

Prepared by: – Sarveswara Sarma Nemani

```
VPC NAME          ----- INFRA-VPC
VPC CIDR Block    ----- 10.0.0.0/16
PUBLIC SUBNET      ----- 10.0.0.0/24
PRIVATE SUBNET     ----- 10.0.1.0/24
```

The screenshot shows a Windows desktop environment. A terminal window is open, displaying the following content:

```

ec2-user@ip-10-0-1-114:~$
login as: ec2-user
Authenticating with public key "imported-openssh-key"

┌─┐┌─┐┌─┐
└─┘└─┘└─┘ Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 15 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-6 ~]$ sudo -i
[root@ip-10-0-0-6 ~]# vi snemani.pem
[root@ip-10-0-0-6 ~]# chmod 400 snemani.pem
[root@ip-10-0-0-6 ~]# ssh -i snemani.pem ec2-user@10.0.1.114
The authenticity of host '10.0.1.114 (10.0.1.114)' can't be established.
ECDSA key fingerprint is SHA256:EGXcZE2enK6QVR+UQmM1/F0IqVEUltjzmU+KbIz7e70.
ECDSA key fingerprint is MD5:4a:14:1f:6a:1d:78:d8:6e:7c:b4:aef:2b:85:19:37.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.1.114' (ECDSA) to the list of known hosts.

┌─┐┌─┐┌─┐
└─┘└─┘└─┘ Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 15 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-1-114 ~]$ ping google.com
PING google.com (172.217.13.78) 56(84) bytes of data:
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=1 ttl=51 time=
2.44 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=2 ttl=51 time=
1.84 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=3 ttl=51 time=
1.80 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=4 ttl=51 time=
1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=5 ttl=51 time=1.79 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=6 ttl=51 time=1.81 ms

```

The taskbar at the bottom of the screen shows the Start button, a search bar with the text "Type here to search", and several application icons including File Explorer, Edge, Mail, Teams, and Chrome. The system tray on the right shows the date and time as "27-04-2021 09:56 AM" and the language as "ENG".

The screenshot shows the AWS Management Console interface. At the top, there are browser tabs for Telugu No., Inbox - nemanii..., 9 VPC Implementati..., vpcs | VPC Manage..., Instances | EC2 Ma..., and New Tab. The address bar shows the URL: console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:sort=instancetype. The console header includes the AWS logo, a search bar, and navigation links for Services, Launch Instance, Connect, and Actions. The left sidebar contains the EC2 Dashboard menu with options like Events, Tags, Limits, INSTANCES, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Scheduled Instances, Capacity Reservations, IMAGES, AMIs, ELASTIC BLOCK STORE, Volumes, Snapshots, Lifecycle Manager, NETWORK & SECURITY, and Security Groups. The main content area displays the 'INSTANCES' section with a table of instances. The table has columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS (IPv4), IPv4 Public IP, IPv6 IPs, and Key Name. Two instances are listed: 'INFRA-PUB' (i-0cc80ea42d9284d38) and 'INFRA-PVT' (i-0d295a1b1807fe9). Below the table, the details for instance 'i-0cc80ea42d9284d38' (INFRA-PUB) are shown, including its configuration, network settings, and security groups.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
INFRA-PUB	i-0cc80ea42d9284d38	t2.micro	us-east-1c	running	2/2 checks ...	None	ec2-54-144-29-160.co...	54.144.29.160	-	kp-nvirenia
INFRA-PVT	i-0d295a1b1807fe9	t2.micro	us-east-1c	running	2/2 checks ...	None	-	-	-	kp-new

Instance: **i-0cc80ea42d9284d38 (INFRA-PUB)** Public DNS: **ec2-54-144-29-160.compute-1.amazonaws.com**

Description	Status Checks	Monitoring	Tags
Instance ID	i-0cc80ea42d9284d38		
Instance state	running		
Instance type	t2.micro		
Finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more		
Private DNS	ip-10-0-0-6.ec2.internal		
Private IPs	10.0.0.6		
Secondary private IPs			
VPC ID	vpc-08842a1432b39d21 (INFRA-VPC)		
Platform	Amazon Linux		
Platform details	Linux/UNIX		
Usage operation	RunInstances		
Source/dest. check	True		
T2/T3 Unlimited	Disabled		
EBS-optimized	False		
Root device type	efs		

Public DNS (IPv4) ec2-54-144-29-160.compute-1.amazonaws.com
 IPv4 Public IP 54.144.29.160
 IPv6 IPs -
 Elastic IPs -
 Availability zone us-east-1c
 Security groups launch-wizard-1, view inbound rules, view outbound rules
 Scheduled events No scheduled events
 AMI ID ami-20210326-0-x86_64-gp2 (ami-0742b4e673072069f)
 Subnet ID subnet-03969f185563e1d8f (INFRA-PUB)
 Network interfaces eth0
 IAM role kp-nvirenia
 Key pair name kp-nvirenia
 Owner 833093811962
 Launch time April 27, 2021 at 9:52:27 AM UTC+5:30 (less than one hour)
 Termination protection False

console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:sort=instancetype

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
INFRA-PUB	i-0cc80ea42d5284d38	t2.micro	us-east-1c	running	2/2 checks ...	None	ec2-54-144-29-160.co...	54.144.29.160	-	kp-nvirenia
INFRA-PVT	i-0d295a18b1807fe9	t2.micro	us-east-1c	running	2/2 checks ...	None	-	-	-	kp-new

Instance: i-0d295a18b1807fe9 (INFRA-PVT) Private IP: 10.0.1.114

Description

Instance ID: i-0d295a18b1807fe9
Instance state: running
Instance type: t2.micro
Finding: Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)
Private DNS: ip-10-0-1-114.ec2.internal
Private IP: 10.0.1.114
Secondary private IPs: -
VPC ID: vpc-08842a1432b39d21 (INFRA-VPC)
Platform: Amazon Linux
Platform details: Linux/UNIX
Usage operation: RunInstances
Source/dest. check: True
T2/T3 Unlimited: Disabled
EBS-optimized: False
Root device type: ebs

Public DNS (IPv4): -
IPv4 Public IP: -
IPv6 IPs: -
Elastic IPs: -
Availability zone: us-east-1c
Security groups: [launch-wizard-2](#) view inbound rules view outbound rules
Scheduled events: No scheduled events
AMI ID: ami-0742b4e673072069f
Subnet ID: subnet-096dad0457b15a90 (INFRA-PVT)
Network interfaces: eth0
IAM role: -
Key pair name: kp-new
Owner: 833093811962
Launch time: April 27, 2021 at 9:53:26 AM UTC+5:30 (less than one hour)
Termination protection: False

console.aws.amazon.com/vpc/home?region=us-east-1#vpccs:sort=VpcId

Create VPC

Filter by tags and attributes or search by keyword

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR (Network Border Group)	DHCP options set	Main Route table
INFRA-VPC	vpc-08842a1432b39d21	available	10.0.0.0/16	-	-	dopt-fd0d9587	rtb-0f34ac3144c2b2311
-	vpc-de727fa3	available	172.31.0.0/16	-	-	dopt-fd0d9587	rtb-0defef73

VPC: vpc-08842a1432b39d21

Description

VPC ID: vpc-08842a1432b39d21
State: available
IPv4 CIDR: 10.0.0.0/16
IPv6 CIDR: -
IPv6 Pool: -
Network ACL: acl-03d91f171153269de
DHCP options set: dopt-fd0d9587
Route table: rtb-0f34ac3144c2b2311
Tenancy: default
Default VPC: No
Classic link: Disabled
IPv6 CIDR (Network Border Group): -
DNS resolution: Enabled
DNS hostnames: Enabled
ClassicLink DNS Support: Disabled
Owner: 833093811962

console.aws.amazon.com/vpc/home?region=us-east-1#subnets:sort=SubnetId

Search for services, features, marketplace products, and docs [Alt+S]

New VPC Experience

VPC Dashboard

Filter by VPC:

Select a VPC

Subnets

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR	Availability Zone	Availability Zone ID	Network
INFRA-PUB	subnet-03969f1856e3e1d8f	available	vpc-08842a143f2b39d21	10.0.0.0/24	249	-	us-east-1c	use1-az6	us-east-1
INFRA-PVT	subnet-09fdad0457b15a90	available	vpc-08842a143f2b39d21	10.0.1.0/24	250	-	us-east-1c	use1-az6	us-east-1
subnet-2a285d75	subnet-2a285d75	available	vpc-de72f7a3	172.31.32.0/20	4091	-	us-east-1c	use1-az6	us-east-1
subnet-2d9cbf23	subnet-2d9cbf23	available	vpc-de72f7a3	172.31.64.0/20	4091	-	us-east-1f	use1-az5	us-east-1
subnet-a6d8fb6e	subnet-a6d8fb6e	available	vpc-de72f7a3	172.31.0.0/20	4091	-	us-east-1d	use1-az1	us-east-1
subnet-a555de7	subnet-a555de7	available	vpc-de72f7a3	172.31.16.0/20	4091	-	us-east-1b	use1-az4	us-east-1
subnet-f2b4c3d3	subnet-f2b4c3d3	available	vpc-de72f7a3	172.31.80.0/20	4091	-	us-east-1a	use1-az2	us-east-1
subnet-f6972bca	subnet-f6972bca	available	vpc-de72f7a3	172.31.48.0/20	4091	-	us-east-1e	use1-az3	us-east-1

Feedback English (US)

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Type here to search

09:57 AM 27-04-2021

console.aws.amazon.com/vpc/home?region=us-east-1#RouteTables:sort=routeTableId

Search for services, features, marketplace products, and docs [Alt+S]

New VPC Experience

VPC Dashboard

Filter by VPC:

Select a VPC

Route Tables

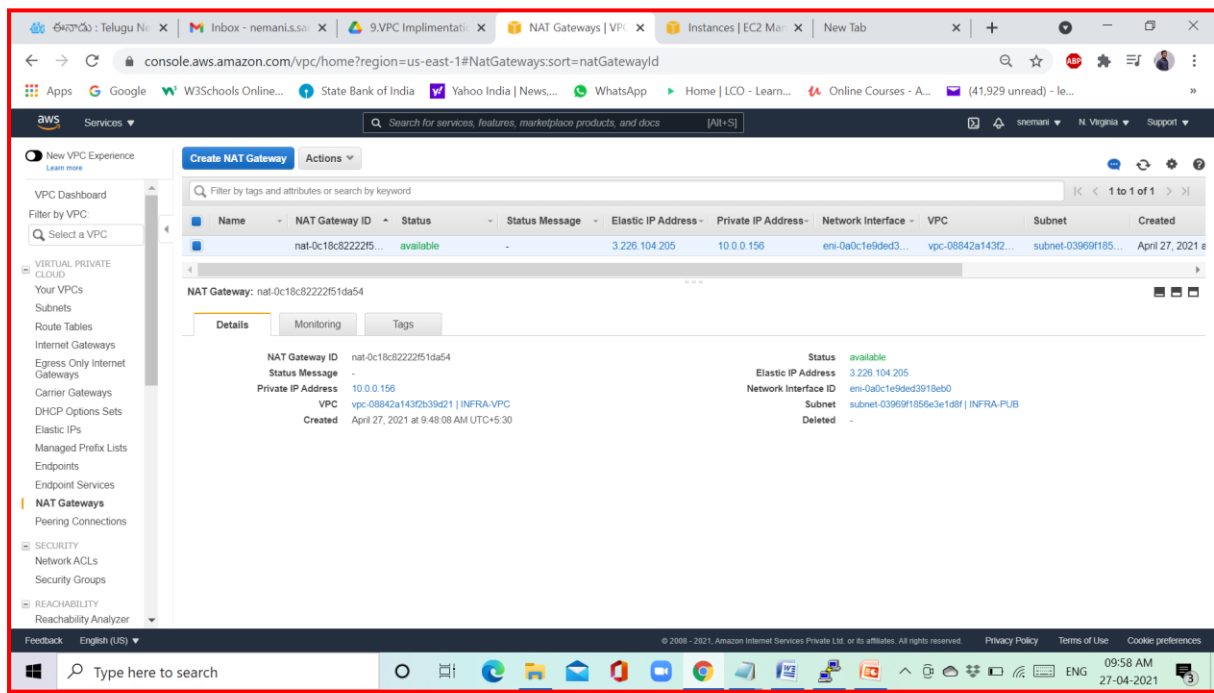
Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID	Owner
PUB-RT	rtb-0167faafb92f5bd8	subnet-03969f1856e3e1d8f	-	No	vpc-08842a143f2b39d21	833093811962
PVT-RT	rtb-0288f8ea4b46202ad5	subnet-09fdad0457b15a90	-	No	vpc-08842a143f2b39d21	833093811962
rtb-0d5efef73	rtb-0d5efef73	-	-	Yes	vpc-de72f7a3	833093811962
rtb-0f34ac3144c2b2311	rtb-0f34ac3144c2b2311	-	-	Yes	vpc-08842a143f2b39d21	833093811962

Feedback English (US)

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Type here to search

09:57 AM 27-04-2021



1 package(s) needed for security, out of 15 available

Run "sudo yum update" to apply all updates.

```
[ec2-user@ip-10-0-0-6 ~]$ sudo -i
```

```
[root@ip-10-0-0-6 ~]# vi snemani.pem
```

```
[root@ip-10-0-0-6 ~]# chmod 400 snemani.pem
```

```
[root@ip-10-0-0-6 ~]# ssh -i snemani.pem ec2-user@10.0.1.114
```

The authenticity of host '10.0.1.114 (10.0.1.114)' can't be established.

ECDSA key fingerprint is SHA256:EGXCZE2enK6QVR+UQmMi/f0IgvEUltjzmU+Kblz7e70.

ECDSA key fingerprint is MD5:4a:14:1f:6a:1d:78:d8:6e:7c:b4:ae:ef:2b:85:19:37.

Are you sure you want to continue connecting (yes/no)? yes

Warning: Permanently added '10.0.1.114' (ECDSA) to the list of known hosts.

```
 _ | _ | )
```

```
 _ | ( / Amazon Linux 2 AMI
```

```
 _ | \ | _ |
```

<https://aws.amazon.com/amazon-linux-2/>

1 package(s) needed for security, out of 15 available

Run "sudo yum update" to apply all updates.

```
[ec2-user@ip-10-0-1-114 ~]$ ping google.com
```

PING google.com (172.217.13.78) 56(84) bytes of data.

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=1 ttl=51 time=2.44 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=2 ttl=51 time=1.84 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=3 ttl=51 time=1.80 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=4 ttl=51 time=1.77 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=5 ttl=51 time=1.79 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=6 ttl=51 time=1.81 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=7 ttl=51 time=1.76 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=8 ttl=51 time=1.76 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=9 ttl=51 time=1.75 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=10 ttl=51 time=1.74 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=11 ttl=51 time=1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=12 ttl=51 time=1.82 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=13 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=14 ttl=51 time=1.83 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=15 ttl=51 time=1.71 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=16 ttl=51 time=1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=17 ttl=51 time=1.87 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=18 ttl=51 time=1.80 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=19 ttl=51 time=1.86 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=20 ttl=51 time=1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=21 ttl=51 time=1.83 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=22 ttl=51 time=1.79 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=23 ttl=51 time=1.75 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=24 ttl=51 time=1.78 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=25 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=26 ttl=51 time=1.79 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=27 ttl=51 time=2.21 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=28 ttl=51 time=1.80 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=29 ttl=51 time=1.74 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=30 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=31 ttl=51 time=1.75 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=32 ttl=51 time=1.80 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=33 ttl=51 time=1.80 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=34 ttl=51 time=1.82 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=35 ttl=51 time=1.94 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=36 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=37 ttl=51 time=1.82 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=38 ttl=51 time=1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=39 ttl=51 time=1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=40 ttl=51 time=1.80 ms

64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=41 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=42 ttl=51 time=1.79 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=43 ttl=51 time=1.75 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=44 ttl=51 time=1.83 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=45 ttl=51 time=1.80 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=46 ttl=51 time=1.99 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=47 ttl=51 time=1.77 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=48 ttl=51 time=1.81 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=49 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=50 ttl=51 time=1.83 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=51 ttl=51 time=1.73 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=52 ttl=51 time=1.76 ms
64 bytes from iad23s60-in-f14.1e100.net (172.217.13.78): icmp_seq=53 ttl=51 time=1.75 ms

> ^C

[ec2-user@ip-10-0-1-114 ~]\$ ^C

[ec2-user@ip-10-0-1-114 ~]\$

Event Logs: -

2021-04-27 09:54:47 Looking up host "ec2-54-144-29-160.compute-1.amazonaws.com" for SSH connection

2021-04-27 09:54:47 Connecting to 54.144.29.160 port 22

2021-04-27 09:54:47 We claim version: SSH-2.0-PuTTY_Release_0.74

2021-04-27 09:54:48 Remote version: SSH-2.0-OpenSSH_7.4

2021-04-27 09:54:48 Using SSH protocol version 2

2021-04-27 09:54:48 No GSSAPI security context available

2021-04-27 09:54:48 Doing ECDH key exchange with curve Curve25519 and hash SHA-256 (unaccelerated)

2021-04-27 09:54:49 Server also has ecdsa-sha2-nistp256/ssh-rsa host keys, but we don't know any of them

2021-04-27 09:54:49 Host key fingerprint is:

2021-04-27 09:54:49 ssh-ed25519 255 3d:c6:b9:bb:c1:25:af:26:f3:c1:59:75:e8:7c:9c:ba

2021-04-27 09:54:50 Initialised AES-256 SDCTR (AES-NI accelerated) outbound encryption

2021-04-27 09:54:50 Initialised HMAC-SHA-256 (unaccelerated) outbound MAC algorithm
2021-04-27 09:54:50 Initialised AES-256 SDCTR (AES-NI accelerated) inbound encryption
2021-04-27 09:54:50 Initialised HMAC-SHA-256 (unaccelerated) inbound MAC algorithm
2021-04-27 09:54:50 Reading key file "D:\Sarvesh\SRT AWS\Key Pairs\kp-nvirenia.ppk"
2021-04-27 09:54:54 Offered public key
2021-04-27 09:54:54 Offer of public key accepted
2021-04-27 09:54:55 Sent public key signature
2021-04-27 09:54:55 Access granted
2021-04-27 09:54:55 Opening main session channel
2021-04-27 09:54:55 Opened main channel
2021-04-27 09:54:56 Allocated pty
2021-04-27 09:54:56 Started a shell/command