

ASSIGNMENT – 7

CREATING MY CUSTOM VPC

The screenshot shows the AWS Management Console interface for the 'Your VPCs' page. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC services. The main content area displays a list of VPCs, with 'assignment-vpc' selected. Below the list, the details for 'vpc-0f7d2c8efc03ece84 / assignment-vpc' are shown, including VPC ID, State (Available), DNS hostnames (Enabled), DNS resolution (Enabled), Tenancy (Default), DHCP option set, Main route table, Main network ACL, Default VPC, IPv4 CIDR, IPv6 pool, IPv6 CIDR, Network Address Usage metrics, Route 53 Resolver DNS Firewall rule groups, and Owner ID.

| Name | VPC ID | State | IPv4 CIDR |
|----------------|-----------------------|-----------|---------------|
| default-thing | vpc-0e374797aac7137ca | Available | 172.31.0.0/16 |
| assignment-vpc | vpc-0f7d2c8efc03ece84 | Available | 10.0.0.0/16 |

| Property | Value |
|--|------------------------|
| VPC ID | vpc-0f7d2c8efc03ece84 |
| State | Available |
| DNS hostnames | Enabled |
| DNS resolution | Enabled |
| Tenancy | Default |
| DHCP option set | dopt-052808951273687a5 |
| Main route table | rtb-0a4d0e9c6e2c73898 |
| Main network ACL | acl-0d74e2331a56f23db |
| Default VPC | No |
| IPv4 CIDR | 10.0.0.0/16 |
| IPv6 pool | - |
| IPv6 CIDR (Network border group) | - |
| Network Address Usage metrics | Disabled |
| Route 53 Resolver DNS Firewall rule groups | - |
| Owner ID | 456532073387 |

CREATING SUBNETS

The screenshot shows the AWS Management Console interface for the 'Subnets' page. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC services. The main content area displays a list of subnets under the VPC 'vpc-0f7d2c8efc03ece84'. The subnets are 'assign-01', 'assign-02', and 'assign-03', all in an 'Available' state. The details for each subnet are shown, including Subnet ID, State, VPC, and IPv4 CIDR.

| Name | Subnet ID | State | VPC | IPv4 CIDR |
|-----------|--------------------------|-----------|-----------------------------------|-------------|
| assign-01 | subnet-005bd77e0ccd34571 | Available | vpc-0f7d2c8efc03ece84 assign... | 10.0.0.0/24 |
| assign-02 | subnet-04f5e1d1041772e29 | Available | vpc-0f7d2c8efc03ece84 assign... | 10.0.1.0/24 |
| assign-03 | subnet-0bfc25b078f8ffeb0 | Available | vpc-0f7d2c8efc03ece84 assign... | 10.0.2.0/24 |

CERATING ROUTE TABLE

Activities Google Chrome Jan 6 20:00

Instances | EC2 Management | EC2 Instance Connect | VPC Management Console | 23.20.41.205

us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#RouteTableDetails:RouteTableId=rtb-0366d1f2b84b3e5d6

aws Services Search [Alt+S] N. Virginia Abineshkumar

VPC dashboard
EC2 Global View New
Filter by VPC:
Select a VPC

Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only Internet gateways
Carrier gateways
DHCP option sets
Elastic IPs
Managed prefix lists
Endpoints
Endpoint services
NAT gateways
Peering connections

Details Info

| | | | |
|---|--------------------------|---|------------------------|
| Route table ID rtb-0366d1f2b84b3e5d6 | Main No | Explicit subnet associations 3 subnets | Edge associations - |
| VPC vpc-0f7d2c8efc03ece84 assignment-vpc | Owner ID 456532073387 | | |

Routes Subnet associations Edge associations Route propagation Tags

Routes (2) Edit routes

Filter routes Both < 1 > ⚙

| Destination | Target | Status | Propagated |
|-------------|-----------------------|--------|------------|
| 0.0.0.0/0 | lgw-0d1df22f113d48c5c | Active | No |
| 10.0.0.0/16 | local | Active | No |

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SUBNET ASSOCIATIONS

Activities Google Chrome Jan 6 20:00

Instances | EC2 Management | EC2 Instance Connect | VPC Management Console | 23.20.41.205

us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#RouteTableDetails:RouteTableId=rtb-0366d1f2b84b3e5d6

aws Services Search [Alt+S] N. Virginia Abineshkumar

VPC dashboard
EC2 Global View New
Filter by VPC:
Select a VPC

Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only Internet gateways
Carrier gateways
DHCP option sets
Elastic IPs
Managed prefix lists
Endpoints
Endpoint services
NAT gateways
Peering connections

Details Info

| | | | |
|---|--------------------------|---|------------------------|
| Route table ID rtb-0366d1f2b84b3e5d6 | Main No | Explicit subnet associations 3 subnets | Edge associations - |
| VPC vpc-0f7d2c8efc03ece84 assignment-vpc | Owner ID 456532073387 | | |

Routes Subnet associations Edge associations Route propagation Tags

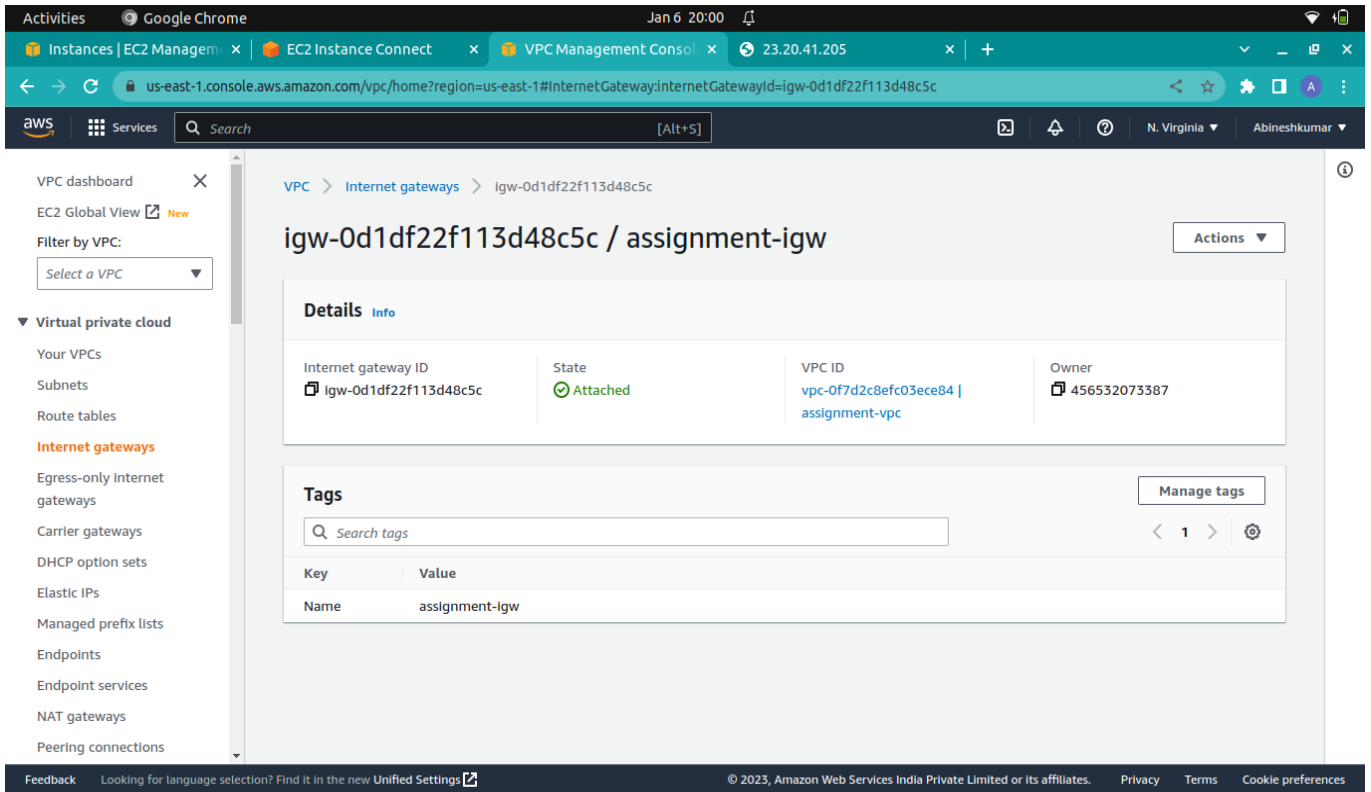
Explicit subnet associations (3) Edit subnet associations

Find subnet association < 1 > ⚙

| Subnet ID | IPv4 CIDR | IPv6 CIDR |
|--------------------------------------|-------------|-----------|
| subnet-005bd77e0ccd34571 / assign-01 | 10.0.0.0/24 | - |
| subnet-04f5e1d1041772e29 / assign-02 | 10.0.1.0/24 | - |
| subnet-0bfc25b078f8ffeb0 / assign-03 | 10.0.2.0/24 | - |

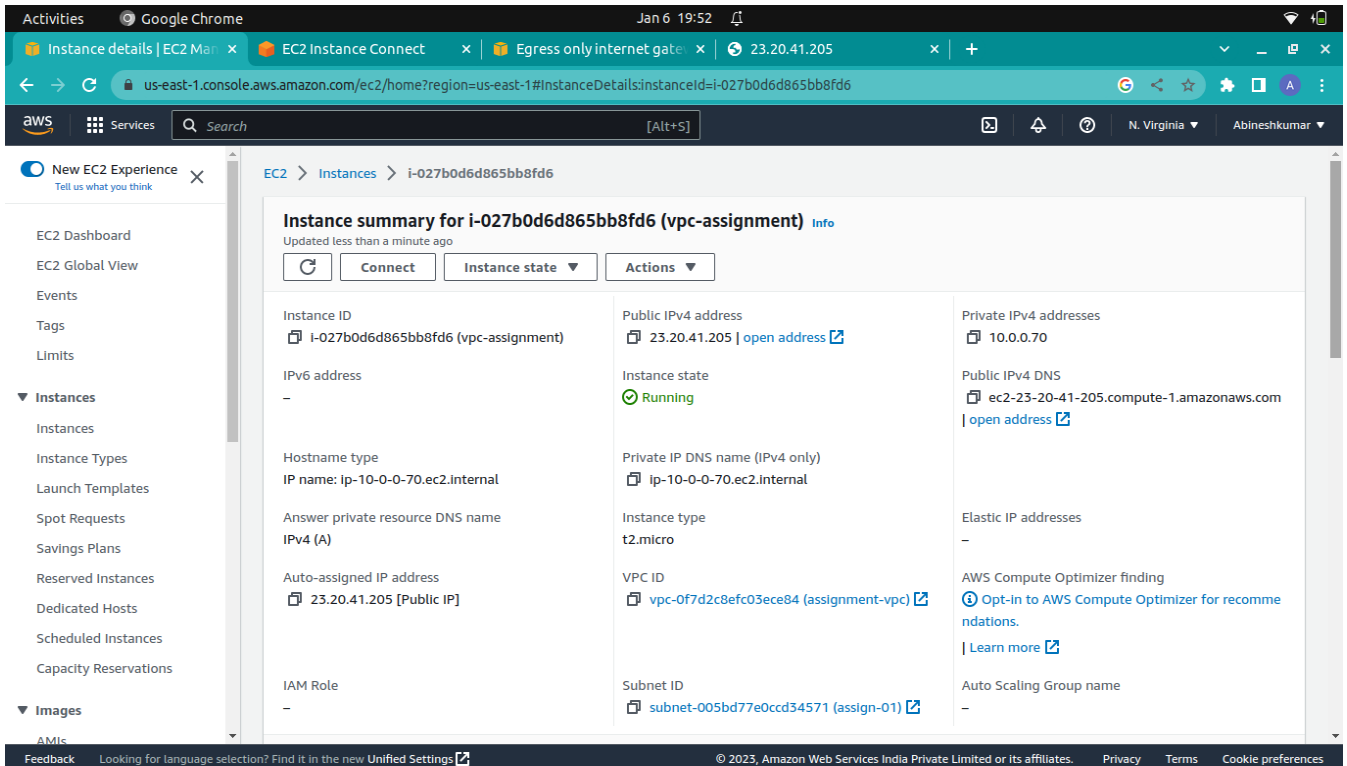
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ATTACHING IGW TO VPC



The screenshot shows the AWS Management Console interface for an Internet Gateway. The breadcrumb navigation indicates the path: VPC > Internet gateways > igw-0d1df22f113d48c5c. The main heading is 'igw-0d1df22f113d48c5c / assignment-igw'. The 'Details' section shows the Internet gateway ID as 'igw-0d1df22f113d48c5c', the state as 'Attached', the VPC ID as 'vpc-0f7d2c8efc03ece84 | assignment-vpc', and the owner as '456532073387'. The 'Tags' section shows a single tag with the key 'Name' and value 'assignment-igw'.

CONFIGURING T2 MICRO INSIDE MY ASSIGNMENT-VPC



The screenshot shows the AWS Management Console interface for an EC2 instance. The breadcrumb navigation indicates the path: EC2 > Instances > i-027b0d6d865bb8fd6. The main heading is 'Instance summary for i-027b0d6d865bb8fd6 (vpc-assignment)'. The 'Instance summary' section shows the instance ID as 'i-027b0d6d865bb8fd6 (vpc-assignment)', the public IPv4 address as '23.20.41.205 | open address', the instance state as 'Running', the hostname type as 'IP name: ip-10-0-0-70.ec2.internal', the private IP DNS name as 'ip-10-0-0-70.ec2.internal', the instance type as 't2.micro', the VPC ID as 'vpc-0f7d2c8efc03ece84 (assignment-vpc)', the subnet ID as 'subnet-005bd77e0ccd34571 (assign-01)', and the IAM role as '-'. The 'Private IPv4 addresses' section shows '10.0.0.70'. The 'Public IPv4 DNS' section shows 'ec2-23-20-41-205.compute-1.amazonaws.com | open address'. The 'Elastic IP addresses' section shows '-'. The 'AWS Compute Optimizer finding' section shows 'Opt-in to AWS Compute Optimizer for recommendations. | Learn more'. The 'Auto Scaling Group name' section shows '-'. The 'Auto-assigned IP address' section shows '23.20.41.205 [Public IP]'.

MY SECURITY GROUP

Activities Google Chrome Jan 6 19:55

EC2 Management Console x EC2 Instance Connect x Egress only internet gate x 23.20.41.205

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-05439ca9b282353ff

aws Services Search [Alt+S]

EC2 > Security Groups > sg-05439ca9b282353ff - launch-wizard-4 > Edit inbound rules

Edit inbound rules [Info](#)

Inbound rules control the incoming traffic that's allowed to reach the Instance.

Inbound rules [Info](#)

| Security group rule ID | Type Info | Protocol Info | Port range Info | Source Info | Description - optional Info | |
|------------------------|---------------------------|-------------------------------|---------------------------------|---|---|--------|
| sgr-087fad80dbf9ef44 | HTTP | TCP | 80 | Custom <input type="text" value="0.0.0.0/0"/> | | Delete |
| sgr-0e00e1e7f6a061c4d | HTTPS | TCP | 443 | Custom <input type="text" value="0.0.0.0/0"/> | | Delete |
| sgr-076c2db41ccff822d | SSH | TCP | 22 | Custom <input type="text" value="0.0.0.0/0"/> | | Delete |

[Add rule](#)

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CONNECTING MY INSTANCE

Activities Google Chrome Jan 6 19:50

Instance details | EC2 Man x EC2 Instance Connect x Egress only internet gate x 23.20.41.205

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-027b0d6d865bb8fd6&osUser=ec2-user&ssh...

aws Services Search [Alt+S]

```
Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 2/9
Verifying : httpd-tools-2.4.54-1.amzn2.x86_64 3/9
Verifying : mod_http2-1.15.19-1.amzn2.0.1.x86_64 4/9
Verifying : httpd-2.4.54-1.amzn2.x86_64 5/9
Verifying : mailcap-2.1.41-2.amzn2.noarch 6/9
Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 7/9
Verifying : httpd-filesystem-2.4.54-1.amzn2.noarch 8/9
Verifying : apr-1.7.0-9.amzn2.x86_64 9/9

Installed:
  httpd.x86_64 0:2.4.54-1.amzn2

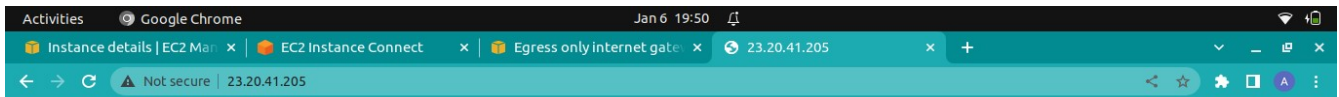
Dependency Installed:
  apr.x86_64 0:1.7.0-9.amzn2          apr-util.x86_64 0:1.6.1-5.amzn2.0.2          apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
  generic-logos-httpd.noarch 0:18.0.0-4.amzn2  httpd-filesystem.noarch 0:2.4.54-1.amzn2          httpd-tools.x86_64 0:2.4.54-1.amzn2
  mailcap.noarch 0:2.1.41-2.amzn2      mod_http2.x86_64 0:1.15.19-1.amzn2.0.1

Complete!
[root@ip-10-0-0-70 ec2-user]# systemctl start httpd
[root@ip-10-0-0-70 ec2-user]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[root@ip-10-0-0-70 ec2-user]# cd /var/www/html
[root@ip-10-0-0-70 html]# echo "<h1>hello world</h1>" > index.html
[root@ip-10-0-0-70 html]# cat index.html
<h1>hello world</h1>
[root@ip-10-0-0-70 html]#
```

i-027b0d6d865bb8fd6 (vpc-assignment)

PublicIPs: 23.20.41.205 PrivateIPs: 10.0.0.70

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hello world

CONNECTING MY EC2 INSTANCE TO MY TERMINAL (SSH AGENT FORWARDING)

```
Activities Terminal Jan 6 20:09 ec2-user@ip-10-0-0-70:~  
abi@abi-X555LAB:~/Desktop/aws key/virginia$ ssh-add -k cloudlearner-1.pem  
Identity added: cloudlearner-1.pem (cloudlearner-1.pem)  
abi@abi-X555LAB:~/Desktop/aws key/virginia$ ssh-add -l  
2048 SHA256:ZX5K09nN7Hr+o27C51MVNjMxVhIT1Ewxze2jggWbC+0 cloudlearner-1.pem (RSA)  
abi@abi-X555LAB:~/Desktop/aws key/virginia$ ssh -a ec2-user@23.20.41.205  
Last login: Fri Jan 6 14:11:22 2023 from ec2-18-206-107-27.compute-1.amazonaws.com  
  
  _ | _ | _ )  
  _ | ( _ /  
  _ \ \ _ |  
Amazon Linux 2 AMI  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-10-0-0-70 ~]$ ping google.com  
PING google.com (172.253.122.113) 56(84) bytes of data:  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=1 ttl=95 time=1.92 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=2 ttl=95 time=1.97 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=3 ttl=95 time=3.25 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=4 ttl=95 time=1.99 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=5 ttl=95 time=2.01 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=6 ttl=95 time=2.01 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=7 ttl=95 time=2.00 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=8 ttl=95 time=1.98 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=9 ttl=95 time=2.10 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=10 ttl=95 time=2.18 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=11 ttl=95 time=2.02 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=12 ttl=95 time=2.02 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=13 ttl=95 time=2.00 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=14 ttl=95 time=1.99 ms  
64 bytes from bh-in-f113.1e100.net (172.253.122.113): icmp_seq=15 ttl=95 time=2.47 ms  
^C  
--- google.com ping statistics ---  
15 packets transmitted, 15 received, 0% packet loss, time 14016ms  
rtt min/avg/max/mdev = 1.922/2.138/3.251/0.324 ms  
[ec2-user@ip-10-0-0-70 ~]$
```

