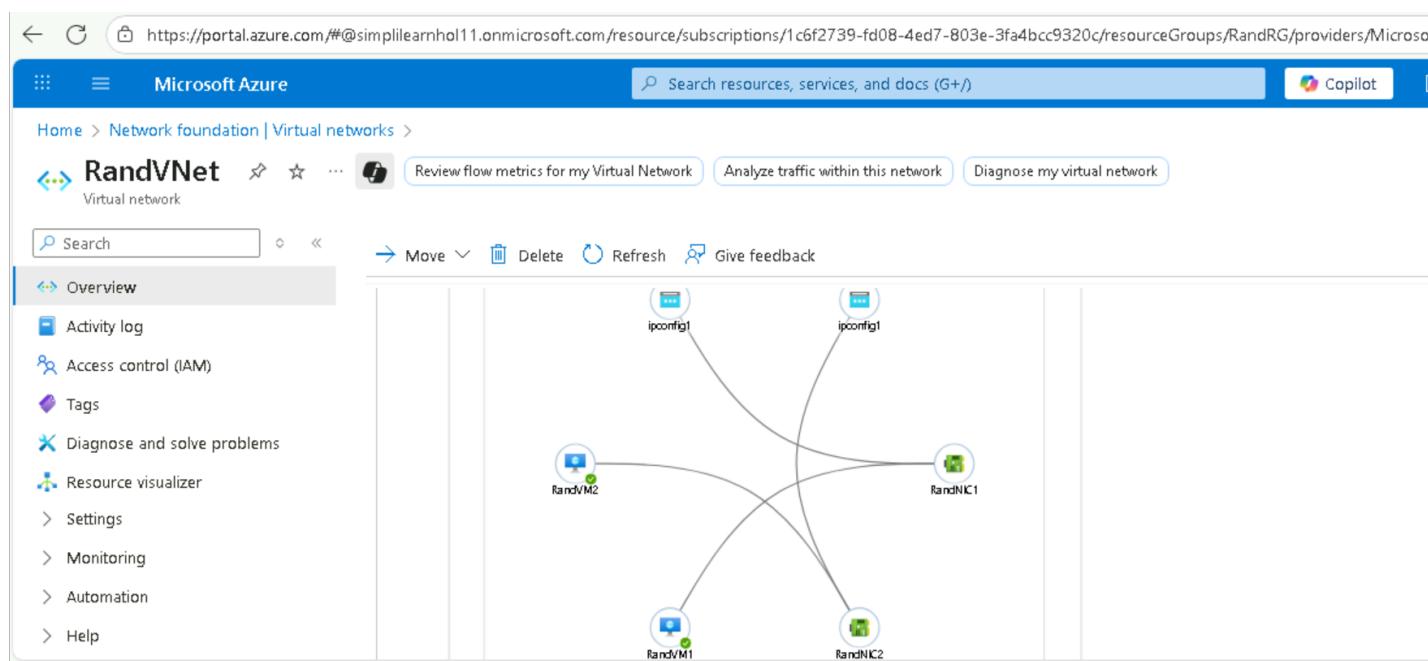


All the below resources are created by using CLI commands mentioned in the file **“deploy-loadbalancer.sh”**

Here are the screenshots captured from azure portal.

Virtual Network

This screenshot shows the 'Overview' tab of a Virtual Network named 'RandVNet'. The left sidebar includes options like Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, Monitoring, Automation, and Help. The main pane displays 'Essentials' information: Resource group (move) is 'RandRG'; Location (move) is 'East US'; Subscription (move) is 'Simplilearn HOL 11'; Subscription ID is '1c6f2739-fd08-4ed7-803e-3fa4bcc9320c'; Tags (edit) is 'Add tags'; Address space is '10.0.0.0/16'; DNS servers is 'Azure provided DNS service'; BGP community string is 'Configure'; and Virtual network ID is 'd0748468-3561-4ace-bd44-ac339ba4ca80'. Below this, there are tabs for Topology, Properties, Capabilities (5), Recommendations, and Tutorials. The 'Topology' tab is selected, showing a diagram with nodes 'RandVM1', 'RandVM2', 'RandNIC1', and 'RandNIC2'. Each node has two 'ipconfig1' interfaces connected to it. A link also connects 'RandVM1' and 'RandVM2'.



Subnet :

```
odl_user [ ~ ]$ az network vnet subnet list \
> --resource-group RandRG \
> --vnet-name RandVNet \
> --output table

AddressPrefix     Name      PrivateEndpointNetworkPolicies   PrivateLinkServiceNetworkPolicies   ProvisioningState   ResourceGroup
-----          -----      -----                                -----                                -----          -----
10.0.0.0/24      RandSubnet  Disabled                           Enabled                            Succeeded        RandRG
odl_user [ ~ ]$
```

Virtual Machines :

The screenshot shows the Microsoft Azure portal interface for managing virtual machines. The left sidebar navigation includes Overview, All resources, Infrastructure, and a selected Virtual machines category. The main content area displays a table of virtual machines with columns for Name, Subscription, Resource Group, Location, Status, Operating sys., Size, Public IP addr..., Disks, and Up. Three virtual machines are listed: RandVM1 (East US, Running, Linux, Standard_DS1_v2, 74.235.18.183, 1 disk), RandVM2 (East US, Running, Linux, Standard_DS1_v2, 74.235.18.183, 1 disk), and VM-1843725 (West US 2, Running, Windows, Standard_B4ms, 20.191.126.110, 1 disk). A message at the top indicates a new version of the Browse experience.

Name	Subscription	Resource Group	Location	Status	Operating sys.	Size	Public IP addr...	Disks	Up
RandVM1	Simplilearn HO...	RandRG	East US	Running	Linux	Standard_DS1_v2	74.235.18.183	1	En
RandVM2	Simplilearn HO...	RandRG	East US	Running	Linux	Standard_DS1_v2	74.235.18.183	1	En
VM-1843725	Simplilearn HO...	ODL-azure-184...	West US 2	Running	Windows	Standard_B4ms	20.191.126.110	1	En

Public IP for the Load Balancer :

Home > Load balancing and content delivery | Load balancers > RandLB

RandLB | Frontend IP configuration

Load balancer

Frontend IP configuration		
<p>The frontend IP address configuration of a load balancer serves as the entry point for incoming traffic to the load balancer, and the load balancer then distributes the traffic to the backend pool of virtual machines or services. Learn more</p>		
<p>Type to start filtering ...</p>		
<p>Showing all 1 items</p>		
Name ↑	IP address ↑	Rules count ↑
RandFrontend	74.235.18.183 (RandPublicIP)	1

https://portal.azure.com/#view/Microsoft_Azure_Network/FrontendIPManage.ReactView/loadBalancerId/%2Fsubscriptions%2F1c6f2739-fd08-4ed7-803e-3fa4bcc9320c%2FresourceGroups%2FRandLB%2FloadBalancers%2FRandLB%2FFrontendIPConfigurations%2FRandFrontend

RandFrontend

RandLB

Name *

Type ⓘ

Public

IP type

IP address
 IP prefix

Public IP address *

RandPublicIP (74.235.18.183) 
[Create new](#)

Gateway Load balancer ⓘ

None 

Used by

Load Balancer:

The screenshot shows the Microsoft Azure portal interface. The top navigation bar has tabs for Home - Microsoft Azure, RandLB - Microsoft Azure, Compute infrastructure - Microsoft Azure, vnet - Microsoft Azure, and a plus sign icon. The main content area is titled "Microsoft Azure" with a search bar and a Copilot button. Below the search bar, there are two help links: "How can I improve the reliability of this load balancer setup?" and "How do I add backend servers to this load balancer?". The main pane displays the "RandLB" load balancer details under the "Overview" tab. Key information includes:

- Resource group: RandRG
- Location: East US
- Subscription: Simplilearn HOL 11
- Subscription ID: 1c6f2739-fd08-4ed7-803e-3fa4bcc9320c
- SKU: Standard
- Backend pool: RandBackendPool (2 virtual machines)
- Load balancing rule: RandRule (Tcp/80)
- Health probe: RandProbe (Http:80)
- Inbound NAT rules: None
- Outbound rules: None

A banner at the bottom right says "Configure high availability and scalability for your applications".

Health Probe :

The screenshot shows the Microsoft Azure portal interface with a tab bar at the top including Home - Microsoft Azure, RandLB - Microsoft Azure, Health probes - Microsoft Azure, Load balancing rules - Microsoft Azure, Backend pools - Microsoft Azure, Compute infrastructure - Microsoft Azure, vnet - Microsoft Azure, and a plus sign icon. The main content area is titled "Microsoft Azure" with a search bar and a Copilot button. The "Health probes" section is displayed, featuring a "Type to start filtering ..." input field and a note: "To check the health status of your instances, navigate to the Load Balancing Rules page". A table lists the existing health probe:

Name	Protocol	Port	Path	Used By
RandProbe	Http	80	/	RandRule

Load Balancing Rule :

The screenshot shows the 'Load balancing rules' blade in the Microsoft Azure portal. At the top, there's a search bar and a breadcrumb navigation showing 'Home > Load balancing rules'. Below the header is a toolbar with 'Add', 'Refresh', 'Export to CSV', and 'Delete' buttons. A descriptive text block explains what a load balancer rule does. A table lists one rule: 'RandRule' (Protocol: TCP/80, Backend pool: RandBackendPool, Health probe: RandProbe). There are filter and sorting options for the table.

Backend Pool :

The screenshot shows the 'Backend pools' blade in the Microsoft Azure portal. At the top, there's a search bar and a breadcrumb navigation showing 'Home > Backend pools'. Below the header is a toolbar with 'Add' and 'Refresh' buttons. A descriptive text block explains what a backend pool is. A table lists two backend pools: 'RandBackendPool (2)'. The table columns include: Backend pool, Resource ID, IP address, Network interface, Availability zone, Rules count, Resource Status, and Admin

Backend pool	Resource ID	IP address	Network interface	Availability zone	Rules c...	Resource Status	Admin ...
RandBackendPool	RandVM1	10.0.0.4	RandNIC1	-	1	Running	None
RandBackendPool	RandVM2	10.0.0.5	RandNIC2	-	1	Running	None

Association of Network Security Group with subnets

The screenshot shows the Microsoft Azure portal interface. The current view is 'RandNSG - Microsoft Azure'. The left sidebar shows navigation options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Settings, Monitoring, Automation, and Help. The main content area displays the 'Essentials' section with details such as Resource group (RandRG), Location (East US), Subscription (Simplilearn HOL 11), Subscription ID (1c6f2739-fd08-4ed7-803e-3fa4bcc9320c), and Tags (Add tags). Below this, there's a table for 'Inbound Security Rules' with one entry: Priority 100, Name AllowHTTP, Port 80, Protocol Tcp, Source Any, Destination Any, and Action Allow. A 'JSON View' link is also present.

Step 8: Test the Application by using public IP Address of LoadBalancer

The screenshot shows a web browser window titled 'Az104 PG Lab'. The address bar indicates 'Not secure 74.235.18.183'. The page content is the standard 'Welcome to nginx!' page, which includes the following text:

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.
For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.