

Project: Deploy a Web Application with Azure App Gateway

Step 1: Create resource group and VNet with two Subnets.

One Subnet will be used for Application Gateway and another Subnet will be used for VMs.

The screenshot shows the 'Create virtual network' page in the Microsoft Azure portal. The 'Basics' tab is selected. Under 'your resources', the 'Subscription' is 'Azure for Students' and the 'Resource group' is 'demo'. In the 'Instance details' section, the 'Virtual network name' is 'Vnet1' and the 'Region' is '(US) East US'. At the bottom, there are buttons for 'Previous', 'Next', and 'Review + create'.

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

Home > Virtual networks >

Create virtual network

Basics Security IP addresses Tags Review + create

your resources.

Subscription * Azure for Students

Resource group * demo [Create new](#)

Instance details

Virtual network name * Vnet1

Region * (US) East US [Deploy to an Azure Extended Zone](#)

Previous Next **Review + create** [Give feedback](#)

One Subnet will be used for Application Gateway and another Subnet will be used for VMs.

The screenshot shows the 'Create virtual network' page in the Microsoft Azure portal, with the 'IP addresses' tab selected. It displays a table of subnets. The first subnet is 'default' with IP range '10.0.0.0 - 10.0.0.255' and size '/24 (256 addresses)'. Two additional subnets are being added: 'app-gtwy-subnet' with IP range '10.0.1.0 - 10.0.1.255' and 'subnet1' with IP range '10.0.2.0 - 10.0.2.255', both with size '/24 (256 addresses)'. At the bottom, there are buttons for 'Previous', 'Next', and 'Review + create'.

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Home > Virtual networks >

Create virtual network

Basics Security **IP addresses** Tags Review + create

10.0.0.0/16 [Delete address space](#)

10.0.0.0 /16

10.0.0.0 - 10.0.255.255 65,536 addresses

[+ Add a subnet](#)

Subnets	IP address range	Size	NAT gateway
default	10.0.0.0 - 10.0.0.255	/24 (256 addresses)	-
app-gtwy-subnet	10.0.1.0 - 10.0.1.255	/24 (256 addresses)	-
subnet1	10.0.2.0 - 10.0.2.255	/24 (256 addresses)	-

Previous Next **Review + create** [Give feedback](#)

Step 2 : Create Application Gateway with front-end as application gateway IP and create backend with no targets for now, you will add VMs later.

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

Home > Load balancing | Application Gateway >

Create application gateway

Enable autoscaling ☐ Yes ☒ No

Instance count * 1 ✓

Availability zone * Zones 1 ✓

HTTP2 ☒ Disabled ☐ Enabled

WAF Policy * (new) waf ✓
[Create new](#)

IP address type ☒ IPv4 only ☐ Dual stack (IPv4 & IPv6)

Configure virtual network

Virtual network * Vnet1 ✓
[Create new](#)

Subnet * app-gtwy-subnet (10.0.1.0/24) ✓
[Manage subnet configuration](#)

Previous Next : Frontends >

portal.azure.com/#create/Microsoft.ApplicationGateway-ARM

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

Home > Load balancing | Application Gateway >

Create application gateway

✓ Basics ✓ Frontends **1 Backends** 4 Configuration 5 Tags 6 Review + create

A backend pool is a collection of resources to which your application gateway can send traffic. A backend pool can contain virtual machines, virtual machine scale sets, app services, IP addresses, or fully qualified domain names (FQDN).

[Add a backend pool](#)

Backend pool	Targets
No results	

Previous Next : Configuration >

Add a backend pool.

A backend pool is a collection of resources to which your application gateway can send traffic. A backend pool can contain virtual machines, virtual machines scale sets, IP addresses, domain names, or an App Service.

Name * web-pool ✓

Add backend pool without targets ☒ Yes ☐ No

Add Cancel

Step 3 : Create Routing rules giving rule priority and port settings.

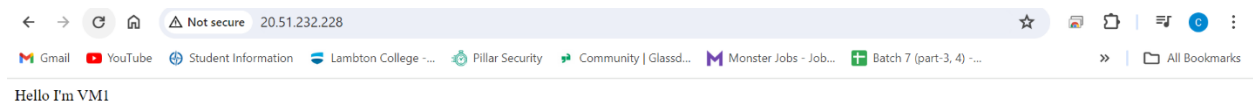
The screenshot shows the Microsoft Azure portal interface for creating an application gateway. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information (c0851112@mylambton.ca). The breadcrumb trail is 'Home > Load balancing | Application Gateway >'. The main heading is 'Create application gateway'. Below this is a progress bar with steps: Basics, Frontends, Backends, Configuration (active), Tags, and Review + create. A descriptive text states: 'Create routing rules that link your frontend(s) and backend(s). You can also add more backend pools, add a second frontend IP configuration if you haven't already, or edit previous configurations.' The Configuration step contains three sections: 'Frontends' with a '+ Add a frontend IP' button and a list item 'Public: (new) app-gtwy-ip'; 'Routing rules' with a '+ Add a routing rule' button and a list item 'rule1' with a 'Manage Backend settings' link; and 'Backend pools' with a '+ Add a backend pool' button and a list item 'backend'. At the bottom, there are 'Previous' and 'Next: Tags >' buttons.

Step 4 : Create two linux VMs and install apache server on it .

Use those commands mentioned below to install apache server. And add html file to the root directory.

Step 5 : Now ,add two VMs as backend targets on the application Gateway.

Step 6 : Using application gateway Public IP ,browse it. Now, it will try to redirect between two IPs of VMs.



Here is the output displaying by continously browsing the application gateway Ip address.



Commands to install Apache server on Linux VMs

```
sudo apt update
```

```
sudo apt install apache2
```

```
sudo systemctl status apache2
```

```
cd /var/www/html
```

```
echo "Hello I'm VM1" > index.html
```

Note : Perform same commands on VM2.