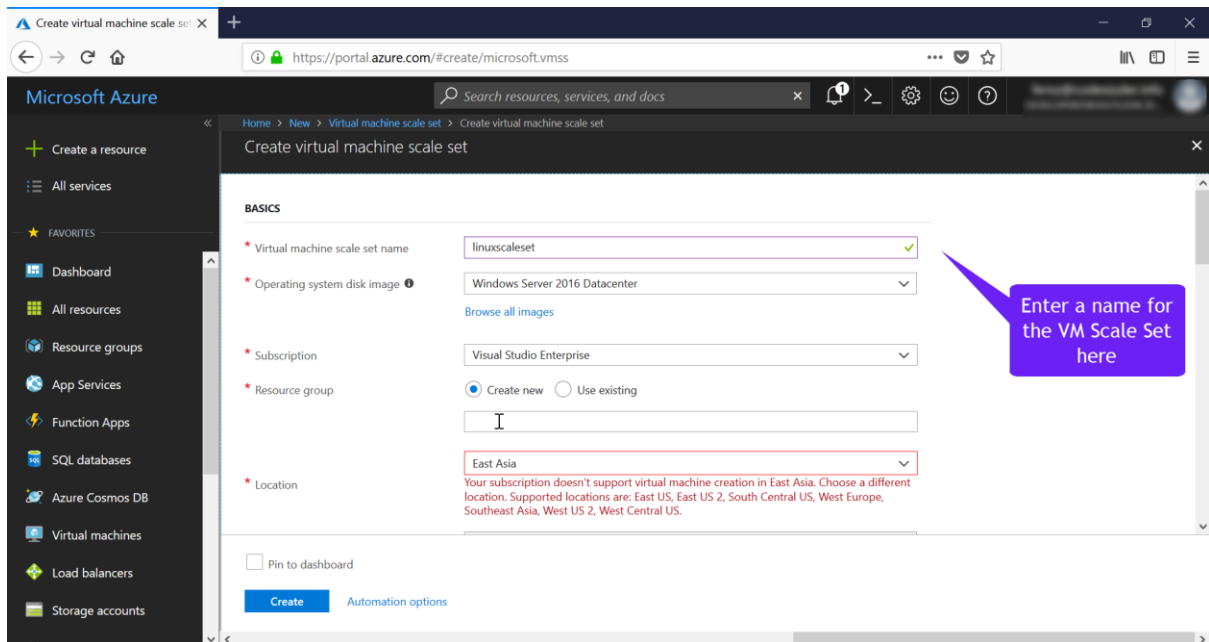
Select the virtual machine scale set and click on “Create”.



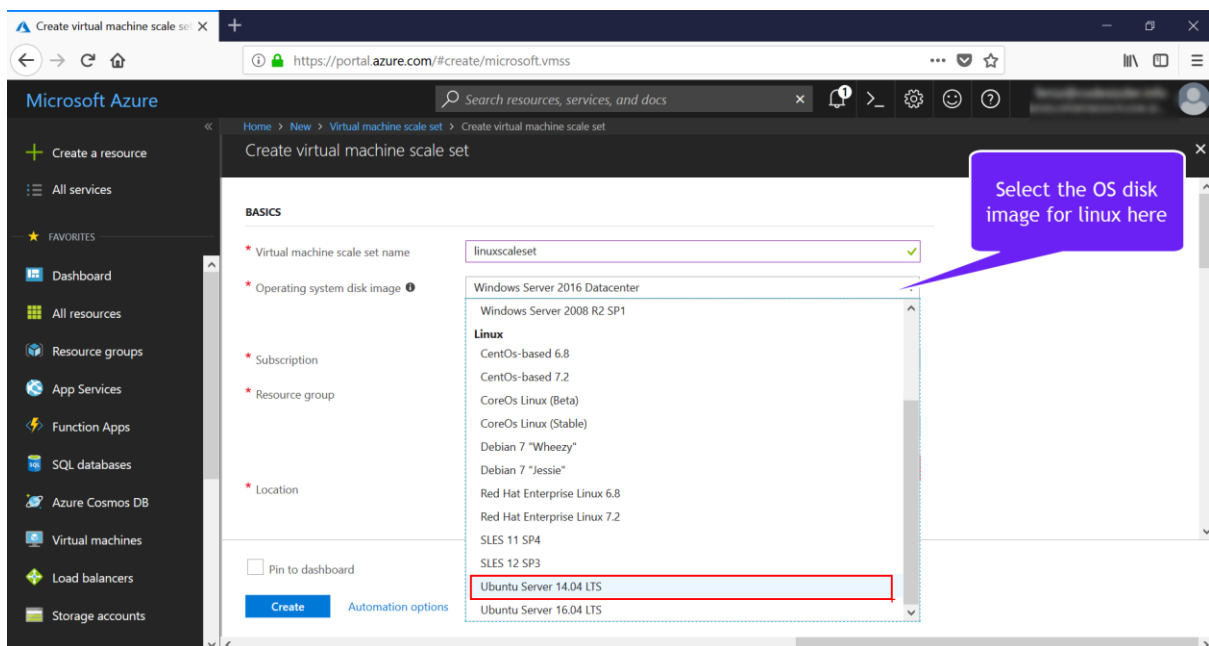
This will land up on a page which will help you to create a virtual machine scale set, fill the below fields to configure a virtual machine scale set using linux image.

Basics blade:

Virtual machine scale set name – Enter a name for the virtual machine scale set over here.



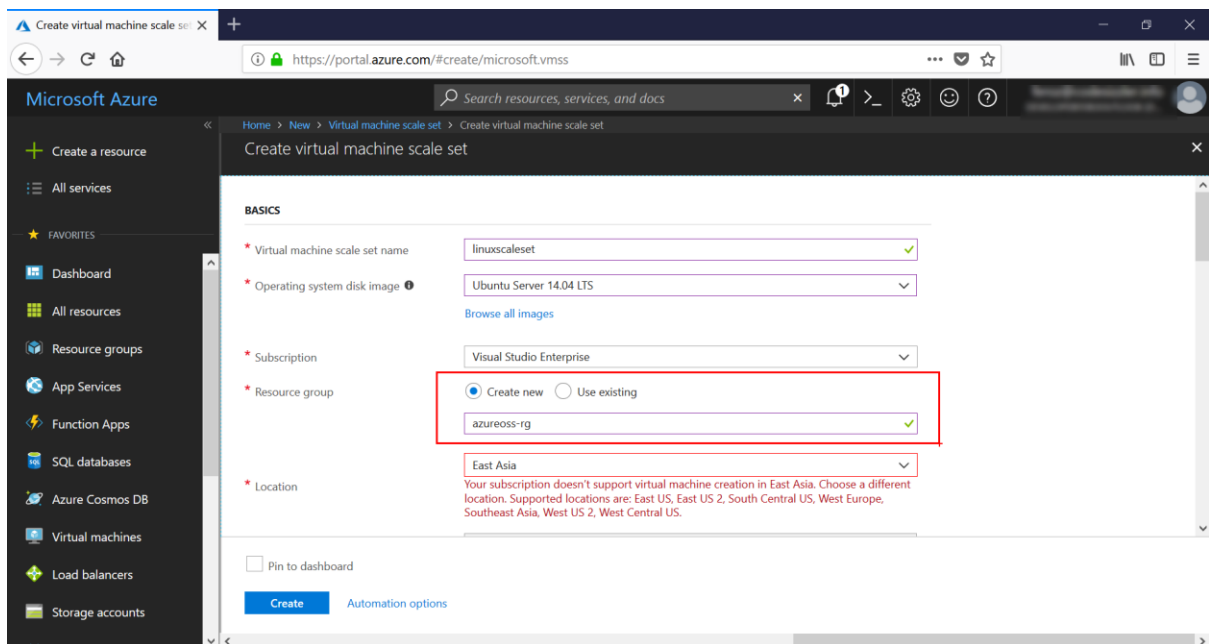
Operating System disk image - Click on the arrow and select the linux image which you want to use for the virtual machine scale set. Here let's select "Ubuntu Server 14.04 LTS".



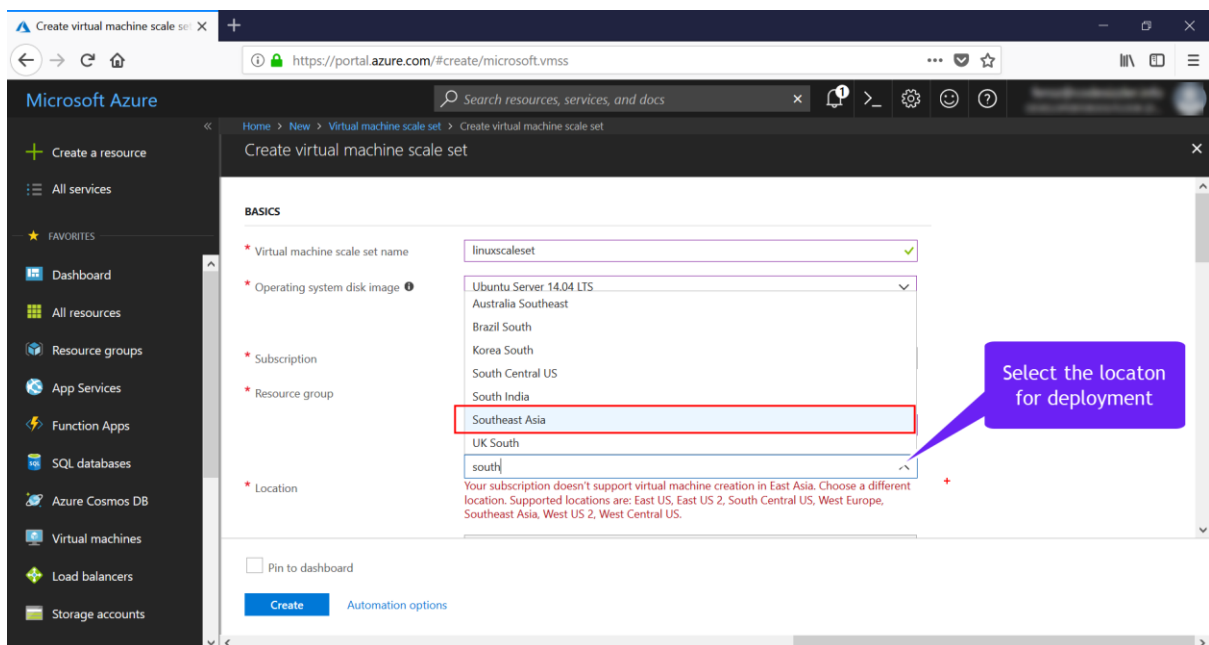
Subscription – Select the subscription which you want to use for deploying the virtual machine scale set.

Resource Group – Select the resource group on which you need to deploy the linux virtual machine scale set deployment, here either you can create a new resource group or tag the resource to an existing resource group.

Here lets create a new resource group named "azureoss-rg".



Location – Select the data center location on which you need to deploy the virtual machine scale set on azure.



Availability zone – availability zone helps in working with critical workloads, this helps us in working with general availability during the time of rack failure and other fault occurrence. Availability zones will help us to have a global coverage on fault tolerance with help of individual power, networking and cooling on separate regions.

Note – Availability zones are supported only on selected locations as of now.

You can select availability zones which are split into three as zone1, zone2 and zone3 as shown below:

Microsoft Azure

Create virtual machine scale set

Resource group: azureooss-rg

* Location: Southeast Asia

Availability zone: Zone 1

* User name:

Authentication type: Password | SSH public key

* Password:
The value should not be empty.
The value must be between 12 and 72 characters long.

* Confirm password:

INSTANCES

☐ Pin to dashboard

Create Automation options

Authentication type – Authentication for a linux machine can be done using SSH keys which can be generated using putty or you can even just go with providing the password for linux machines as shown.

Microsoft Azure

Create virtual machine scale set

Resource group: azureooss-rg

* Location: Southeast Asia

Availability zone: Zone 1

* User name: demouser

Authentication type: Password | SSH public key

* Password:

* Confirm password:

INSTANCES

* Instance count: 2

* Instance size (View full pricing details): D1_v2 (This size is not available for zones 1, 2, 3 in Southeast Asia.)

☐ Pin to dashboard

Create Automation options

Instances blade:

Here you can select the number of instance count which you need to put up the virtual machines on the virtual machine scale set followed by the size for the machines.

Priority:

You can deploy the virtual machines with low priority, this will help you to come with cost cut off where the virtual machines will get evicted to stop or deallocate and even deletion state when it is utilised less.

Deploy as low priority ⓘ

No

Yes

Eviction Policy ⓘ



Stop / Deallocate



Delete

Disks:

You can use managed or unmanaged disks over here for the virtual machines which is to be deployed.

Use managed disks ⓘ

No

Yes

Advanced settings:

Advanced settings will help you to enable the scaling beyond 100 instances and if you need you can select yes. Here lets select “no” for it.

[Hide advanced settings](#)

Enable scaling beyond 100 instances ⓘ

No

Yes

Auto scale:

Autoscaling helps in increasing the instance count when the virtual machine gets breached up. You can select the maximum number of virtual machines which you need and the minimum count over here. You can configure the scale out policy and scale in policy with CPU threshold.

AUTOSCALE

Autoscale ⓘ

Disabled

Enabled

* Minimum number of VMs ⓘ

1

* Maximum number of VMs ⓘ

10

Scale out

* CPU threshold (%) ⓘ

75

* Number of VMs to increase by ⓘ

1

Scale in

* CPU threshold (%) ⓘ

25

* Number of VMs to decrease by ⓘ

1

Networking –

Microsoft networking allows us to go with two options for the load balancing, they are Application Gateway and Load Balancer.

Application Gateway can be used to balance the web traffic which helps us to manage the traffic to the web applications.

Load balancer supports with public IP address name and domain name label.

Select the load balancing options over here with the Public IP address name and Domain name label with unique name.

NETWORKING

Microsoft Azure Application Gateway is a dedicated virtual appliance providing application delivery controller (ADC) as a service.

Azure Load Balancer allows you to scale your applications and create high availability for your services.

[Learn more about load balancer differences](#)

RESOURCES	OPTIMAL FOR	SUPPORTED PROTOCOLS	SSL OFFLOADING	RDP TO INSTANCE
Application Gateway	Web-based traffic	HTTP/HTTPS/WebSocket	Supported	Not supported
Load balancer	Stream-based traffic	Any	Not supported	Supported

Choose Load balancing options

☐ Application Gateway ☒ Load balancer

* Public IP address name ⓘ

ossazure ✓

* Domain name label ⓘ

ossazure ✓

.westcentralus.cloudapp.azure.com

Click on pin to dashboard and create the virtual machine scale set with linux virtual machine.