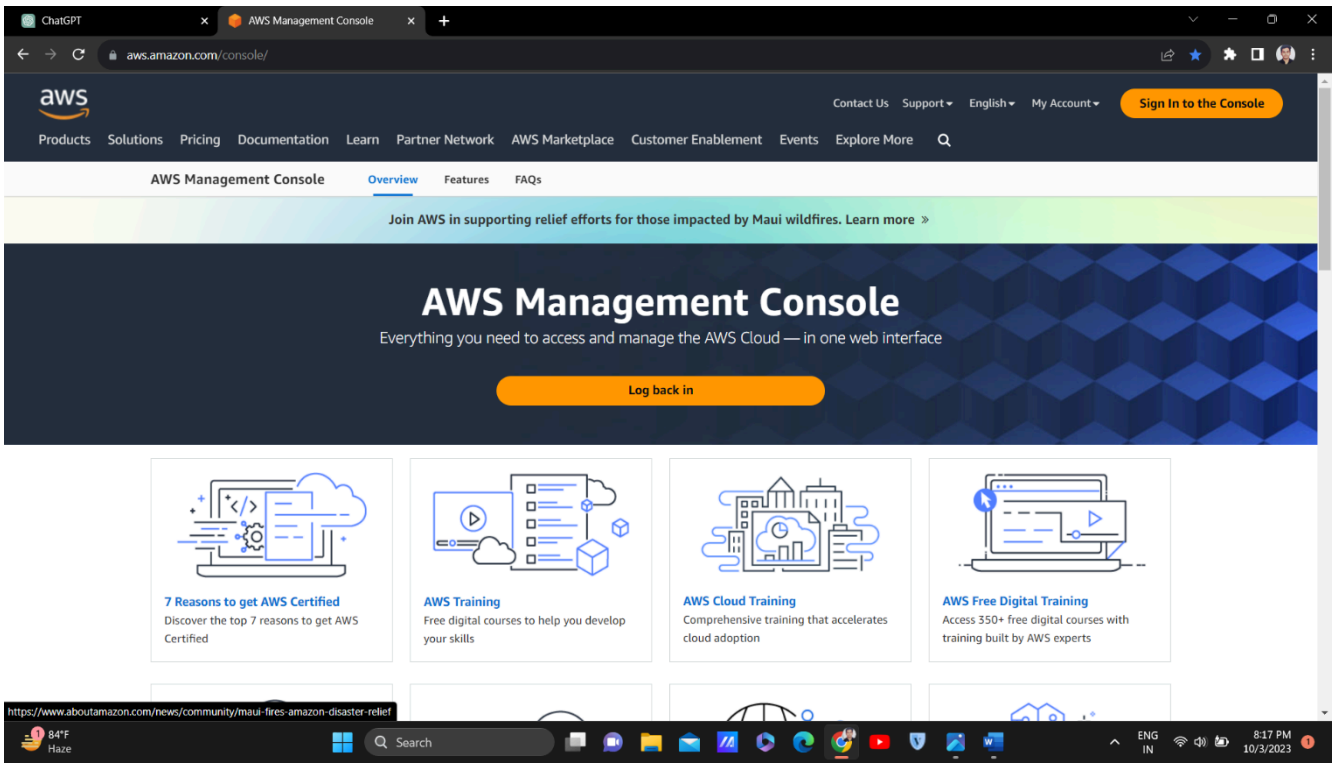
VPC PEERING IN AMAZON WEB SERVICES (AWS)

In this blog we will see how to connect two VPC in AWS using VPC peering. When we need to connect two VPC, we can use VPC Peering, when we need to connect more than two VPC we need to do it by Transit Gateway. But in this blog, we will see only VPC Peering.

STEP 1. Login to AWS console

- https://aws.amazon.com/console/ using this website login to AWS Console, if you do not have an AWS account please sign up first and then login.



STEP 2. Create VPC

- After logging into the AWS account, you will see the home page of AWS Console.
- On the left top there is a search bar.
- In the search bar search for VPC and press enter button.
- You will see the interface as shown in fig 2.1
- Now click on Create VPC

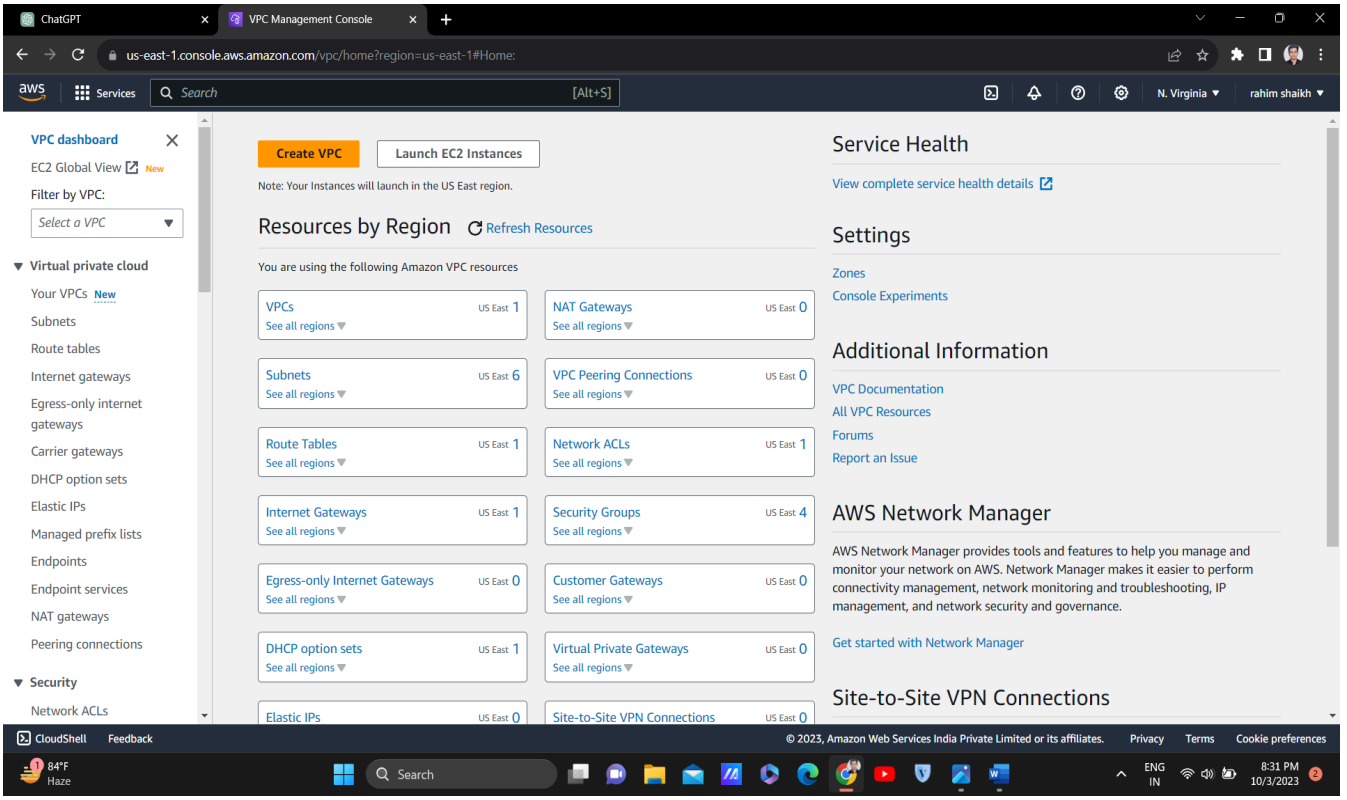


Fig 2.1

- After you click on create VPC, there will be two options VPC only or VPC and more, click on VPC only.
- Now give a name to your VPC by your choice (for eg. Testvpc1)
- Now in IPv4 CIDR type this 10.0.0.0/16
- Rest other settings keep default do not change any of the settings.
- Then click on Create VPC.
- Now repeat the above process and create another VPC (for eg. Testvpc2), but make sure that give a different IPv4 CIDR in this VPC (for eg. 10.0.0.0/24) to avoid overlapping CIDRs.
- Now go in subnet, click on create subnet, give the vpc id Testvpc1 and give the name of subnet and create a subnet in that vpc.
- Similarly create one subnet by selecting Testvpc2.

STEP 3. Create EC2 Instance

- After creating 2 VPC now its time to create 2 EC2 Instances.
- Search for EC2 and press enter, you will see the interface as shown in fig 3.1
- Now click on Launch Instance
- Now name your instance (for eg. Testec21)
- Now in Application and OS image, select Amazon Linux.

- In Amazon Machine Image, select Amazon Linux 2023 AMI free eligible tier. Remember, always select the free tier to avoid getting charged for EC2 instance.
- In Instance type, select t2 micro free eligible tier. Remember, always select the free tier if you do not have a heavy task to perform. Amazon will charge for other instance types except the free ones.

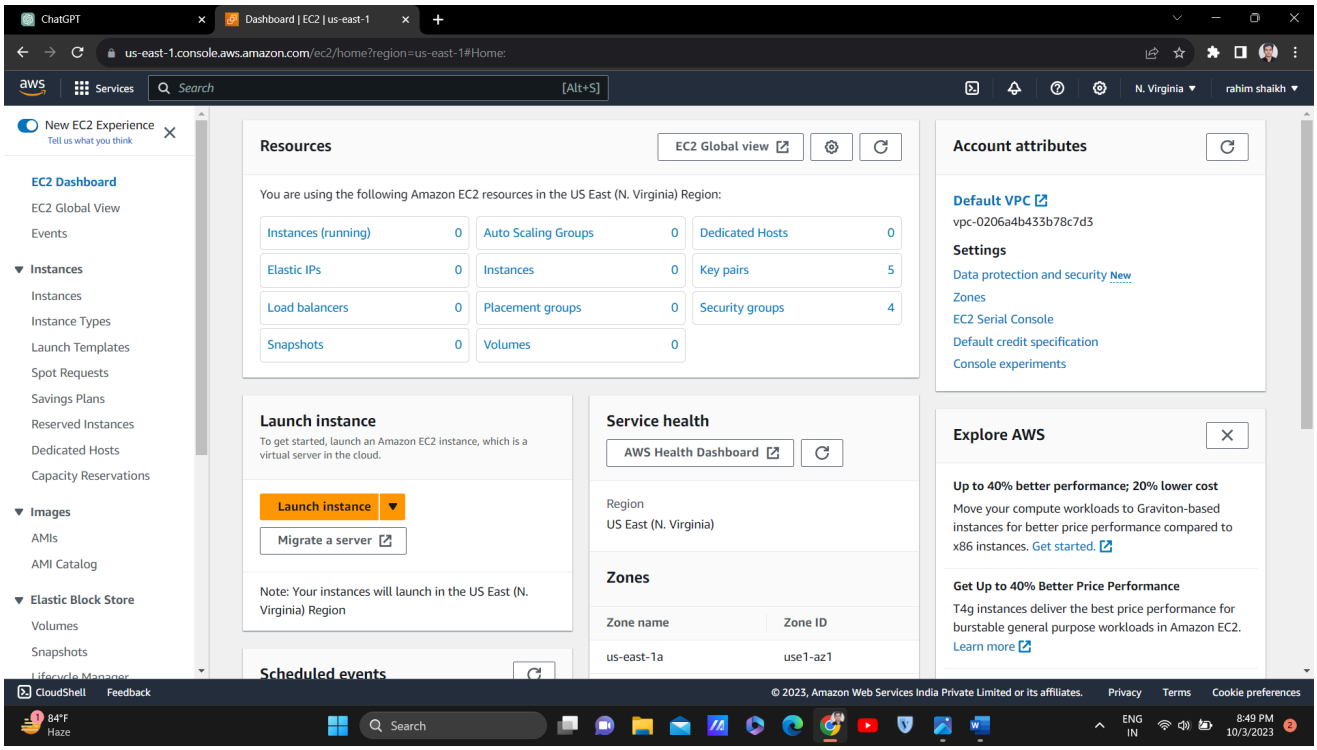


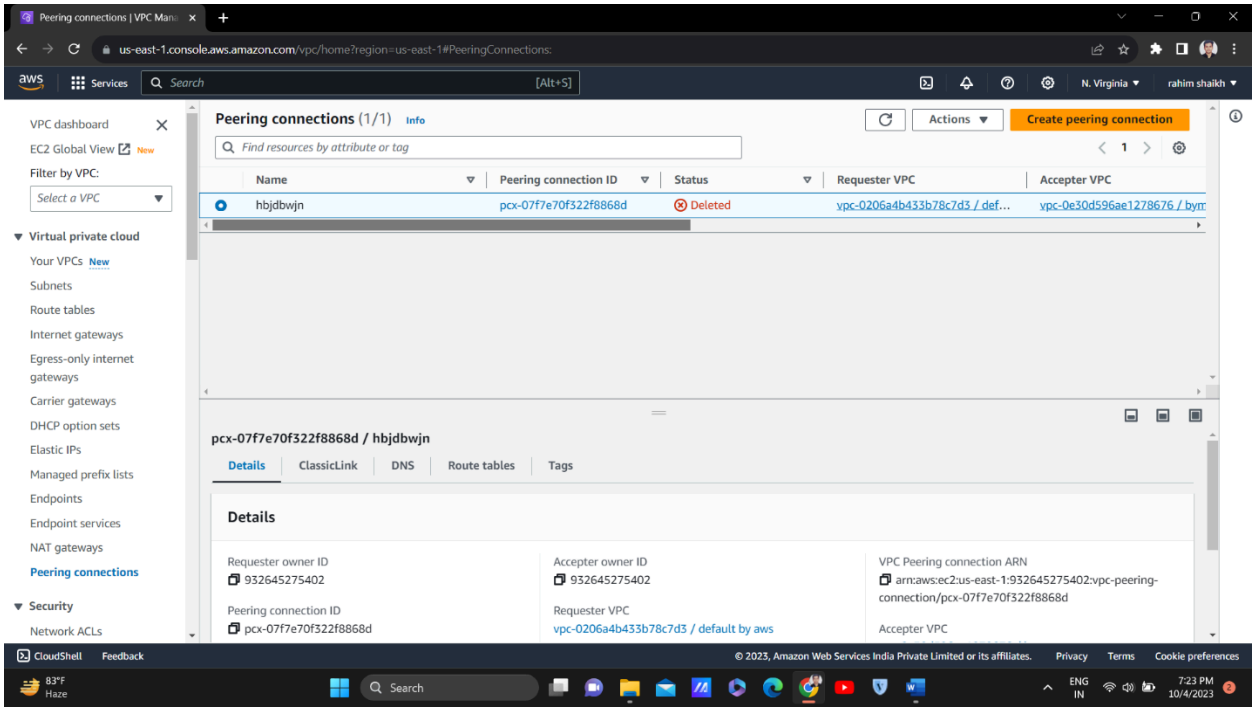
Fig 3.1

- Now in Key Pair, click on create on a new key pair, name the key pair (for eg. ec21key), in key pair type click RSA and in Private key file format click on .ppk and then click on Create Key Pair. After creating, your key pair will automatically get downloaded.
- In Network Settings, edit the network settings and in VPC select the Testvpc1 which we have created before. Make sure that Auto assign public IP is enabled. Rest of the setting keep by default.
- Now click on Launch Instance and your Testec21 instance will be created
- Now in the same way create one more ec2 instance (for eg. Testec22), but make sure that in network setting for this ec2, in VPC section select another VPC that is Testvpc2 which we have created before.

STEP 4. Create a VPC Peering Connection

- After successfully creating VPC and EC2, now it is time to create Peering Connection between the VPC that we have created.
- Search VPC and press Enter, now go in peering connection.

- You will see the below interface once you go in peering connection.



- Now click on Create peering connection on the top right corner.
- Name your peering connection (for eg. peering1)
- In VPC Id (Requester), select any one VPC (for eg Testvpc1)
- In VPC Id (Accepter), select another VPC (for eg Testvpc2)
- Keep other settings same if the VPC is in same account and in same region, if not then change the settings accordingly.
- Now click on create peering connection.
- As soon as the peering connection is created go in action and accept the request.

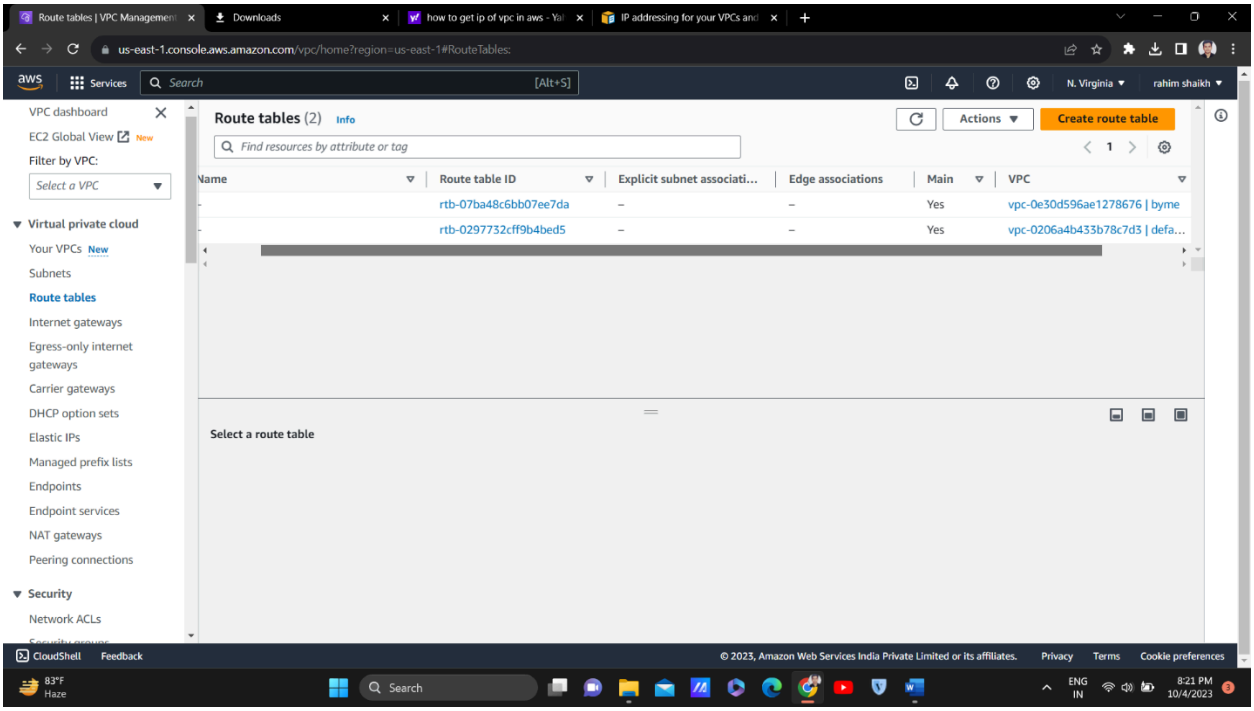
STEP 5. Modifying Security Groups

- Go in VPC, copy the IPv4 CIDR of Testvpc2.
- Go in EC2 > go in instance id of Testec21 > scroll down and go in security > click on the security group linked with it.
- Now edit inbound rules > Add rule > in type select All Traffic in IP paste the Testvpc2 IPv4 CIDR copied before and save rule.
- Now repeat the same process, copy IP of Testvpc1 > go to instance id of Testec22> go in security groups> edit inbound rules> add rule > All traffic > paste the IP of Testvpc1 > save rule.

STEP 6. Modifying Route Table

- Route table are automatically created as we create VPC
- Search VPC and press enter

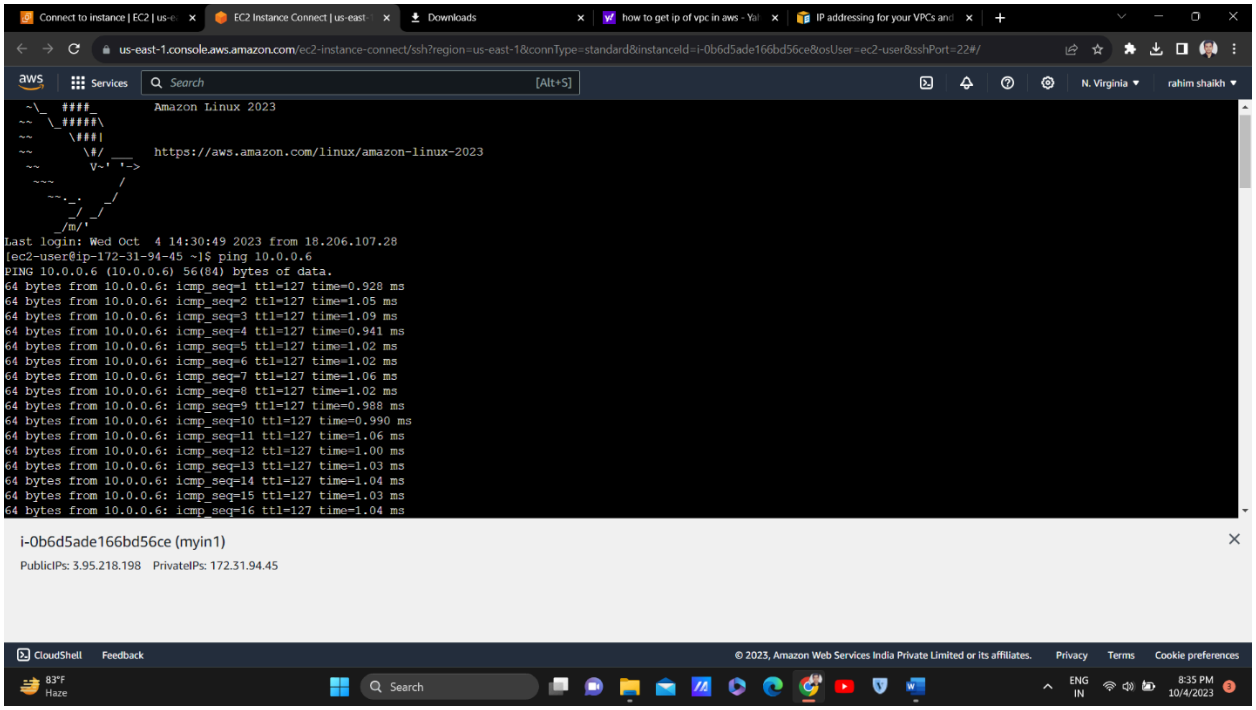
- Go to route table you will see the below interface.



- Go in route table associated with Testvpc2 > click on edit routes > add route > in destination add the IPv4 CIDR of Testvpc1> in target add peering connection and select the peering connection you made> then save changes.
- Now repeat the same process, go in route table associated with Testvpc1 > click on edit routes > add route > in destination add the IPv4 CIDR of Testvpc2> in target add peering connection and select the peering connection you made> then save changes.

STEP 7. Launch EC2 Instance

- Copy the Private IP address of any of the instance (for eg Testec22)
- Now go in instance id of Testec21 and click on connect then scroll down and click on connect.
- As soon as you get connected type a command: ping ‘private IP’ and press enter.
- You can see the interface as shown in fig 7.1 which means that the connection between 2 VPC was established successfully.
- If you did not see the interface as shown below then it is possible that you have made mistake somewhere.
- Repeat the process again if your connection was not established successfully


Connect to instance | EC2 | us-e
EC2 Instance Connect | us-east-
Downloads
how to get ip of vpc in aws - Ya
IP addressing for your VPCs and
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-0b6d5ade166bd56ce&osUser=ec2-user&sshPort=22#/
aws
Services
Search
[Alt+S]
N. Virginia
rahim shaikh
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
Last login: Wed Oct 4 14:30:49 2023 from 18.206.107.28
[ec2-user@ip-172-31-94-45 ~]$ ping 10.0.0.6
PING 10.0.0.6 (10.0.0.6) 56(84) bytes of data.
64 bytes from 10.0.0.6: icmp_seq=1 ttl=127 time=0.928 ms
64 bytes from 10.0.0.6: icmp_seq=2 ttl=127 time=1.05 ms
64 bytes from 10.0.0.6: icmp_seq=3 ttl=127 time=1.09 ms
64 bytes from 10.0.0.6: icmp_seq=4 ttl=127 time=0.941 ms
64 bytes from 10.0.0.6: icmp_seq=5 ttl=127 time=1.02 ms
64 bytes from 10.0.0.6: icmp_seq=6 ttl=127 time=1.02 ms
64 bytes from 10.0.0.6: icmp_seq=7 ttl=127 time=1.06 ms
64 bytes from 10.0.0.6: icmp_seq=8 ttl=127 time=1.02 ms
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64 bytes from 10.0.0.6: icmp_seq=10 ttl=127 time=0.990 ms
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PublicIPs: 3.95.218.198 PrivateIPs: 172.31.94.45
CloudShell
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Fig 7.1