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Department of Computer Science & Engineering
Week-wise Internship Report Academic Year 2019-20

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Name of Mentor: Padmapani Tribhuvan mam
Detailed name of Internship (Organization/Online platform/Training Institute): Indian OpenSource Community.

Duration of Internship (In weeks): 5/6 weeks

Date of Joining the Internship: 13/june/2020

Date of Completion of Internship: 18/july2020

Create and manage networks:

Technology / Platform on Which Working: OpenStack and AWS

The OpenStack Networking service provides a scalable system for managing the network connectivity within an OpenStack cloud deployment. It can easily and quickly react to changing network needs (for example, creating and assigning new IP addresses).

Create a network

1. Log in to the dashboard, choose a project, and click Networks.
2. Click Create Network.
3. In the Create Network dialog box, specify the following values.

Network tab
Network Name: Specify a name to identify the network.

Subnet tab

Create Subnet: Select this check box to create a subnet

You do not have to specify a subnet when you create a network, but if you do not specify a subnet, any attached instance receives an Error status.

Subnet Name: Specify a name for the subnet.

Network Address: Specify the IP address for the subnet.

IP Version: Select IPv4 or IPv6.

Gateway IP: Specify an IP address for a specific gateway. This parameter is optional.

Disable Gateway: Select this check box to disable a gateway IP address.

Subnet Detail tab

Enable DHCP: Select this check box to enable DHCP.

Allocation Pools Specify IP address pools.

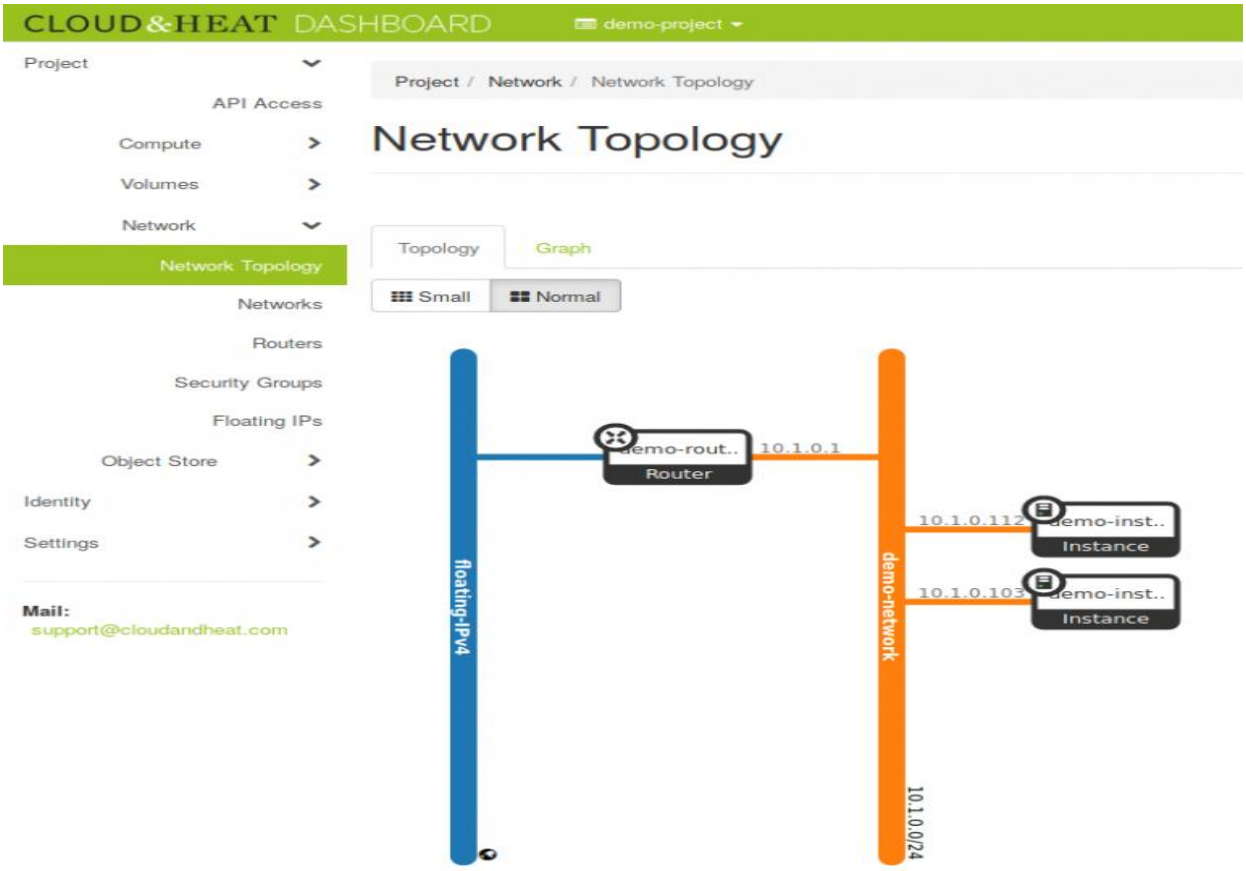
DNS Name Servers: Specify a name for the DNS server.

Host Routes: Specify the IP address of host routes.

4.Click Create: The dashboard shows the network on the Networks tab. Can also seen screenshot as a below.

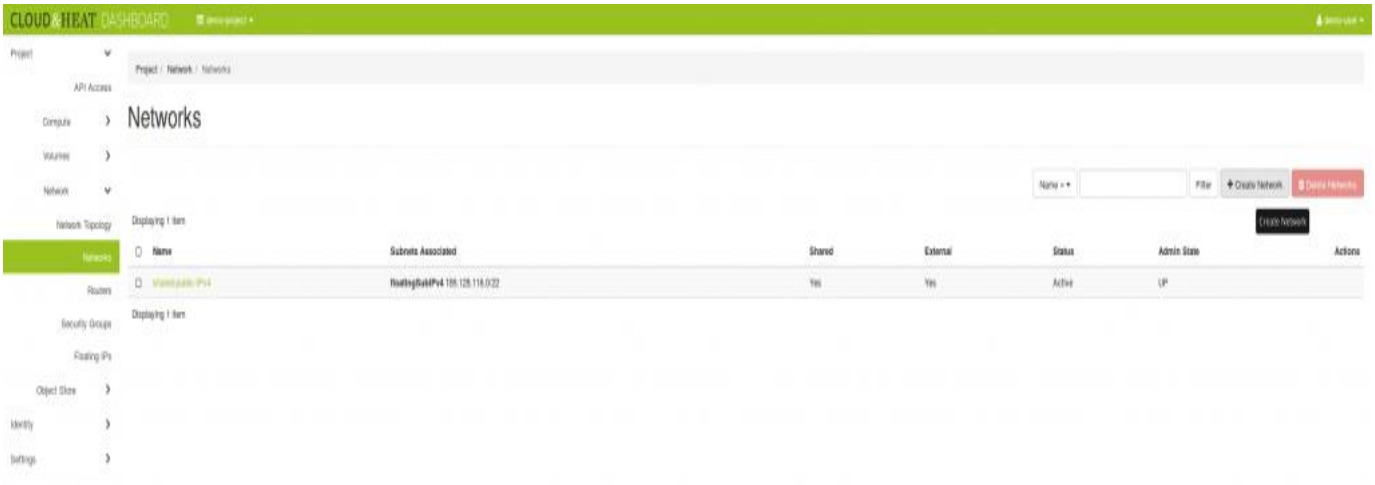
Instances created on the private network don't get direct connectivity to the extrenal world. To be able to communicate with your instances, you need to assign a floating IP to them. You can reduce the number of floating IPs you use by configuring SSH forwarding on one of your instances to access the other instances in the same private network.

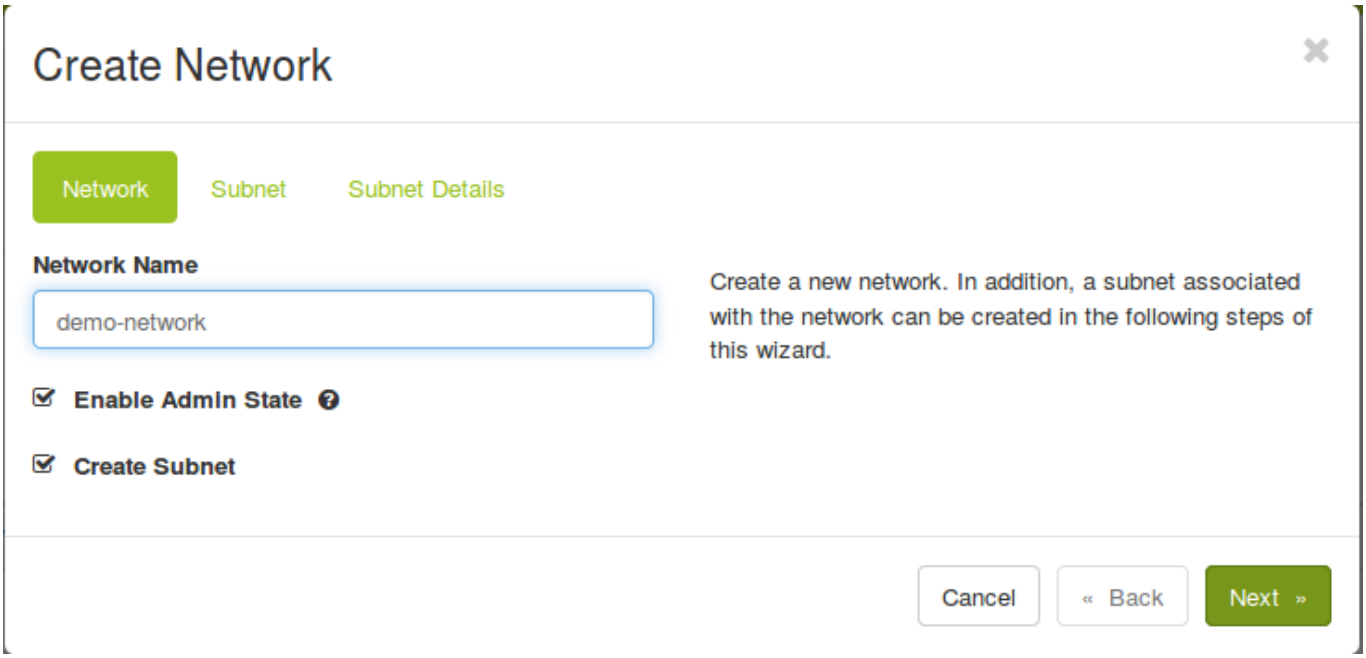
Not every instance needs an IP reachable from the internet and with this private network setup, your network is isolated from the networks and instances of other users and the internet. A private network is only part of one project, but one project can have several private networks.



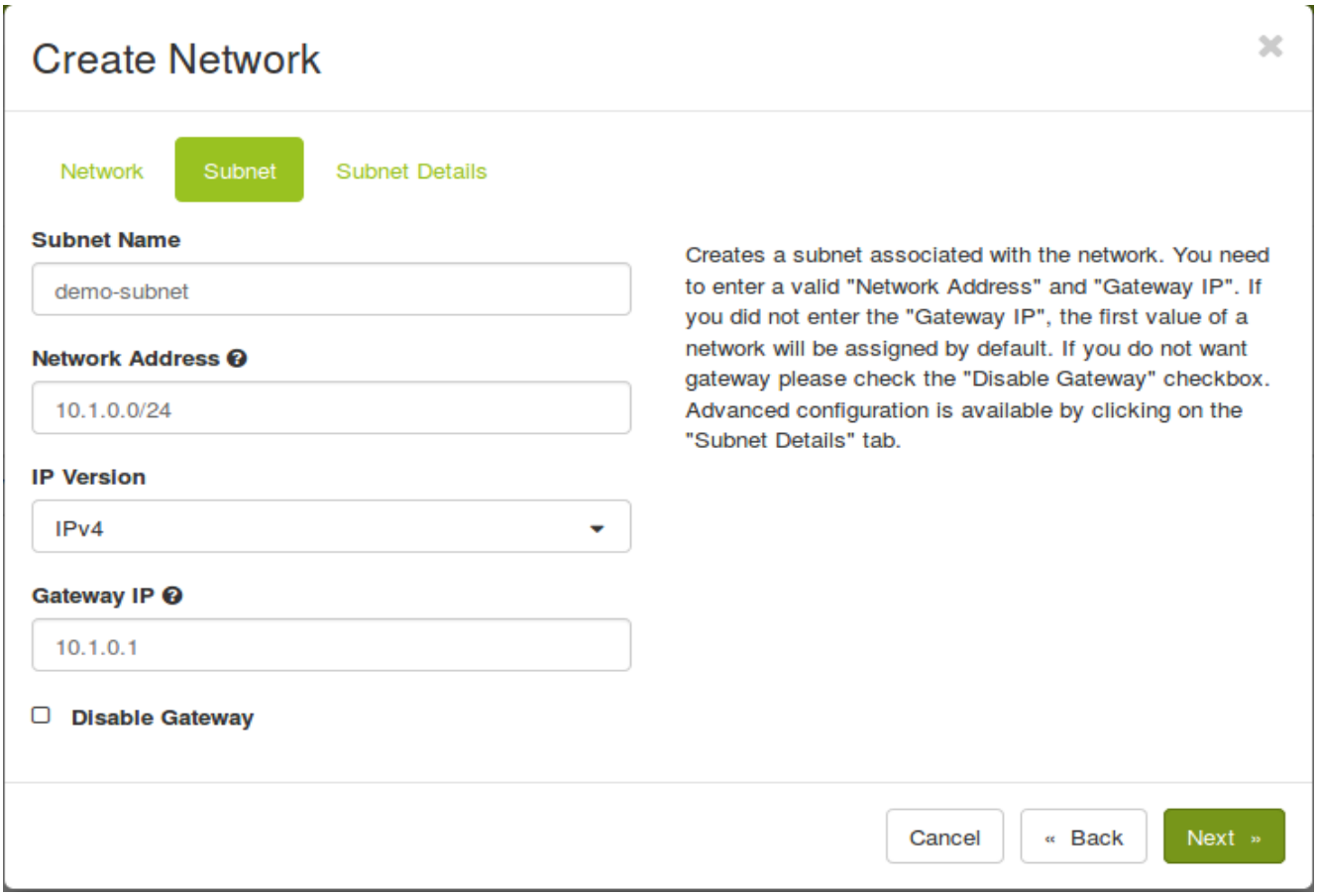
Network Setup

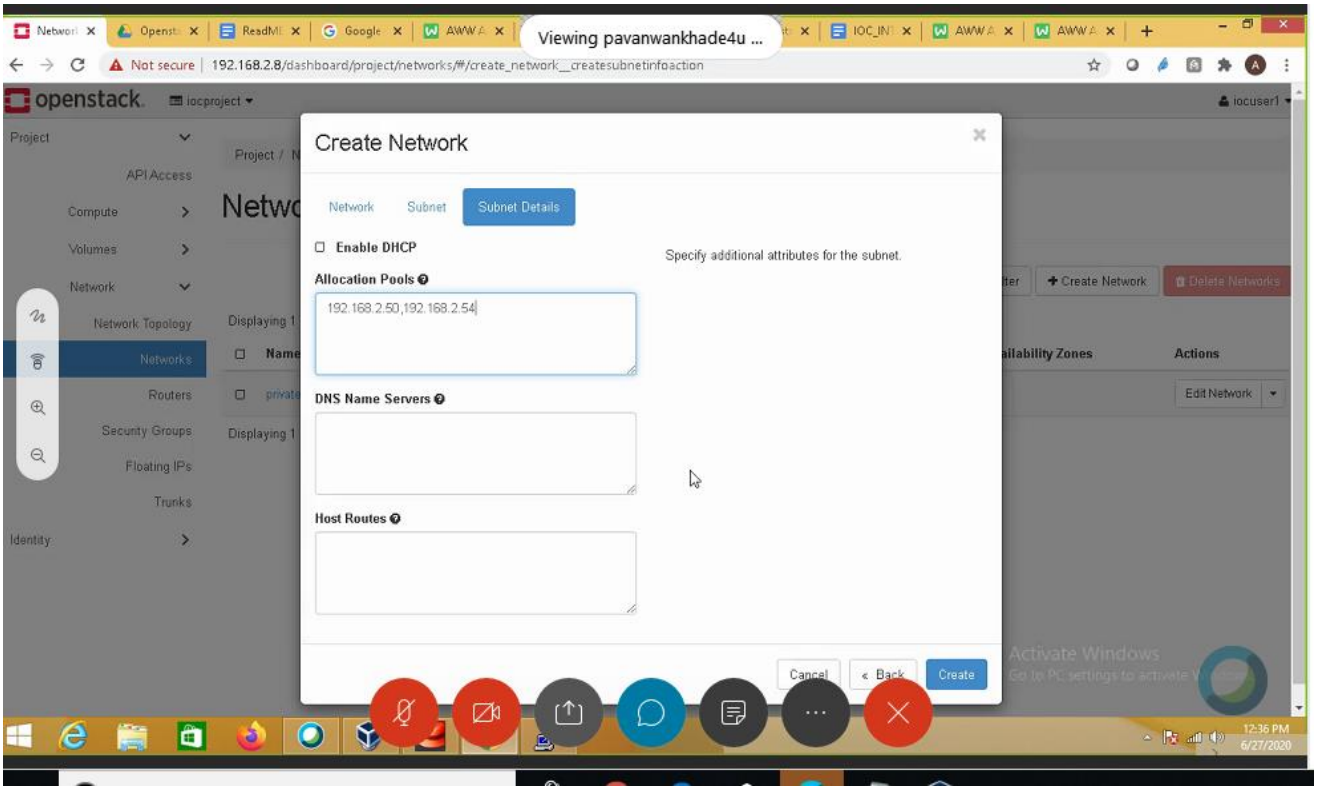
Create a network:
openstack network create demo-network





Create a subnet inside the new network. You can choose every networkrange and allocationpool-range you like, but it should be in the private IP address range. You are also free to chose the DNS nameserver you prefer.
openstack subnet create demo-subnet –network demo-network –subnet-range 10.1.0.0/24 –gateway 10.1.0.1 –allocation-pool start=10.1.0.100,end=10.1.0.200 –dns-nameserver 9.9.9.9


Create Network
Network
Subnet
Subnet Details
Subnet Name
demo-subnet
Network Address
10.1.0.0/24
IP Version
IPv4
Gateway IP
10.1.0.1
Disable Gateway
Creates a subnet associated with the network. You need to enter a valid "Network Address" and "Gateway IP". If you did not enter the "Gateway IP", the first value of a network will be assigned by default. If you do not want gateway please check the "Disable Gateway" checkbox. Advanced configuration is available by clicking on the "Subnet Details" tab.
Cancel
« Back
Next »



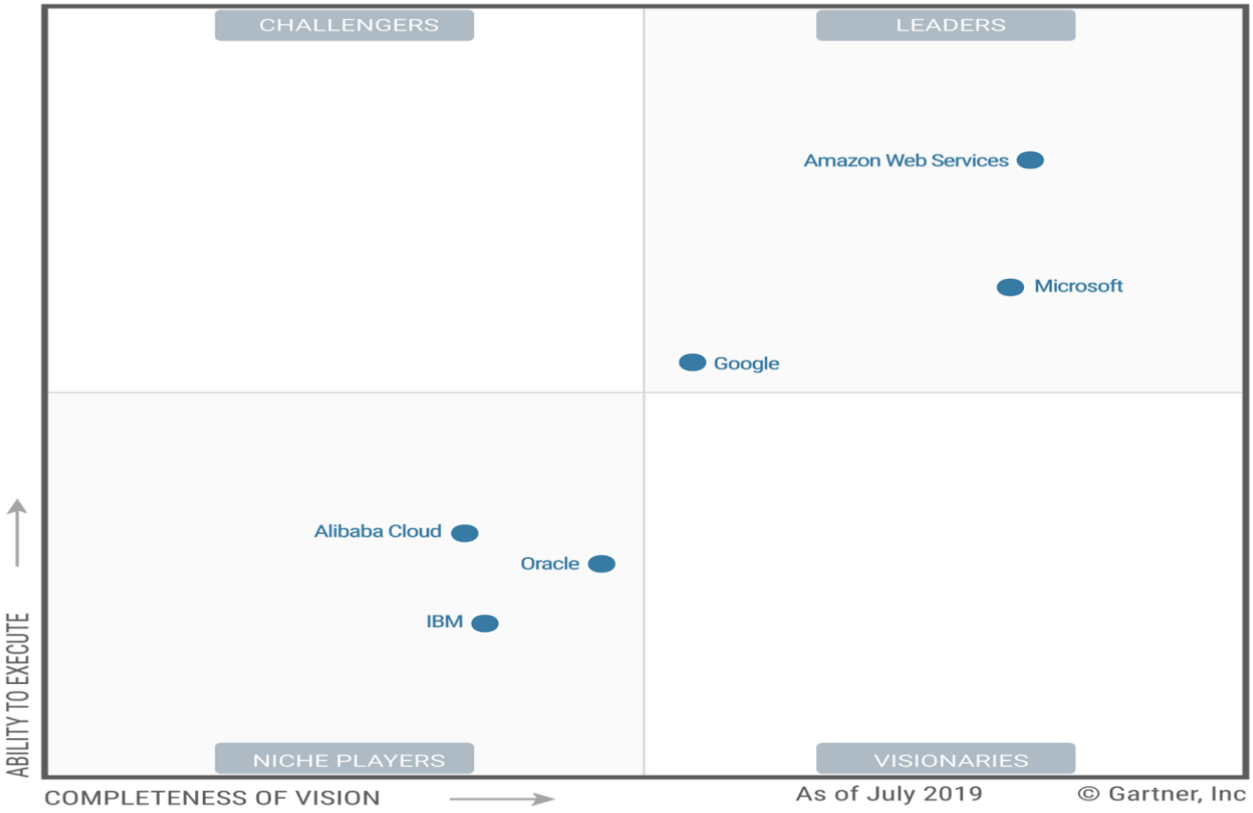
Cloud Infrastructure:

The AWS Global Cloud Infrastructure is the most secure, extensive, and reliable cloud platform, offering over 175 fully featured services from data centers globally. Whether you need to deploy your application workloads across the globe in a single click, or you want to build and deploy specific applications closer to your end-users with single-digit millisecond latency, AWS provides you the cloud infrastructure where and when you need it.

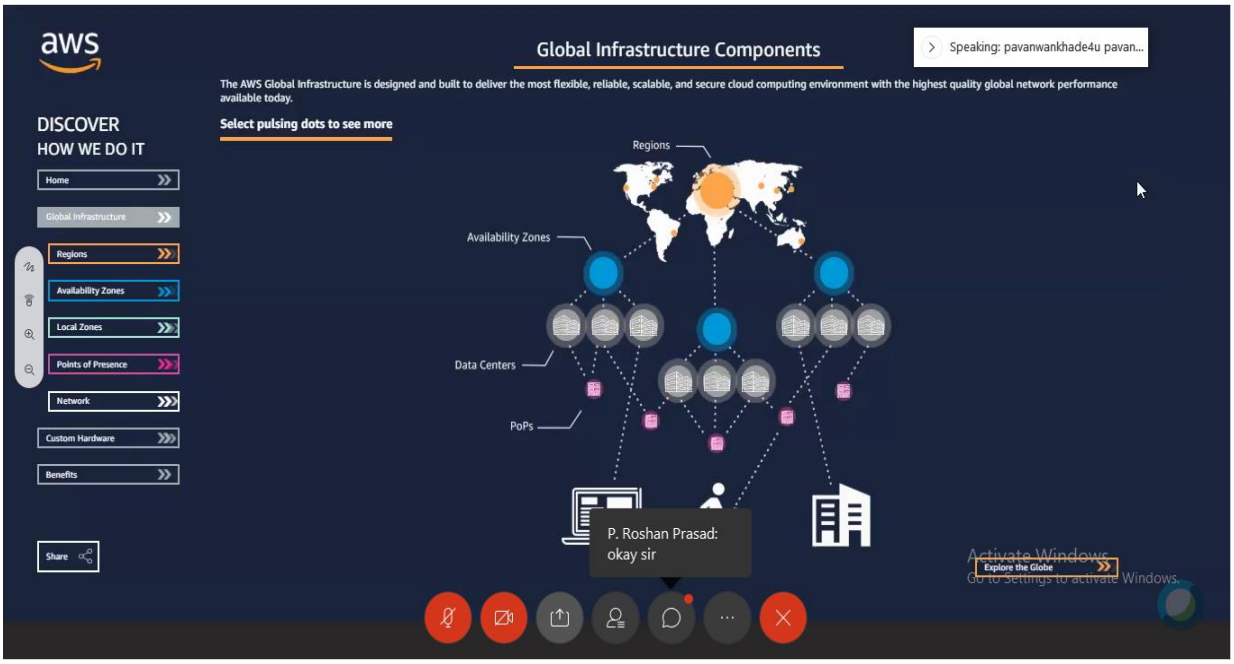
With millions of active customers and tens of thousands of partners globally, AWS has the largest and most dynamic ecosystem. Customers across virtually every industry and of every size, including start-ups, enterprises, and public sector organizations, are running every imaginable use case on AWS.

Customers are increasingly choosing AWS to host their cloud-based infrastructure and realize increased performance, security, reliability, and scale wherever they go.
For Magic Quadrant for Cloud Infrastructure as a Service, Worldwide, with the highest score in both axes of measurement— Ability to Execute and Completeness of Vision among the top 6 vendors in the industry.

Figure 1. Magic Quadrant for Cloud Infrastructure as a Service, Worldwide



Source: Gartner (July 2019)



About Openstack and Aws.