

1. Create Virtual network named as virtue with ip range 79.23.0.0/16 and subnet name sub\_virtue with ip range 79.23.46.0/24

The screenshot shows the Microsoft Azure portal interface. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Address space, Connected devices, Subnets, DDoS protection, Firewall, and Security. The main content area displays the 'virtue' Virtual Network overview. The 'Essentials' section shows the following details:

- Resource group (Move): [practice\\_session](#)
- Location: East US
- Subscription (Move): [Free Trial](#)
- Subscription ID: 88a26aba-1558-4d72-bd54-c190a1a78464
- Tags (Edit): [Click here to add tags](#)
- Address space: 79.23.0.0/16
- DNS servers: Azure provided DNS service

The 'Connected devices' section shows a table with one device:

Device	Type	IP Address
base59	Network interface	79.23.46.4

The screenshot shows the Microsoft Azure portal interface, specifically the 'virtue | Subnets' page. The left sidebar is the same as the previous screenshot. The main content area displays the 'virtue' Virtual Network Subnets page. The 'Subnets' section shows a table with one subnet:

Name	IPv4	IPv6	Available IPs	Delegated to	Security group	Route table
sub_virtue	79.23.46.0/24	-	249	-	-	-

2. Create 2 Linux Virtual machines named as base and abase, install httpd package and create sample webpages.

The screenshot displays the Microsoft Azure portal interface. At the top, the browser address bar shows the URL: `portal.azure.com/#blade/HubsExtension/BrowseResource/resourceType/Microsoft.Compute%2FVirtualMachines`. The page title is "Virtual machines" under the "DXC Production (CSCPortal.onmicrosoft.com)" subscription. Below the navigation bar, there are filters for "Subscription == all", "Resource group == all", and "Location == all". The table lists two virtual machines:

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address
abase	Free Trial	practice_session	East US	Running	Linux	Standard_B2ms	20.106.234.229
base	Free Trial	practice_session	East US	Running	Linux	Standard_B2ms	20.106.232.114

Below the table, there are two terminal windows showing the installation of the httpd package on the 'base' VM. The left terminal window shows the command `sudo yum install httpd` and its output, including the download size (3.0 M), installed size (10 M), and the list of packages to be installed. The right terminal window shows the command `sudo systemctl start httpd` and its output, indicating that the service is now active.

```
azuresuser@base:~$ sudo yum install httpd
Total download size: 3.0 M
Installed size: 10 M
Is this ok [y/d/N]: y
Downloading packages:
(1/5): apr-1.4.8-7.el7.x86_64.rpm | 104 kB 00:00
(2/5): mailcap-2.1.41-2.el7.noarch.rpm | 31 kB 00:00
(3/5): apr-util-1.5.2-6.el7.x86_64.rpm | 92 kB 00:00
(4/5): httpd-tools-2.4.6-97.el7.centos.2.x86_64.rpm | 94 kB 00:00
(5/5): httpd-2.4.6-97.el7.centos.2.x86_64.rpm | 2.7 MB 00:00
Total 13 MB/s | 3.0 MB 00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : apr-1.4.8-7.el7.x86_64 1/5
Installing : apr-util-1.5.2-6.el7.x86_64 2/5
Installing : httpd-tools-2.4.6-97.el7.centos.2.x86_64 3/5
Installing : mailcap-2.1.41-2.el7.noarch 4/5
Installing : httpd-2.4.6-97.el7.centos.2.x86_64 5/5
Verifying : httpd-2.4.6-97.el7.centos.2.x86_64 1/5
Verifying : mailcap-2.1.41-2.el7.noarch 2/5
Verifying : apr-1.4.8-7.el7.x86_64 3/5
Verifying : httpd-tools-2.4.6-97.el7.centos.2.x86_64 4/5
Verifying : apr-util-1.5.2-6.el7.x86_64 5/5
Installed:
httpd.x86_64 0:2.4.6-97.el7.centos.2
Dependency Installed:
apr.x86_64 0:1.4.8-7.el7 apr-util.x86_64 0:1.5.2-6.el7
httpd-tools.x86_64 0:2.4.6-97.el7.centos.2 mailcap.noarch 0:2.1.41-2.el7
Complete!
[azuresuser@base ~]$
```

```
azuresuser@abase:~$ sudo systemctl start httpd
Total download size: 3.0 M
Installed size: 10 M
Is this ok [y/d/N]: y
Downloading packages:
(1/5): apr-1.4.8-7.el7.x86_64.rpm | 104 kB 00:00
(2/5): mailcap-2.1.41-2.el7.noarch.rpm | 31 kB 00:00
(3/5): apr-util-1.5.2-6.el7.x86_64.rpm | 92 kB 00:00
(4/5): httpd-tools-2.4.6-97.el7.centos.2.x86_64.rpm | 94 kB 00:00
(5/5): httpd-2.4.6-97.el7.centos.2.x86_64.rpm | 2.7 MB 00:00
Total 15 MB/s | 3.0 MB 00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : apr-1.4.8-7.el7.x86_64 1/5
Installing : apr-util-1.5.2-6.el7.x86_64 2/5
Installing : httpd-tools-2.4.6-97.el7.centos.2.x86_64 3/5
Installing : mailcap-2.1.41-2.el7.noarch 4/5
Installing : httpd-2.4.6-97.el7.centos.2.x86_64 5/5
Verifying : httpd-2.4.6-97.el7.centos.2.x86_64 1/5
Verifying : mailcap-2.1.41-2.el7.noarch 2/5
Verifying : apr-1.4.8-7.el7.x86_64 3/5
Verifying : httpd-tools-2.4.6-97.el7.centos.2.x86_64 4/5
Verifying : apr-util-1.5.2-6.el7.x86_64 5/5
Installed:
httpd.x86_64 0:2.4.6-97.el7.centos.2
Dependency Installed:
apr.x86_64 0:1.4.8-7.el7 apr-util.x86_64 0:1.5.2-6.el7
httpd-tools.x86_64 0:2.4.6-97.el7.centos.2 mailcap.noarch 0:2.1.41-2.el7
Complete!
[azuresuser@abase ~]$
```

```
azureuser@base:/var/www/html
[azureuser@base ~]$ cd /var/www/html/
[azureuser@base html]$ ll
total 4
-rw-r--r--. 1 root root 44 Nov 22 10:25 index.html
[azureuser@base html]$ cat index.html
Hi this webpage is for base virtual machine
[azureuser@base html]$
```

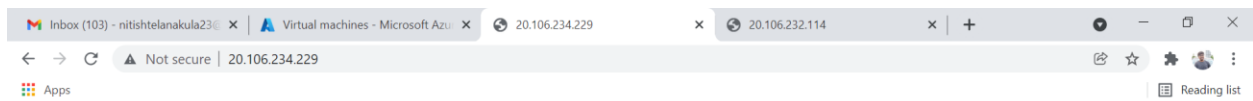
```
azureuser@abase:/var/www/html
[azureuser@abase ~]$ cd /var/www/html/
[azureuser@abase html]$ ll
total 4
-rw-r--r--. 1 root root 38 Nov 22 10:27 index.html
[azureuser@abase html]$ cat index.html
Hi this webpage is from abase machine
[azureuser@abase html]$
```

3. after hosting the website on both Virtual machines try to access those machines with public ip.



Hi this webpage is for base virtual machine

Activate Windows  
Go to Settings to activate Windows.



Hi this webpage is from abase machine

Activate Windows  
Go to Settings to activate Windows.

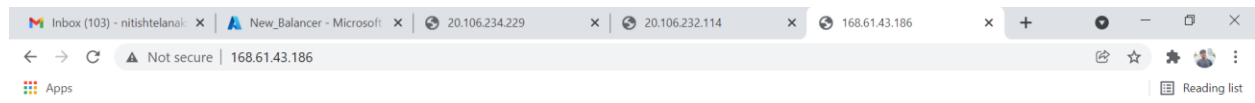
4. Create a load balancer named as New\_balancer (config frontend ip, backend pool, add balancer rule, public ip, etc)

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo, an 'Upgrade' button, a search bar, and user information for 'nitish.venkata@dxc.com'. The breadcrumb trail indicates the path: Home > Microsoft.LoadBalancer-20211122160243 > New\_Balancer. The main content area is titled 'New\_Balancer' and 'Load balancer'. It features a left-hand navigation pane with sections for 'Overview' (Activity log, Access control, Tags, Diagnose and solve problems) and 'Settings' (Frontend IP configuration, Backend pools, Health probes, Load balancing rules, Inbound NAT rules, Outbound rules). The 'Essentials' section on the right lists key configuration details: Resource group (practice\_session), Location (East US), Subscription (Free Trial), Subscription ID (88a26aba-1558-4d72-bd54-c190a1a78464), SKU (Standard), Tags (with a link to add tags), Backend pool (back\_1 with 2 virtual machines), Load balancing rule (inbound1), Health probe (health1), NAT rules (0 inbound), and Tier (Regional). A 'JSON View' link is present in the top right. At the bottom, there is a Windows activation banner.

This screenshot displays the 'New\_Balancer | Frontend IP configuration' page in the Azure portal. The breadcrumb trail is: Home > Microsoft.LoadBalancer-20211122160243 > New\_Balancer. The left navigation pane is identical to the previous screenshot, with 'Frontend IP configuration' selected under the 'Settings' section. The main content area shows a table of IP configurations. At the top, there is a '+ Add' button, a 'Refresh' icon, and a 'Give feedback' link. Below these is a search bar labeled 'Filter by name...'. The table has three columns: 'Name', 'IP address', and 'Rules count'. One entry is listed: 'practice\_ip' with IP address '168.61.43.186 (practiceip)' and a 'Rules count' of '1'. A 'JSON View' link is in the top right. A Windows activation banner is at the bottom.

Name	IP address	Rules count
practice_ip	168.61.43.186 (practiceip)	1

5. try to connect with ip address of load balancer.



Hi this webpage is for base virtual machine

Activate Windows  
Go to Settings to activate Windows.