Module 7 : Assignment 2

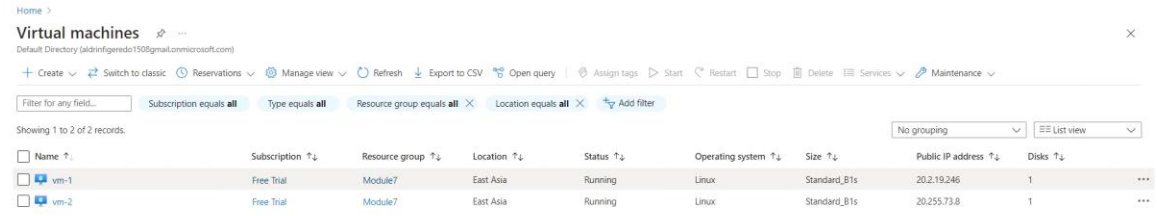
Tasks To Be Performed:

Create an application gateway with the following configuration:

a. /vm1 should point to VM1

b. /vm2 should point to VM2

Solution:




```
Last login: Sat Sep  7 15:15:03 2024 from 223.233.80.52
Jungkook@vm-1:~$ cd /var/www/html/
Jungkook@vm-1:/var/www/html$ ls
index.html
Jungkook@vm-1:/var/www/html$ cat index.html
This is VM1
Jungkook@vm-1:/var/www/html$ sudo rm index.html
Jungkook@vm-1:/var/www/html$ ls
Jungkook@vm-1:/var/www/html$
```

Jungkook@vm-1: /var/www/html

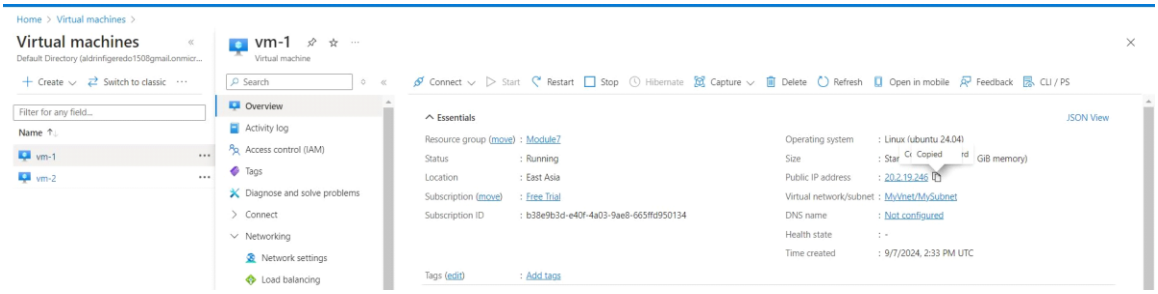
```
  GNU nano 7.2
<b> THIS IS APPLICATION GATEWAY <b>
<H2> It is used to do path based routing. <H2>
```

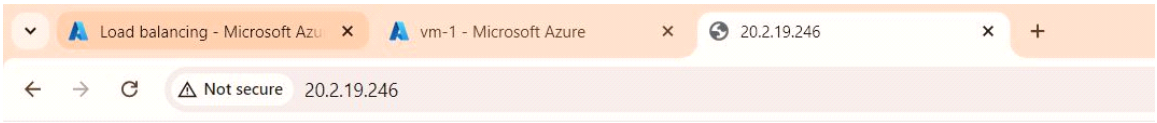
```
Last login: Sat Sep  7 15:15:03 2024 from 223.233.80.52
Jungkook@vm-1:~$ cd /var/www/html/
Jungkook@vm-1:/var/www/html$ ls
index.html
Jungkook@vm-1:/var/www/html$ cat index.html
This is VM1
Jungkook@vm-1:/var/www/html$ sudo rm index.html
Jungkook@vm-1:/var/www/html$ ls
Jungkook@vm-1:/var/www/html$ sudo nano index.html
Jungkook@vm-1:/var/www/html$ sudo cat index.html
<b> THIS IS APPLICATION GATEWAY <b>
<H2> It is used to do path based routing. <H2>
Jungkook@vm-1:/var/www/html$
```

```
Jungkook@vm-1:/var/www/html$ sudo mkdir vm1
Jungkook@vm-1:/var/www/html$ ls
index.html  vm1
Jungkook@vm-1:/var/www/html$ cd vm1
Jungkook@vm-1:/var/www/html/vm1$ sudo nano index.html
Jungkook@vm-1:/var/www/html/vm1$ ls
index.html
Jungkook@vm-1:/var/www/html/vm1$ sudo cat index.html
This is VM1
Jungkook@vm-1:/var/www/html/vm1$
```

```
Jungkook@vm-2:~$ cd /var/www/html/
Jungkook@vm-2:/var/www/html$ ls
index.html
Jungkook@vm-2:/var/www/html$ sudo rm index.html
Jungkook@vm-2:/var/www/html$ sudo nano index.html
Jungkook@vm-2:/var/www/html$ Jungkook@vm-2:/var/www/html$ cat index.html
This is VM1
Jungkook@vm-2:/var/www/html$ sudo nano index.html
Jungkook@vm-2:/var/www/html$ sudo cat index.html
This is VM2
Jungkook@vm-2:/var/www/html$ sudo rm index.html
Jungkook@vm-2:/var/www/html$ ls
Jungkook@vm-2:/var/www/html$
```

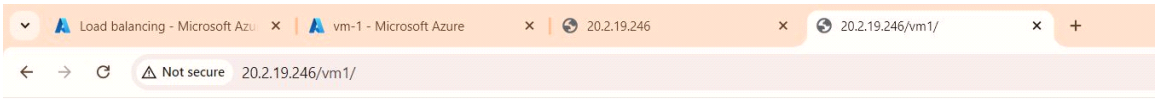
```
Jungkook@vm-2:/var/www/html$ sudo mkdir vm2
Jungkook@vm-2:/var/www/html$ ls
vm2
Jungkook@vm-2:/var/www/html$ cd vm2
Jungkook@vm-2:/var/www/html/vm2$ sudo nano index.html
Jungkook@vm-2:/var/www/html/vm2$ sudo cat index.html
 This is VM2
Jungkook@vm-2:/var/www/html/vm2$
```



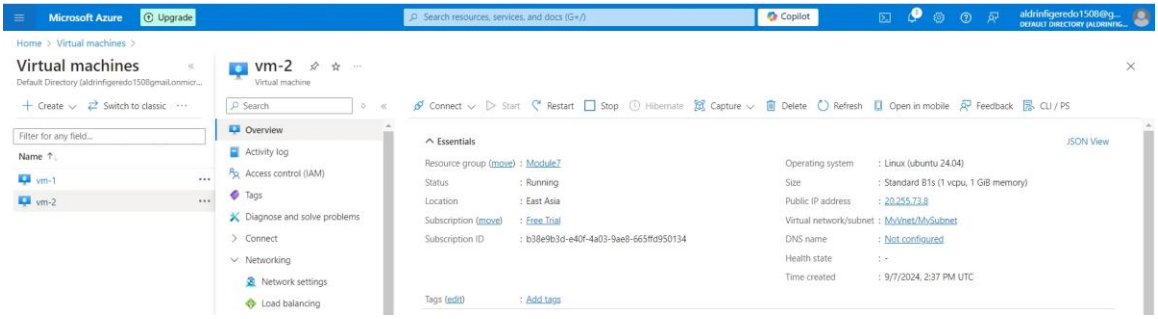


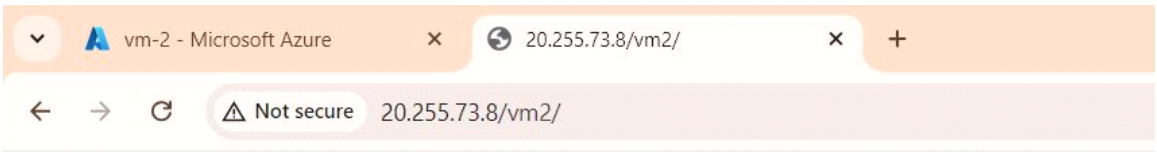
THIS IS APPLICATION GATEWAY

It is used to do path based routing.

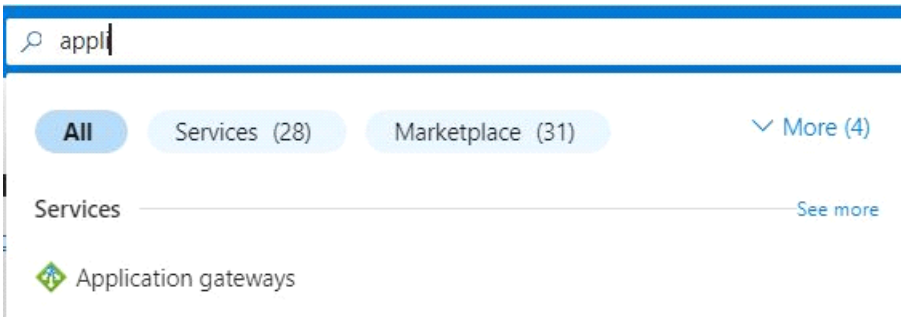


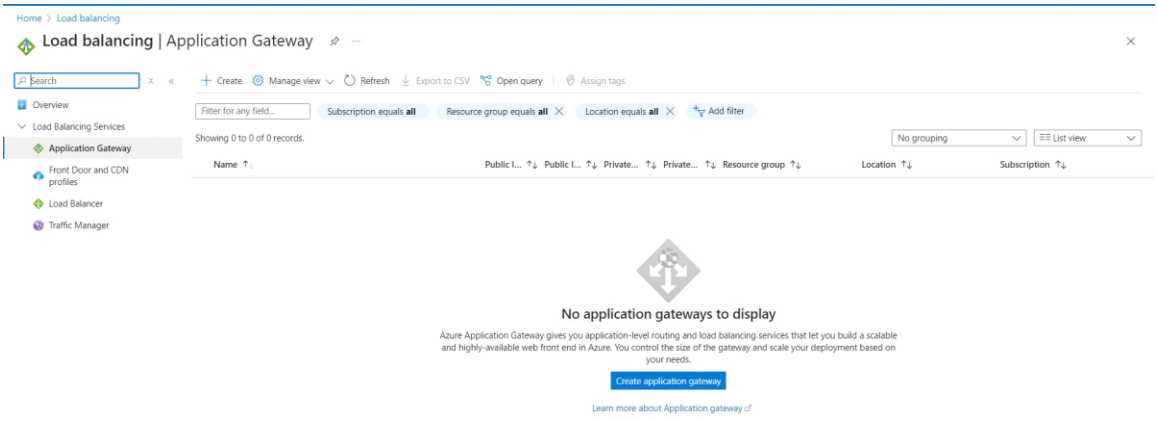
This is VM1




vm-2 - Microsoft Azure
20.255.73.8/vm2/
Not secure
20.255.73.8/vm2/

This is VM2


appli
All
Services (28)
Marketplace (31)
More (4)
Services
See more
Application gateways


Home > Load balancing
Load balancing | Application Gateway
Search
Create
Manage view
Refresh
Export to CSV
Open query
Assign tags
Overview
Load Balancing Services
Application Gateway
Front Door and CDN profiles
Load Balancer
Traffic Manager
Filter for any field...
Subscription equals all
Resource group equals all
Location equals all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Public I...
Public I...
Private...
Private...
Resource group
Location
Subscription
No application gateways to display
Azure Application Gateway gives you application-level routing and load balancing services that let you build a scalable and highly-available web front end in Azure. You control the size of the gateway and scale your deployment based on your needs.
Create application gateway
Learn more about Application gateway

Home > Load balancing | Application Gateway >

Create application gateway ...

your resources.

Subscription * : Free Trial

Resource group * : Module7

Create new

Instance details

Application gateway name * : appgw

Region * : East Asia

Tier : Standard V2

Enable autoscaling : (•) Yes ( ) No

Minimum instance count * : 1

Maximum instance count : 5

Availability zone * : Zones 1, 2, 3

IP address type : (•) IPv4 only ( ) Dual stack (IPv4 & IPv6)

HTTP2 : ( ) Disabled (•) Enabled

Configure virtual network

Virtual network * : MyVnet

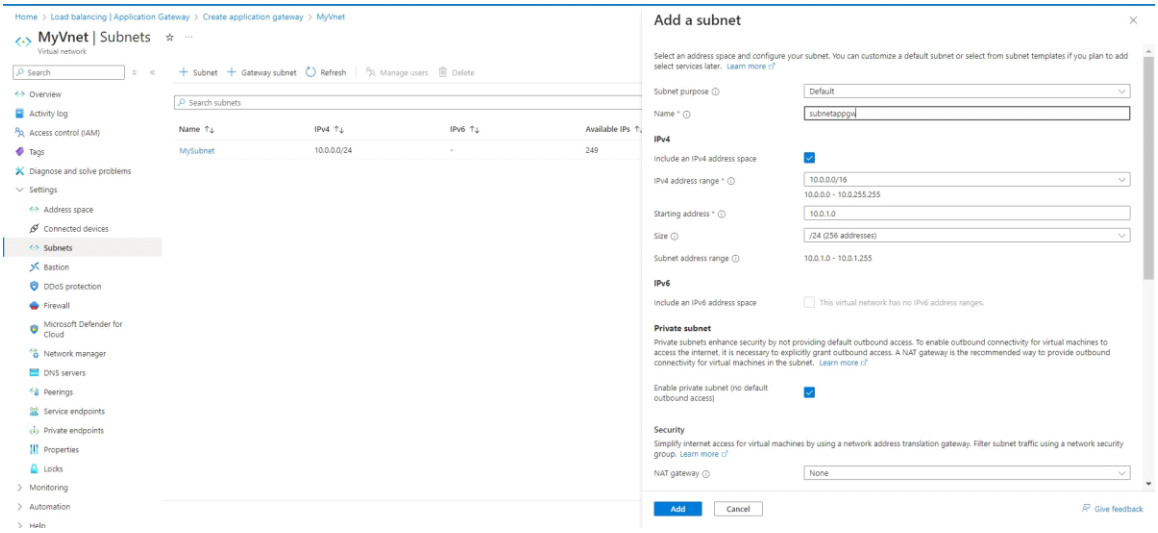
Create new

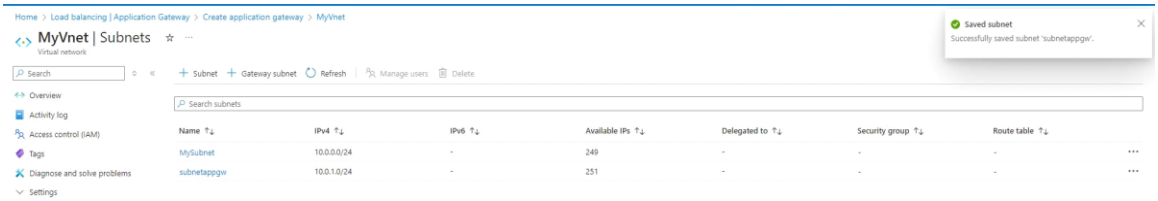
Subnet * : MySubnet (10.0.0.0/24)

Manage subnet configuration

Subnet must only have application gateway

Previous | Next : Frontends >


Home > Load balancing | Application Gateway > Create application gateway > MyVnet
MyVnet | Subnets
Virtual network
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Address space
Connected devices
Subnets
Bastion
DDoS protection
Firewall
Microsoft Defender for Cloud
Network manager
DNS servers
Peerings
Service endpoints
Private endpoints
Properties
Locks
Monitoring
Automation
Help
Subnet
Gateway subnet
Refresh
Manage users
Delete
Search subnets
Name
IPv4
IPv6
Available IPs
MySubnet
10.0.0.0/24
-
249
Add a subnet
Select an address space and configure your subnet. You can customize a default subnet or select from subnet templates if you plan to add select services later. Learn more
Subnet purpose
Default
Name *
subnetappgw
IPv4
Include an IPv4 address space
IPv4 address range *
10.0.0.0/16
10.0.0.0 - 10.0.255.255
Starting address *
10.0.1.0
Size
/24 (256 addresses)
Subnet address range
10.0.1.0 - 10.0.1.255
IPv6
Include an IPv6 address space
This virtual network has no IPv6 address ranges.
Private subnet
Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. Learn more
Enable private subnet (no default outbound access)
Security
Simplify internet access for virtual machines by using a network address translation gateway. Filter subnet traffic using a network security group. Learn more
NAT gateway
None
Add
Cancel
Give feedback


Home > Load balancing | Application Gateway > Create application gateway > MyVnet
MyVnet | Subnets
Virtual network
Saved subnet
Successfully saved subnet 'subnetappgw'.
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Subnet
Gateway subnet
Refresh
Manage users
Delete
Search subnets
Name
IPv4
IPv6
Available IPs
Delegated to
Security group
Route table
MySubnet
10.0.0.0/24
-
249
-
-
-
subnetappgw
10.0.1.0/24
-
251
-
-
-

Home > Load balancing | Application Gateway >

Create application gateway

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * : Free Trial

Resource group * : Module7

Create new

Instance details

Application gateway name * : appgw

Region * : East Asia

Tier : Standard V2

Enable autoscaling : (•) Yes ( ) No

Minimum instance count * : 1

Maximum instance count : 5

Availability zone * : Zones 1, 2, 3

IP address type : (•) IPv4 only ( ) Dual stack (IPv4 & IPv6)

HTTP2 : ( ) Disabled (•) Enabled

Configure virtual network

Virtual network * : MyVnet

Create new

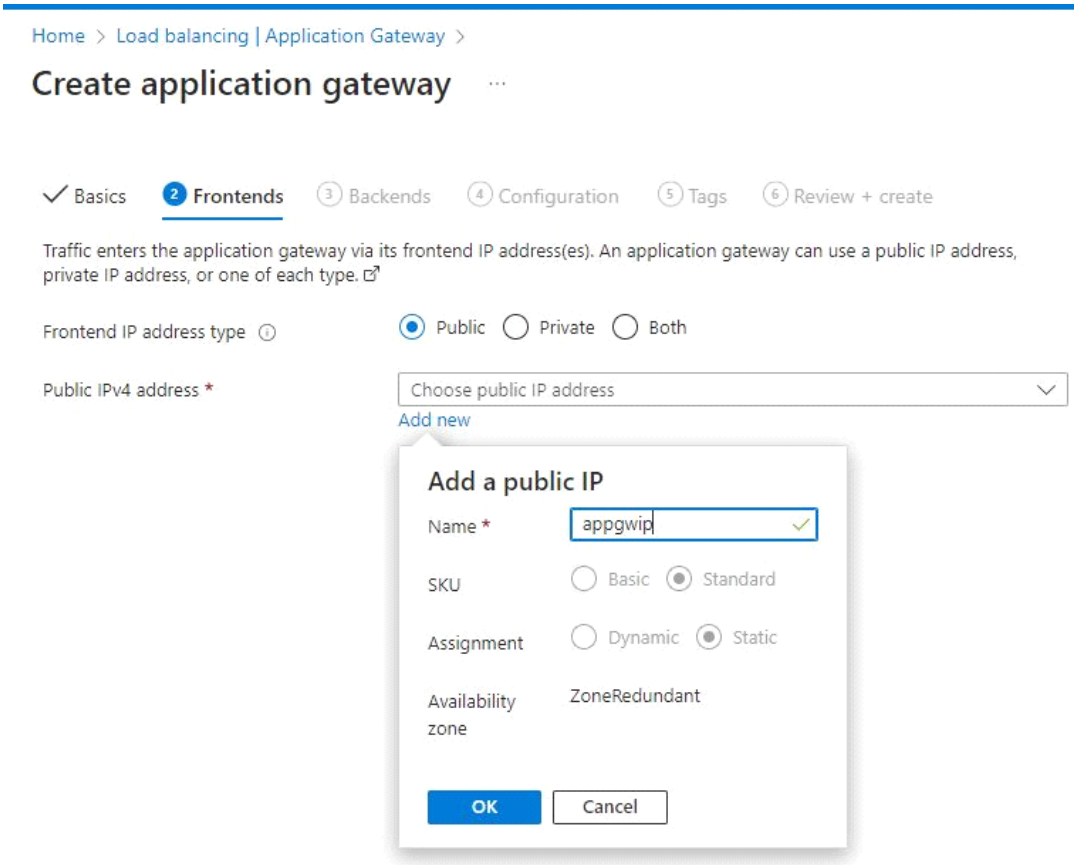
Subnet * : subnetappgw (10.0.1.0/24)

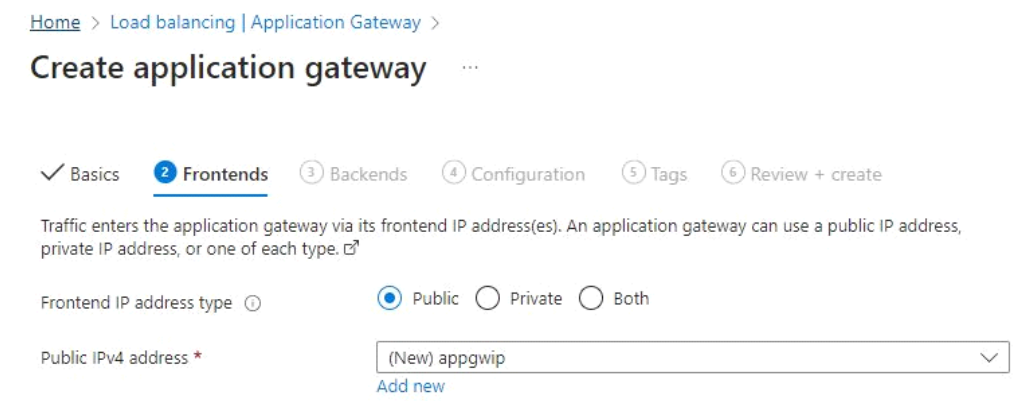
Manage subnet configuration

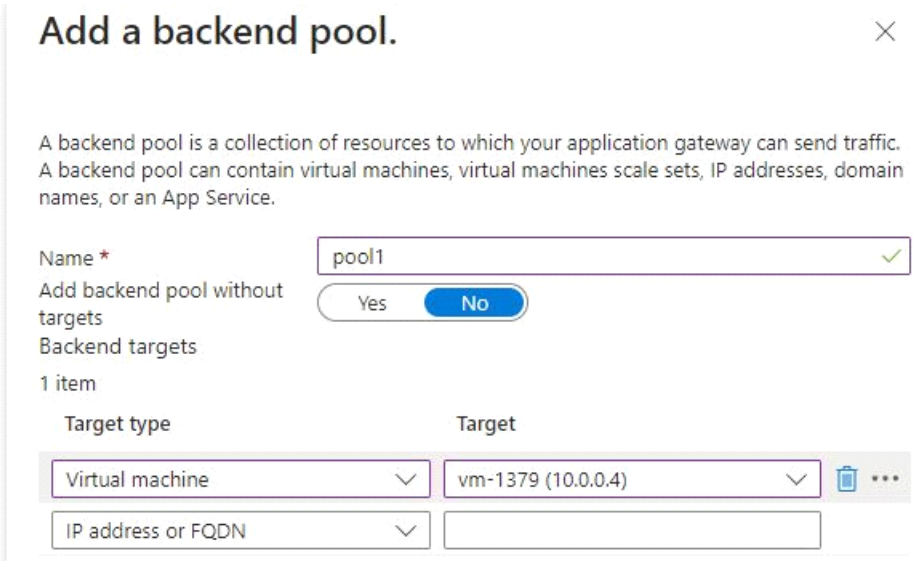
Previous | Next : Frontends >

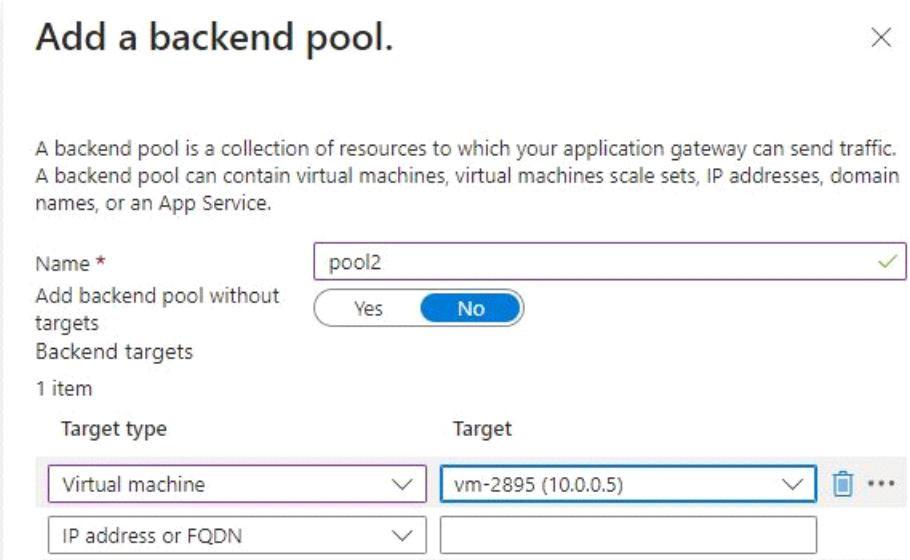
Subnet * : subnetappgw (10.0.1.0/24)

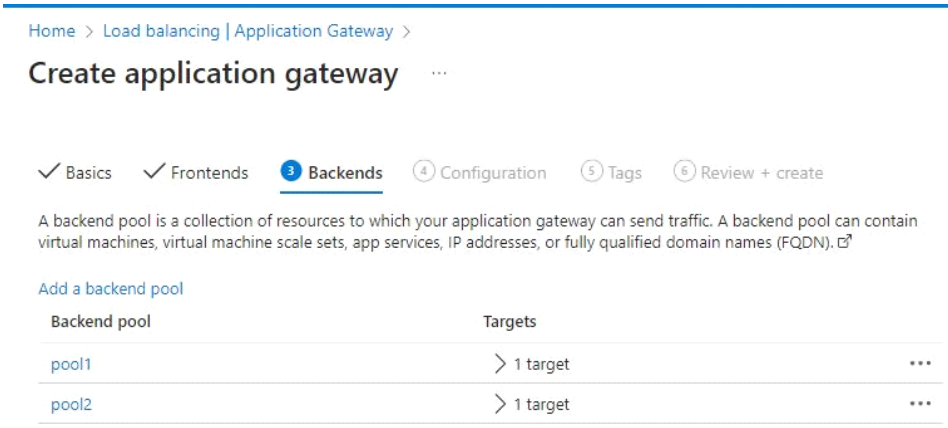
Manage subnet configuration

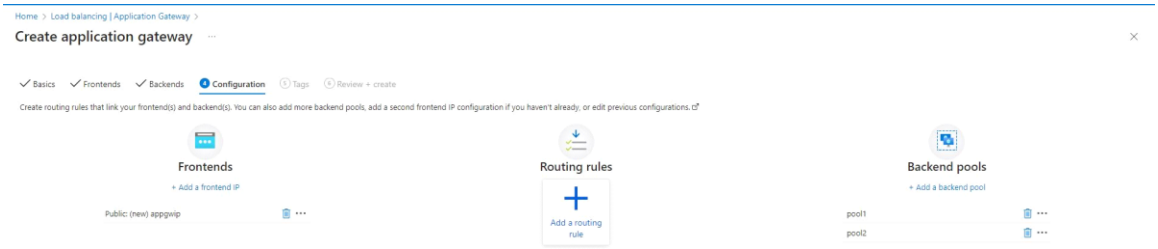

Home > Load balancing | Application Gateway >
Create application gateway
Basics
2 Frontends
3 Backends
4 Configuration
5 Tags
6 Review + create
Traffic enters the application gateway via its frontend IP address(es). An application gateway can use a public IP address, private IP address, or one of each type.
Frontend IP address type
Public
Private
Both
Public IPv4 address *
Choose public IP address
Add new
Add a public IP
Name *
appgwip
SKU
Basic
Standard
Assignment
Dynamic
Static
Availability zone
ZoneRedundant
OK
Cancel


Home > Load balancing | Application Gateway >
Create application gateway
Basics
2 Frontends
3 Backends
4 Configuration
5 Tags
6 Review + create
Traffic enters the application gateway via its frontend IP address(es). An application gateway can use a public IP address, private IP address, or one of each type.
Frontend IP address type
Public
Private
Both
Public IPv4 address *
(New) appgwip
Add new


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 *
pool1
Add backend pool without targets
Yes
No
Backend targets
1 item
Target type
Target
Virtual machine
vm-1379 (10.0.0.4)
IP address or FQDN


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 *
pool2
Add backend pool without targets
Yes
No
Backend targets
1 item
Target type
Target
Virtual machine
vm-2895 (10.0.0.5)
IP address or FQDN


Home > Load balancing | Application Gateway >
Create application gateway
Basics
Frontends
3 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
pool1
1 target
pool2
1 target


Home > Load balancing | Application Gateway >
Create application gateway
Basics
Frontends
Backends
Configuration
Tags
Review + create
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.
Frontends
+ Add a frontend IP
Public: (new) appgwip
Routing rules
Add a routing rule
Backend pools
+ Add a backend pool
pool1
pool2

Add a routing rule

Configure a routing rule to send traffic from a given frontend IP address to one or more backend targets. A routing rule must contain a listener and at least one backend target.

Rule name *: rule

Priority *: 1

*Listener *Backend targets

A listener "listens" on a specified port and IP address for traffic that uses a specified protocol. If the listener criteria are met, the application gateway will apply this routing rule.

Listener name *: name

Frontend IP *: Public IPv4

Protocol: HTTP / HTTPS

Port *: 80

Listener type: Basic / Multi site

Custom error pages

Show customized error pages for different response codes generated by Application Gateway. This section lets you configure Listener-specific error pages. Learn more

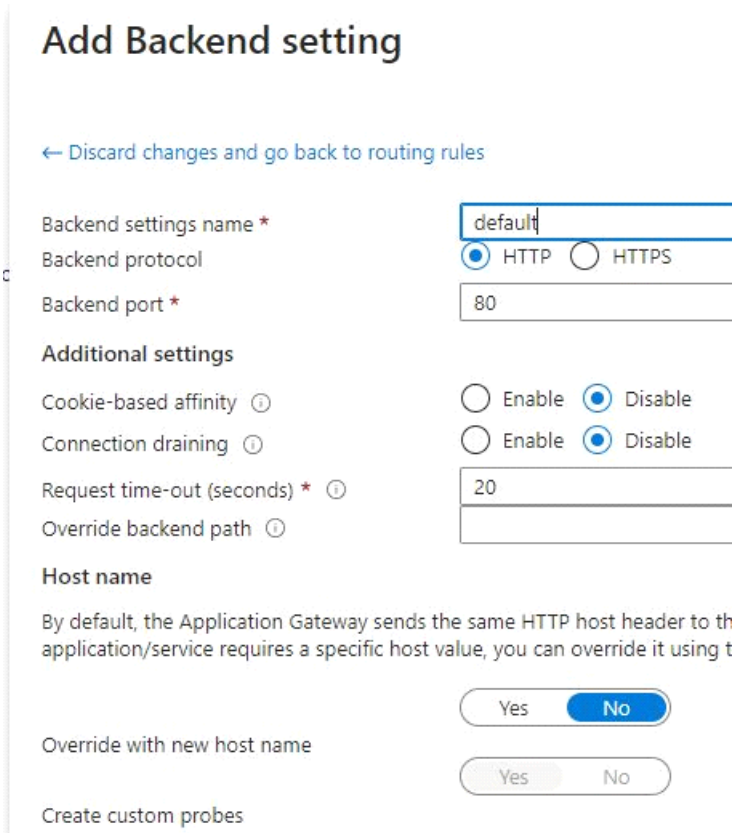
Please verify that the url(s) being added here is reachable from your application gateway using the connection troubleshoot tool to prevent any deployment error.

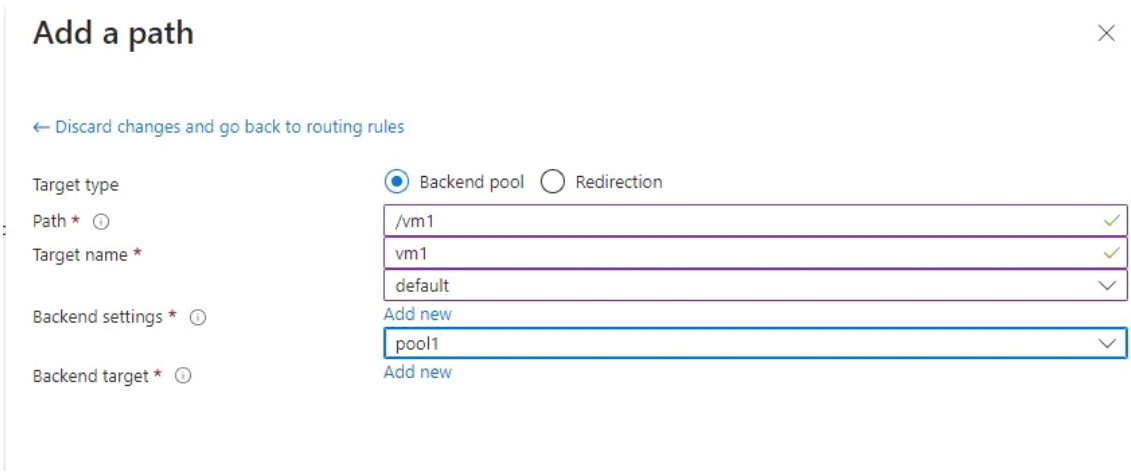
Bad Gateway - 502: Enter Html file URL

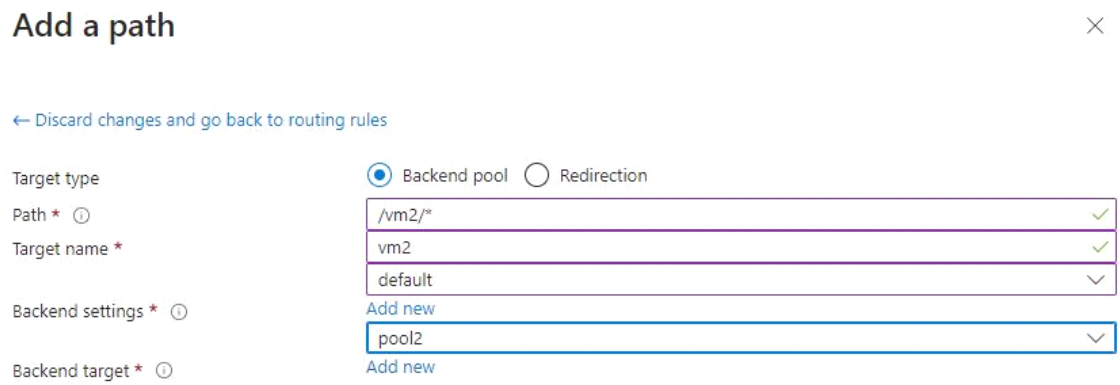
Forbidden - 403: Enter Html file URL

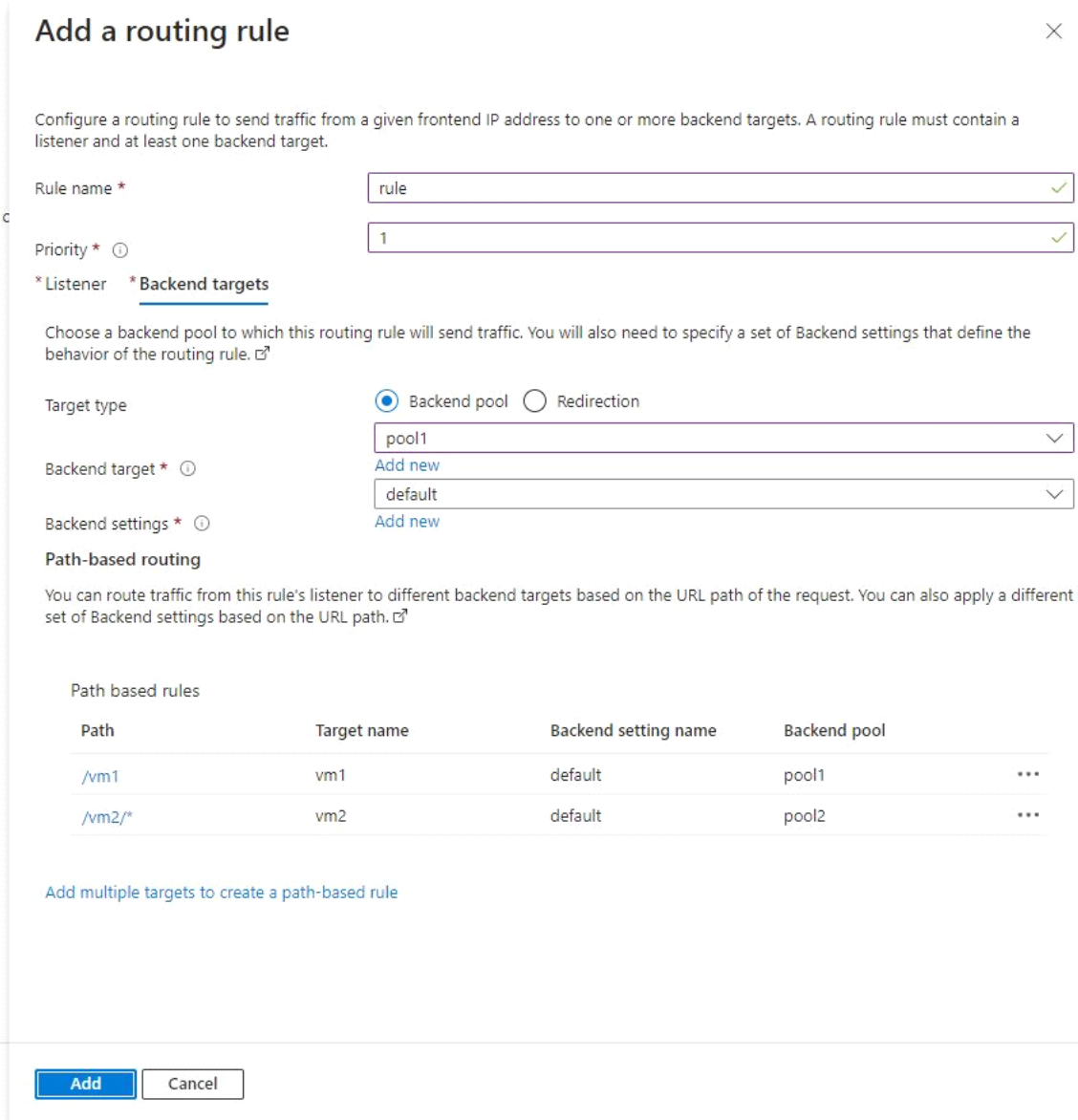
Show more status codes

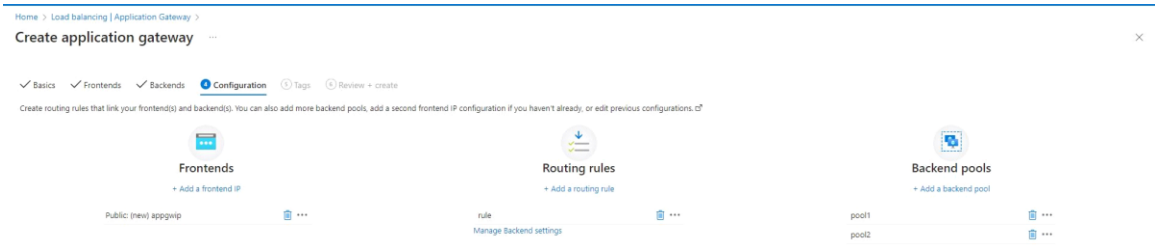
Add Cancel


Add Backend setting
← Discard changes and go back to routing rules
Backend settings name *
default
Backend protocol
HTTP
HTTPS
Backend port *
80
Additional settings
Cookie-based affinity
Enable
Disable
Connection draining
Enable
Disable
Request time-out (seconds) *
20
Override backend path
Host name
By default, the Application Gateway sends the same HTTP host header to th
application/service requires a specific host value, you can override it using t
Override with new host name
Yes
No
Create custom probes
Yes
No


Add a path
← Discard changes and go back to routing rules
Target type
Backend pool
Redirection
Path *
/vm1
Target name *
vm1
Backend settings *
default
Add new
pool1
Backend target *
Add new


Add a path
← Discard changes and go back to routing rules
Target type
Backend pool
Redirection
Path *
/vm2/*
Target name *
vm2
default
Backend settings *
Add new
pool2
Backend target *
Add new


Add a routing rule
Configure a routing rule to send traffic from a given frontend IP address to one or more backend targets. A routing rule must contain a listener and at least one backend target.
Rule name *
rule
Priority *
1
*Listener
*Backend targets
Choose a backend pool to which this routing rule will send traffic. You will also need to specify a set of Backend settings that define the behavior of the routing rule.
Target type
Backend pool
Redirection
pool1
Backend target *
Add new
default
Backend settings *
Add new
Path-based routing
You can route traffic from this rule's listener to different backend targets based on the URL path of the request. You can also apply a different set of Backend settings based on the URL path.
Path based rules
Path
Target name
Backend setting name
Backend pool
/vm1
vm1
default
pool1
/vm2/*
vm2
default
pool2
Add multiple targets to create a path-based rule
Add
Cancel


Home > Load balancing | Application Gateway >
Create application gateway
Basics
Frontends
Backends
Configuration
Tags
Review + create
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.
Frontends
+ Add a frontend IP
Public: (new) appgwip
Routing rules
+ Add a routing rule
rule
Manage Backend settings
Backend pools
+ Add a backend pool
pool1
pool2

Home > Load balancing | Application Gateway >

Create application gateway ...

Validation passed

✓ Basics ✓ Frontends ✓ Backends ✓ Configuration ✓ Tags 6 Review + create

Basics

Subscription	Free Trial
Resource group	Module7
Name	appgw
Region	East Asia
Tier	Standard_v2
Enable autoscaling	Enabled
Minimum instance count	1
Maximum instance count	5
Availability zone	Zones 1, 2, 3
HTTP2	Enabled
Virtual network	MyVnet
Subnet	subnetappgw (10.0.1.0/24)

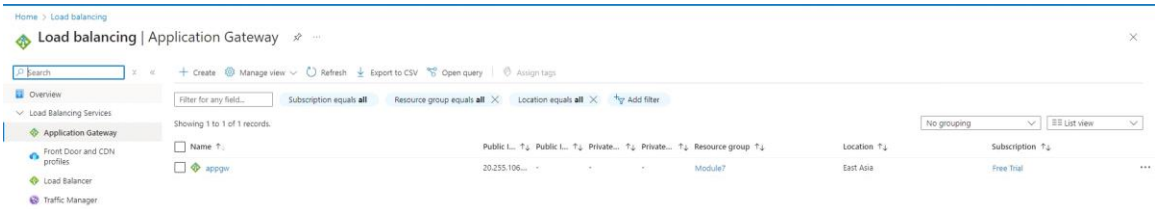
Frontends

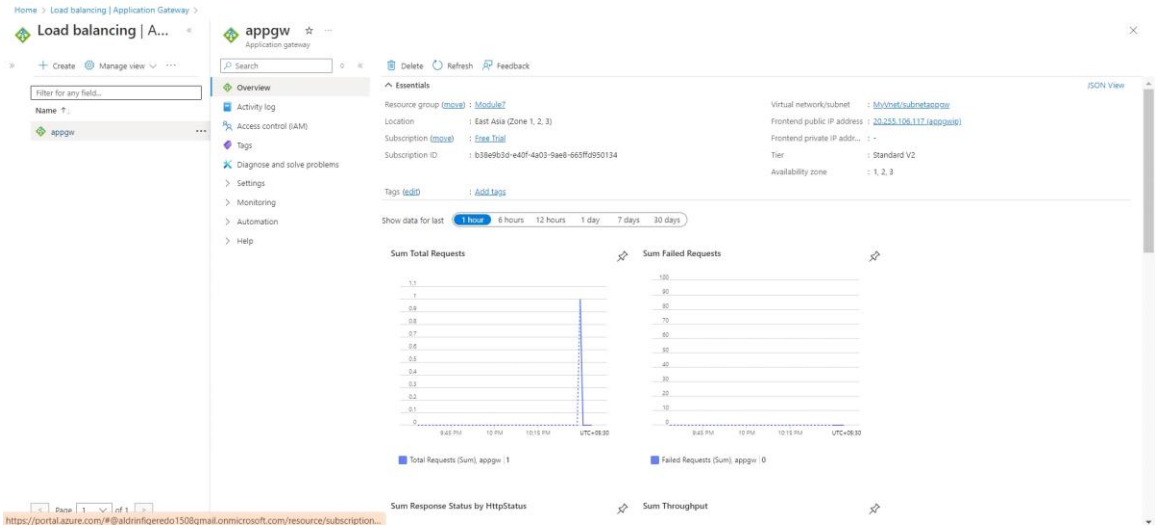
Public IPv4 address name	appgwip
SKU	Standard
Assignment	Static
Availability zone	ZoneRedundant

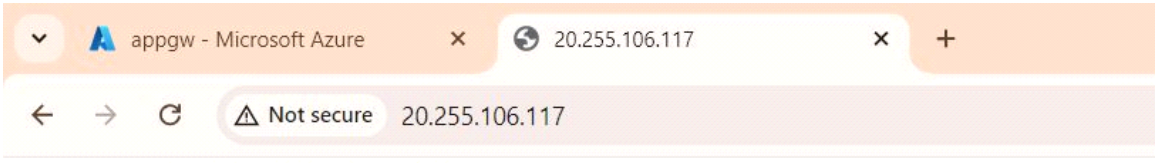
Tags

None

Create Previous Next Download a template for automation





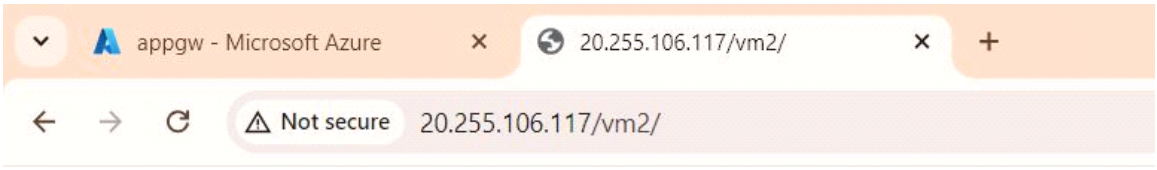


THIS IS APPLICATION GATEWAY

It is used to do path based routing.

Frontend public IP address : 20.255.106.117 (appgwip)

This is VM1


appgw - Microsoft Azure
20.255.106.117/vm2/
Not secure
20.255.106.117/vm2/

This is VM2