

10th july

> Openstack works on the IaaS protocol

> In openstack we have neutron(vpc)

mysql works on port 3306

in kubernetes slave nodes is also known as minions

ingress and inbound (traffic is allowed to come in)

Egress and outbound (we want to hit diff server)

The screenshot shows a browser window with multiple tabs open at the top, including LinkedIn, EC2 Management, VPC Management Console, Google Docs, and Google Sheets. The main content area is the AWS VPC Management Console, specifically the 'Create security group' wizard. The title bar says 'Create security group'. The first section, 'Basic details', contains fields for 'Security group name' (set to 'mywebsg'), 'Description' (set to 'allow ssh http and all icmp'), and 'VPC' (set to 'vpc-0475f41d90b88e79f (lwvpc)'). Below this is a section titled 'Inbound rules' which is currently empty. At the bottom of the page, there are links for 'Feedback', 'English (US)', 'Privacy Policy', and 'Terms of Use'. The status bar at the bottom right shows the date and time as '10:13 PM IN 7/10/2020'.

The screenshot shows the AWS VPC Management Console interface. The main area displays a table of inbound rules for a security group. The columns include Type, Protocol, Port range, Source, and Description - optional. There are three rows of rules:

- Type:** Custom ICMP - ...
Protocol: All
Port range: All
Source: Anywhere
Description: (empty)
Entries: 0.0.0.0/0, ::/0
- Type:** SSH
Protocol: TCP
Port range: 22
Source: Anywhere
Description: (empty)
Entries: 0.0.0.0/0, ::/0
- Type:** HTTP
Protocol: TCP
Port range: 80
Source: Anywhere
Description: (empty)
Entries: 0.0.0.0/0, ::/0

At the bottom left is a button labeled "Add rule".

The screenshot shows the "Create security group" wizard, Step 1: Set basic security group details. The title is "Create security group". The page instructs the user to complete fields for a new security group.

Basic details

Security group name [Info](#)

Name cannot be edited after creation.

Description [Info](#)

VPC [Info](#)

Inbound rules [Info](#)

The screenshot shows the "Create security group" wizard, Step 2: Set inbound rules. This step is currently empty, indicated by a large "No inbound rules defined" message.

The screenshot shows the AWS VPC Management console with the URL ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#CreateSecurityGroup. The interface displays two sections: 'Inbound rules' and 'Outbound rules'. In the 'Inbound rules' section, a rule is being configured with the following details:

Type	Protocol	Port range	Source	Description - optional
Custom TCP	TCP	0	Custom	sg-00f8b61e0 0451d2ab

An 'Add rule' button is visible below the table.

The 'Outbound rules' section is currently empty.

At the bottom of the browser window, the Windows taskbar is visible with various pinned icons and the system tray showing the date and time as 7/10/2020 10:23 PM.

This screenshot shows the same AWS VPC Management console interface, but the 'Type' dropdown in the 'Inbound rules' section has been changed to 'MySQL/Aurora'. The other settings remain the same:

Type	Protocol	Port range	Source	Description - optional
MySQL/Aurora	TCP	3306	Custom	sg-00f8b61e0 0451d2ab

The 'Outbound rules' section is still empty.

The Windows taskbar at the bottom remains the same, showing the date and time as 7/10/2020 10:32 PM.

The screenshot shows the AWS VPC Management Console with the URL ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#SecurityGroups. The page displays a list of 7 security groups:

Name	Security group ID	Security group name	VPC ID
-	sg-00f8b61e00451d2ab	mywebsg	vpc-0475f41d90b88e79f
-	sg-0109dcba27926fb9b	mybastion	vpc-0475f41d90b88e79f
-	sg-01a2dd1c104357e32	launch-wizard-1	vpc-15f8e57d
-	sg-066f66473a01e7f8c	myallowsqlssh	vpc-0475f41d90b88e79f
-	sg-071296072e89e748f	default	vpc-0475f41d90b88e79f
-	sg-0977d0117177772f	myvpc	vpc-0475f41d90b88e79f

The screenshot shows the AWS EC2 Launch Instance Wizard at Step 1: Choose AMI. The URL is ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard. The search bar shows "Search for an AMI by entering a search term e.g. "Windows"".

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

The results list shows one item:

Image Name	AMI ID	Root device type	Virtualization type	Owner	ENA Enabled	Architecture
my-php-image	ami-0b39bdec65a992579	ebs	hvm	410914255776	Yes	64-bit (x86)

Actions: Cancel and Exit, Select

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 [Launch into Auto Scaling Group](#)

Purchasing option: Request Spot instances

Network: vpc-0475f41d90b88e79f | lwpvc [Create new VPC](#)

Subnet: subnet-00f3b263fac3b8669 | lwsbent1-1a | ap-south-1 [Create new subnet](#)
251 IP Addresses available

Auto-assign Public IP: Use subnet setting (Enable)

Placement group: Add instance to placement group

Capacity Reservation: Open [Create new Capacity Reservation](#)

Buttons: Cancel, Previous, **Review and Launch**, Next: Add Storage

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key: (128 characters maximum) **Value:** (256 characters maximum) **Instances:** **Volumes:**

name mywebos

Add another tag (Up to 50 tags maximum) mywebos

Buttons: Cancel, Previous, **Review and Launch**, Next: Configure Security Group

Step 6: Configure Security Group

Select an existing security group

Security Group ID	Name	Description	Actions
sg-071296072e89e748f	default	default VPC security group	Copy to new
sg-066f66473a01e7f8c	myallowsqlssh	allow access from bastion host only	Copy to new
sg-0109dcba27926fb9b	mybastion	allow ssh	Copy to new
sg-0a872d8d174372a3f	mysql	allow sql	Copy to new
sg-00f8b61e00451d2ab	mywebsg	allow ssh http and all icmp	Copy to new

Inbound rules for sg-00f8b61e00451d2ab (Selected security groups: sg-00f8b61e00451d2ab)

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	

[Cancel](#) [Previous](#) [Review and Launch](#)

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Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 [Launch into Auto Scaling Group](#)

Purchasing option: Request Spot instances

Network: vpc-0475f41d90b88e79f | lwpvc [Create new VPC](#)

Subnet: subnet-0c874a455cec4c2fd | lws subnet2-1b | ap-south-1 [Create new subnet](#)

Auto-assign Public IP: **subnet-0c874a455cec4c2fd | lws subnet2-1b | ap-south-1**

Placement group: Add instance to placement group

Capacity Reservation: Open [Create new Capacity Reservation](#)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

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Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum) | **Value** (256 characters maximum) | **Instances** | **Volumes**

Name: mysqls
Value: mysqls

Add another tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group

Step 6: Configure Security Group

Select an existing security group

Security Group ID	Name	Description	Actions
sg-071296072e89e748f	default	default VPC security group	Copy to new
sg-066f66473a01e7f8c	myallowsqlssh	allow access from bastion host only	Copy to new
sg-0109dcba27926fb9b	mybastion	allow ssh	Copy to new
<input checked="" type="checkbox"/> sg-0a872d8d174372a3f	mysql	allow sql	Copy to new
sg-00f8b61e00451d2ab	mywebsg	allow ssh http and all icmp	Copy to new

Inbound rules for sg-0a872d8d174372a3f (Selected security groups: sg-0a872d8d174372a3f)

Type	Protocol	Port Range	Source	Description
MySQL/Aurora	TCP	3306	sg-00f8b61e00451d2ab (mywebsg)	

Cancel Previous Review and Launch

```

eth0: flags=4163 mtu 9001
    inet 192.168.0.249 netmask 255.255.255.0 broadcast 192.168.0.255
        inet6 fe80::42:b9ff:fed1:d5d2 prefixlen 64 scopeid 0x20
            ether 02:42:b9:d1:d5:d2 txqueuelen 1000 (Ethernet)
            RX packets 427 bytes 70046 (68.4 KiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 552 bytes 64928 (63.4 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10
            loop txqueuelen 1000 (Local Loopback)
            RX packets 0 bytes 0 (0.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 0 bytes 0 (0.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

Mem: total       used       free        buff/cache     available
Swap:          0          0          0           160          779
welcome to vishesh webpage

```

Instances

Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 I
t2.micro	ap-south-1a	running	2/2 checks ...	None	ec2-13-234-238-76.ap...	13.234.238.76	-
t2.micro	ap-south-1b	terminated	-	None	-	-	-
t2.micro	ap-south-1b	terminated	-	None	-	-	-
t2.micro	ap-south-1a	terminated	-	None	-	-	-
t2.micro	ap-south-1b	running	2/2 checks ...	None	-	-	-
t2.micro	ap-south-1a	terminated	-	None	-	-	-

Feedback **English (US)**

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Screenshot of the AWS EC2 Management Console showing the Instances page. The table lists several t2.micro instances across different availability zones (ap-south-1a, ap-south-1b). One instance in ap-south-1b is shown as terminated. A modal window displays the security groups associated with a specific instance, showing a rule allowing MySQL traffic (port 3306) from a specific security group.

Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 Public IP
t2.micro	ap-south-1a	running	2/2 checks ...	None	ec2-13-234-238-76.ap...	13.234.238.76	-
t2.micro	ap-south-1b	terminated	-	None	-	-	-
t2.micro	ap-south-1b	terminated	-	None	-	-	-
t2.micro	ap-south-1a	terminated	-	None	-	-	-
t2.micro	ap-south-1b	running	2/2 checks ...	None	-	-	-

Screenshot of the AWS EC2 Launch Instance Wizard, Step 1: Choose an Amazon Machine Image (AMI). The user is selecting the Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type. The interface shows two options: 64-bit (Arm) and 64-bit (x86). The 64-bit (x86) option is selected.

Step 1: Choose an Amazon Machine Image (AMI)

Advanced Systems Management, Web and Scripting, and Legacy modules enabled.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-08706cb5f68222d09

Select

Amazon Linux
Free tier eligible

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0732b62d310b80e97 (64-bit x86) / ami-0a03ca89888cfe0c1 (64-bit Arm)

Select

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Cancel and Exit

64-bit (x86)
 64-bit (Arm)

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 [Launch into Auto Scaling Group](#)

Purchasing option: Request Spot instances

Network: vpc-0475f41d90b88e79f | lwpvc [Create new VPC](#)

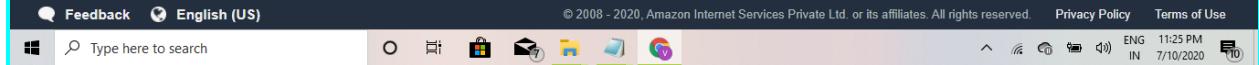
Subnet: subnet-00f3b263fac3b8669 | lwsbent1-1a | ap-south-1 [Create new subnet](#)
250 IP Addresses available

Auto-assign Public IP: Use subnet setting (Enable)

Placement group: Add instance to placement group

Capacity Reservation: Open [Create new Capacity Reservation](#)

Buttons: Cancel, Previous, **Review and Launch**, Next: Add Storage



Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key: (128 characters maximum) **Value:** (256 characters maximum) **Instances:** **Volumes:**

Name: bastion host

Add another tag (Up to 50 tags maximum)

Buttons: Cancel, Previous, **Review and Launch**, Next: Configure Security Group



Screenshot of the AWS Launch Instance Wizard Step 6: Configure Security Group.

The page shows a list of existing security groups:

Security Group ID	Name	Description	Actions
sg-071296072e89e748f	default	default VPC security group	Copy to new
sg-066f66473a01e7f8c	myallowsqlssh	allow access from bastion host only	Copy to new
<input checked="" type="checkbox"/> sg-0109dcba27926fb9b	mybastion	allow ssh	Copy to new
sg-0a872d8d174372a3f	mysql	allow sql	Copy to new
sg-00f8b61e00451d2ab	mywebsg	allow ssh http and all icmp	Copy to new

Inbound rules for sg-0109dcba27926fb9b (Selected security groups: sg-0109dcba27926fb9b):

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	0.0.0.0/0	

Buttons at the bottom: Cancel, Previous, Review and Launch.

Screenshot of the AWS Launch Instance Wizard Step 1: Choose an Amazon Machine Image (AMI).

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search bar: Search for an AMI by entering a search term e.g. "Windows"

Filter: Search by Systems Manager parameter

My AMIs section:

Image Name	Root device type	Virtualization type	Owner	ENA Enabled	Architecture
my-php-image - ami-0b39bdec65a992579	ebs	hvm	410914255776	Yes	64-bit (x86)

Buttons: Select, Cancel and Exit.

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Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 [Launch into Auto Scaling Group](#)

Purchasing option: Request Spot instances

Network: vpc-0475f41d90b88e79f | lwpvc [Create new VPC](#)

Subnet: subnet-0c874a455cec4c2fd | lws subnet2-1b | ap-south1 [Create new subnet](#)
251 IP Addresses available

Auto-assign Public IP: Use subnet setting (Disable)

Placement group: Add instance to placement group

Capacity Reservation: Open [Create new Capacity Reservation](#)

Buttons: Cancel, Previous, **Review and Launch**, Next: Add Storage



Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key: (128 characters maximum) **Value:** (256 characters maximum) **Instances:** **Volumes:**

Name: mysql

Add another tag (Up to 50 tags maximum)

Buttons: Cancel, Previous, **Review and Launch**, Next: Configure Security Group



Screenshot of the AWS Launch Instance Wizard Step 6: Configure Security Group.

The screenshot shows the AWS Launch Instance Wizard Step 6: Configure Security Group. The security group selected is "myallowsqlssh".

Inbound rules for sg-066f66473a01e7f8c (Selected security groups: sg-0a872d8d174372a3f, sg-066f66473a01e7f8c)

Type	Protocol	Port Range	Source	Description
Custom TCP Rule	TCP	0	sg-0109dcba27926fb9b (mybastion)	

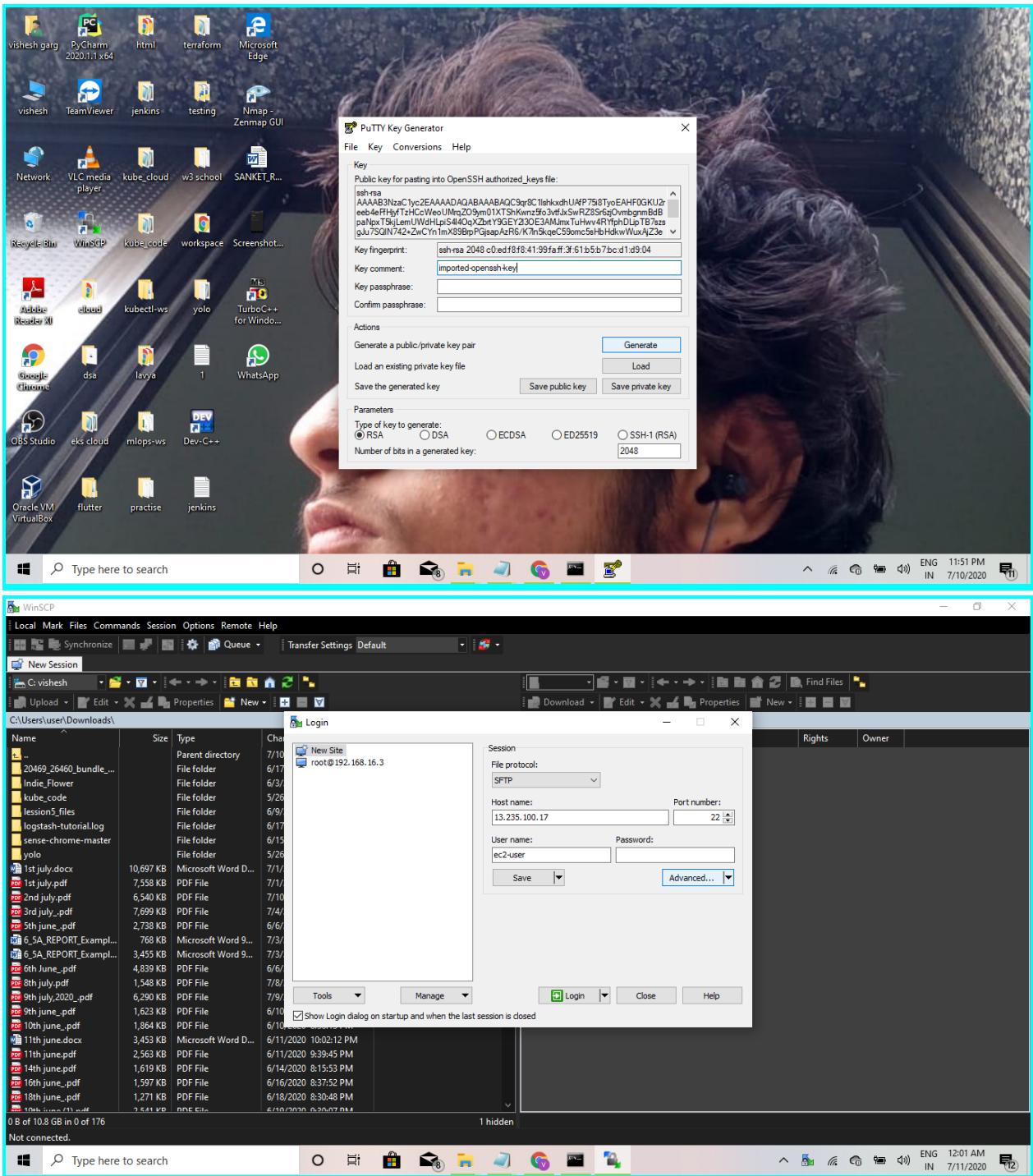
Buttons at the bottom: Cancel, Previous, Review and Launch.

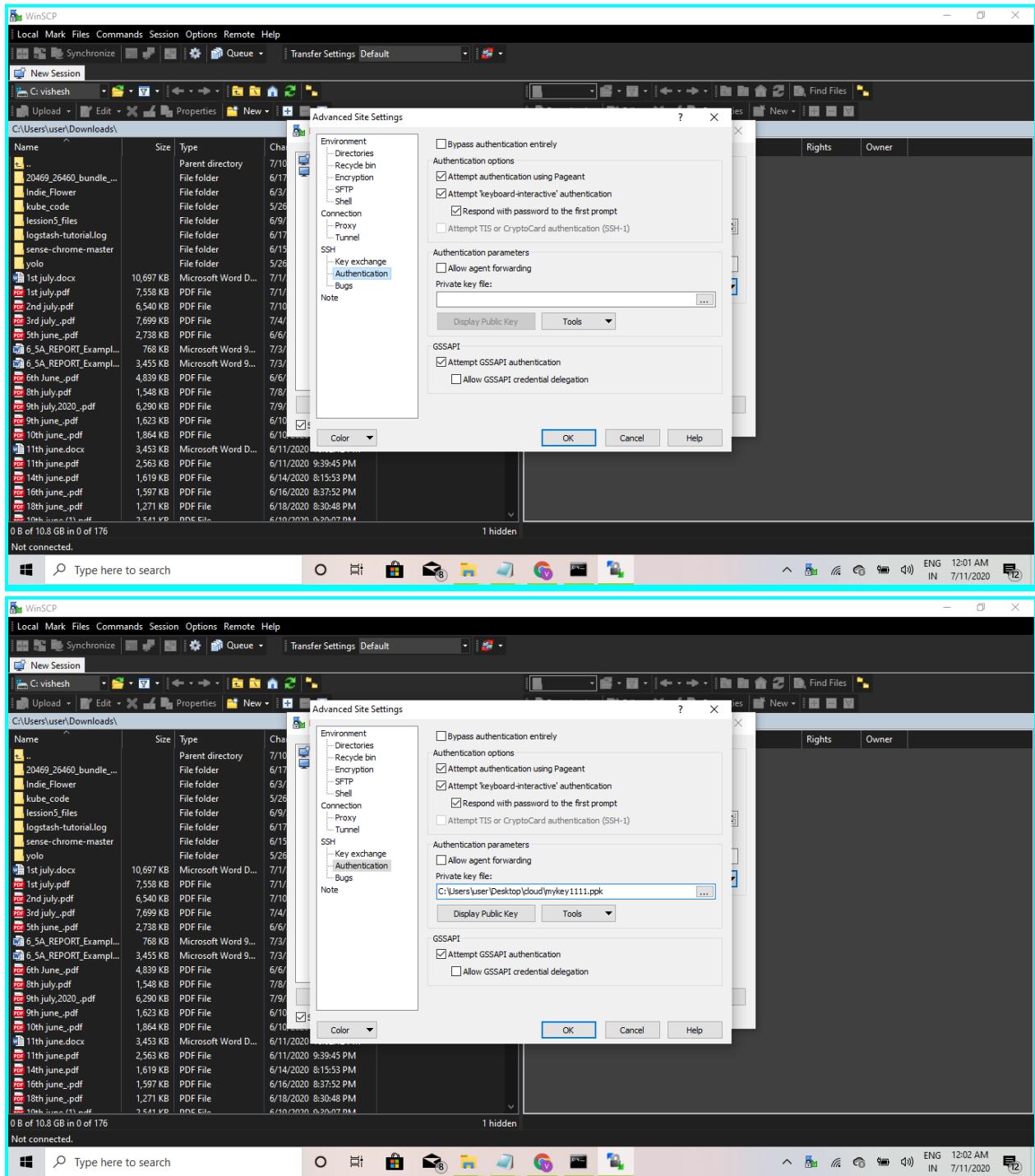
EC2 Instances Overview

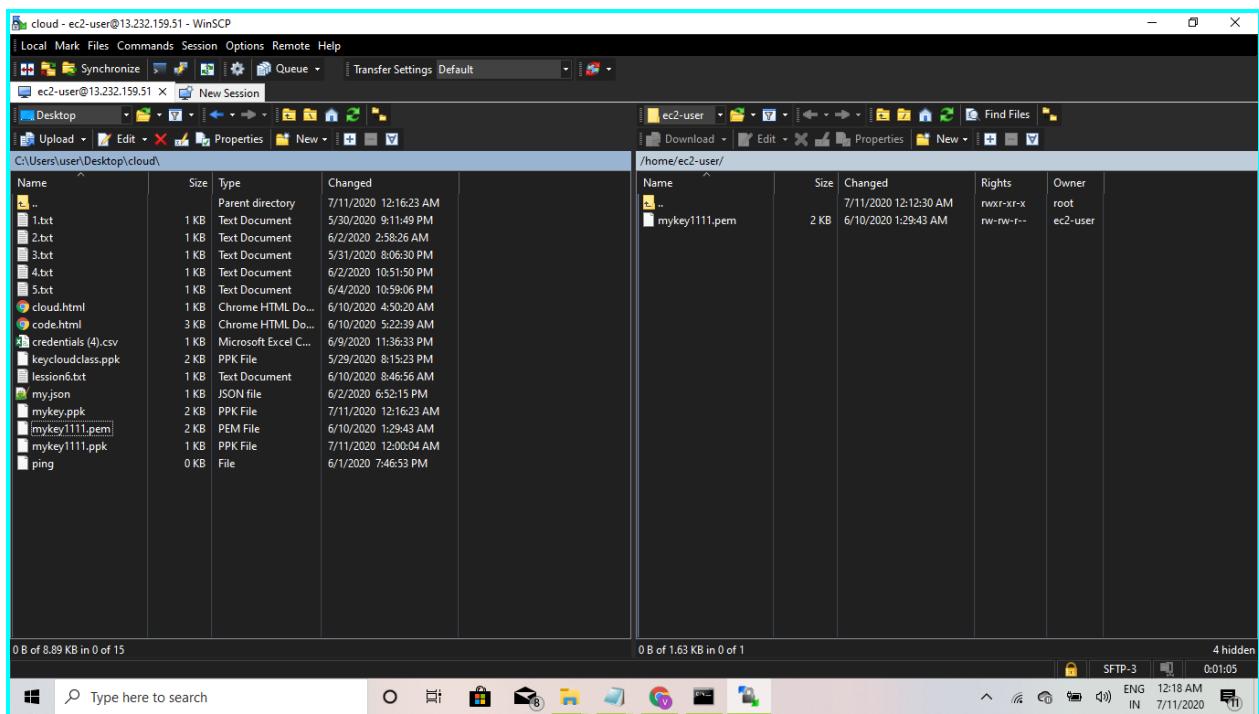
The EC2 Instances Overview page shows the following details for an instance:

- Private IP: 192.168.0.44
- Availability zone: ap-south-1a
- Security groups: mybastion, view inbound rules, view outbound rules
- Scheduled events: No scheduled events
- AMI ID: amzn2-ami-hvm-2.0.20200617.0-

Bottom navigation bar: Feedback, English (US), Type here to search, and system status.







The screenshot shows the AWS CloudFormation console with a stack named "multi-hybrid-CloudFormation-10thJuly-Go...". The "Create New Stack" button is visible. The "Basic Information" section includes fields for "Stack Name" (multi-hybrid-CloudFormation), "Region" (ap-south-1), and "Description" (Multi Hybrid CloudFormation). The "Outputs" section lists an output named "OutputKey" with the value "13.234.238.76". The "Logs" section shows a log entry: "2020-07-11T12:18:43Z [INFO] AWS::CloudFormation::Interface: AWS CloudFormation has detected a change to your stack's configuration. This change will be processed in the background. You can view the progress of this change in the 'Changes' tab of the CloudFormation console." The status bar at the bottom indicates "ENG 12:18 AM IN 7/11/2020".

The image shows two side-by-side screenshots of the AWS Management Console.

Top Screenshot (VPC Management):

- VPC Info:** The VPC ID is `vpc-0475f41d90b88e79f (lwvpc)`.
- Inbound rules:** A rule for SSH (TCP port 22) from a custom source (`sg-0109dcba2`) is listed. An "Add rule" button is available.
- Outbound rules:** This section is currently empty.

Bottom Screenshot (EC2 Management):

- Instances:** An EC2 instance is running, showing the terminal output:

```
rw-rw-r-- 1 ec2-user ec2-user 1670 Jun 9 19:59 mykey1111.pem
[ec2-user@ip-192-168-0-38 ~]$ chmod 400 mykey1111.pem
[ec2-user@ip-192-168-0-38 ~]$ ssh -i mykey1111.pem -l ec2-user 192.168.1.52
Last login: Fri Jul 10 17:06:51 2020 from ec2-13-233-177-1.ap-south-1.compute.amazonaws.com
```
- EC2 Dashboard:** Shows basic metrics like Events, Tags, Limits, Instances, and Launch Templates.
- Instances Details:** An instance named `i-0a4b4153169dd2af` is detailed:

Attribute	Value
Instance ID	i-0a4b4153169dd2af
Instance state	running
Instance type	t2.micro
Finding	Opt-In to AWS Compute Optimizer for recommendations

The screenshot shows the AWS VPC Management Console interface. A security group named 'allow ssh' is being created. The 'Inbound rules' section contains one rule: an SSH rule on port 22 from a custom source. The browser's address bar shows the URL: ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#CreateSecurityGroup.

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My Drive - Google Drive 10th July - Google Docs VPC Management Console

Name cannot be edited after creation.

Description [Info](#) allow ssh

VPC [Info](#) vpc-0475f41d90b88e79f (lwvpc)

Inbound rules [Info](#)

Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info
SSH	TCP	22	Custom	

Add rule Delete

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My Drive - Google Drive 10th July - Google Docs VPC Management Console

Name cannot be edited after creation.

Description [Info](#) allow ssh

VPC [Info](#) vpc-0475f41d90b88e79f (lwvpc)

Inbound rules [Info](#)

Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info
SSH	TCP	22	Custom	

Add rule Delete

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My Drive - Google Drive 10th July - Google Docs VPC Management Console

bastion host or jump host

C:\Users\user>cd Desktop

C:\Users\user\Desktop>cd cloud

```
C:\Users\user\Desktop\cloud>ssh -i mykey1111.pem -l ec2-user 13.235.100.17
The authenticity of host '13.235.100.17 (13.235.100.17)' can't be established.
ECDSA key fingerprint is
SHA256:3MXhrY6v5mt2+QuZLfl0GkjoHpZkSOaipCO+zbOyzY.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '13.235.100.17' (ECDSA) to the list of known hosts.
```

__| __|_)

__| __|_)

_| (/ Amazon Linux 2 AMI

__|__|__|

```
https://aws.amazon.com/amazon-linux-2/
9 package(s) needed for security, out of 16 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-192-168-0-44 ~]$ sudo su - root
[root@ip-192-168-0-44 ~]# ping 192.168.0.44
PING 192.168.0.44 (192.168.0.44) 56(84) bytes of data.
64 bytes from 192.168.0.44: icmp_seq=1 ttl=255 time=0.019 ms
64 bytes from 192.168.0.44: icmp_seq=2 ttl=255 time=0.028 ms
64 bytes from 192.168.0.44: icmp_seq=3 ttl=255 time=0.027 ms
^C
--- 192.168.0.44 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2035ms
rtt min/avg/max/mdev = 0.019/0.024/0.028/0.007 ms
[root@ip-192-168-0-44 ~]# ping 192.168.1.27
PING 192.168.1.27 (192.168.1.27) 56(84) bytes of data.
^C
--- 192.168.1.27 ping statistics ---
5 packets transmitted, 0 received, 100% packet loss, time 4088ms
C:\Users\user\Desktop\cloud>ssh -i mykey1111.pem -l ec2-user 13.232.159.51
The authenticity of host '13.232.159.51 (13.232.159.51)' can't be established.
ECDSA key fingerprint is
SHA256:SYUffEKFVAZsBPreA2zkZu7s8r3JS5TVq71vu0YI1dA.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '13.232.159.51' (ECDSA) to the list of known hosts.
```

__| __|_)

_| (/ Amazon Linux 2 AMI

_____|__|

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

9 package(s) needed for security, out of 16 available

Run "sudo yum update" to apply all updates.

[ec2-user@ip-192-168-0-38 ~]\$ ls

mykey1111.pem

[ec2-user@ip-192-168-0-38 ~]\$ ssh 192.168.1.27

^C

[ec2-user@ip-192-168-0-38 ~]\$ ssh -i mykey1111.pem 192.168.1.27

ssh: connect to host 192.168.1.27 port 22: Connection timed out

[ec2-user@ip-192-168-0-38 ~]\$ ssh -i mykey1111.pem 192.168.1.52

The authenticity of host '192.168.1.52 (192.168.1.52)' can't be established.

ECDSA key fingerprint is

SHA256:skHxB6uNTPNMPqlk2wl2qa6P9+H17dsytjISM3S/GyU.

ECDSA key fingerprint is MD5:1f:06:ca:75:29:22:0e:cb:f6:9a:a9:38:16:08:a4:13.

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

Warning: Permanently added '192.168.1.52' (ECDSA) to the list of known hosts.

@@@@@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@

@@@@@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@

@ WARNING: UNPROTECTED PRIVATE KEY FILE! @

@@@@@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@

@@@@@@@ @@@@ @@@@ @@@@ @@@@ @@@@ @@@@

Permissions 0664 for 'mykey1111.pem' are too open.

It is required that your private key files are NOT accessible by others.

This private key will be ignored.

Load key "mykey1111.pem": bad permissions

Permission denied (publickey,gssapi-keyex,gssapi-with-mic).

[ec2-user@ip-192-168-0-38 ~]\$ ls -l

total 4

-rw-rw-r-- 1 ec2-user ec2-user 1670 Jun 9 19:59 mykey1111.pem

[ec2-user@ip-192-168-0-38 ~]\$ chmod 400 mykey1111.pem

[ec2-user@ip-192-168-0-38 ~]\$ ssh -i mykey1111.pem -l ec2-user 192.168.1.52

Last login: Fri Jul 10 17:06:51 2020 from

ec2-13-233-177-1.ap-south-1.compute.amazonaws.com

_| __|_)

_| (/ Amazon Linux 2 AMI

___|__|__|

```
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-192-168-1-52 ~]$ ifconfig  
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 9001  
    inet 192.168.1.52 netmask 255.255.255.0 broadcast 192.168.1.255  
        inet6 fe80::81a:3ff:feb:3162 prefixlen 64 scopeid 0x20<link>  
            ether 0a:1a:03:fb:31:62 txqueuelen 1000 (Ethernet)  
                RX packets 423 bytes 56932 (55.5 KiB)  
                RX errors 0 dropped 0 overruns 0 frame 0  
                TX packets 617 bytes 70391 (68.7 KiB)  
                TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
        inet6 ::1 prefixlen 128 scopeid 0x10<host>  
            loop txqueuelen 1000 (Local Loopback)  
                RX packets 0 bytes 0 (0.0 B)  
                RX errors 0 dropped 0 overruns 0 frame 0  
                TX packets 0 bytes 0 (0.0 B)  
                TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
Instances | EC... VPC Manager... multi hybrid... 10th July - Go... 13.234.238.76 AWS: aws_sec... AWS: aws_ins... ssh - Convert... Select ec2-user@ip-192-168-1-52~:~| https://aws.amazon.com/amazon-linux-2/ 10th July File Edit https://aws.amazon.com/amazon-linux-2/ [ec2-user@ip-192-168-1-52 ~]$ ifconfig eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 9001 inet 192.168.1.52 netmask 255.255.255.0 broadcast 192.168.1.255 inet6 fe80::81a:3ff:fe16:62 prefixlen 64 scopeid 0x20<link> ether 0a:1a:03:fb:31:62 txqueuelen 1000 (Ethernet) RX packets 423 bytes 56932 (55.5 Kib) RX errors 0 dropped 0 overruns 0 frame 0 TX packets 617 bytes 70391 (68.7 Kib) TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0 [ec2-user@ip-192-168-1-52 ~]$ sudo yum install mariadb* Loaded plugins: extras_suggestions, langpacks, priorities, update-motd 10th July File Edit https://aws.amazon.com/amazon-linux-2/ [ec2-user@ip-192-168-1-52 ~]$ sudo yum install mariadb* Loaded plugins: extras_suggestions, langpacks, priorities, update-motd ^C 10th July File Edit https://aws.amazon.com/amazon-linux-2/ [ec2-user@ip-192-168-1-52 ~]$ yum repolist repo id repo name status amzn2-core/2/x86_64 Amazon Linux 2 core repository 19,883 28 amzn2extra-docker/2/x86_64 Amazon Extras repo for docker 28 repolist: 19,911 [ec2-user@ip-192-168-1-52 ~]$ sudo yum install docker-ce Loaded plugins: extras_suggestions, langpacks, priorities, update-motd ^C 10th July File Edit https://aws.amazon.com/amazon-linux-2/ [ec2-user@ip-192-168-1-52 ~]$ ping 8.8.8.8 PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data. ^C --- 8.8.8.8 ping statistics --- 2 packets transmitted, 0 received, 100% packet loss, time 1025ms [ec2-user@ip-192-168-1-52 ~]$
```

[ec2-user@ip-192-168-1-52 ~]\$ sudo yum install mariadb*

Loaded plugins: extras_suggestions, langpacks, priorities, update-motd

^C

Exiting on user cancel

[ec2-user@ip-192-168-1-52 ~]\$ yum repolist

```

Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
repo id                                repo name                               status
!amzn2-core/2/x86_64                      Amazon Linux 2 core repository
19,883
amzn2extra-docker/2/x86_64                Amazon Extras repo for docker
28
repolist: 19,911
[ec2-user@ip-192-168-1-52 ~]$ sudo yum install docker-ce
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
^C

```

Exiting on user cancel

```

[ec2-user@ip-192-168-1-52 ~]$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
^C
--- 8.8.8.8 ping statistics ---
2 packets transmitted, 0 received, 100% packet loss, time 1025ms

```

Source nating:

The screenshot shows the AWS VPC service page for NAT Gateways. The left sidebar lists various networking components like Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, Endpoints, and Endpoint Services. Under the 'NAT Gateways' section, there is a large callout box with the text "You do not have any NAT Gateways in this region" and "Click the Create NAT Gateway button to create your first NAT Gateway". A prominent blue "Create NAT Gateway" button is centered below this text. The top navigation bar includes tabs for Instances, NAT Gateways, multi hybrid c..., 10th July - Go..., 13.234.238.76, AWS: aws_sec..., AWS: aws_inst..., ssh - Convert..., and others. The user's profile "visheshgargavi" and location "Mumbai" are also visible.

Screenshot of the AWS VPC NAT Gateway creation interface:

Create NAT Gateway

Create a NAT gateway and assign it an Elastic IP address. [Learn more.](#)

Subnet*:

Elastic IP Allocation ID*: [Allocate Elastic IP address](#)

Tags:

Key	(128 characters maximum)	Value	(256 characters maximum)
This resource currently has no tags			

[Add Tag](#) 50 remaining (Up to 50 tags maximum)

*** Required** [Cancel](#) [Create a NAT Gateway](#)

VPC > Elastic IP addresses

Elastic IP addresses

Name	Public IPv4 address	Allocation ID	Associated instance
No Elastic IP addresses found			

[Allocate Elastic IP address](#)

Navigation: Instances | EC2 | Create NAT Gateway | multi hybrid cloud | 10th July - Go... | 13.234.238.76 | AWS: aws_sec... | AWS: aws_inst... | ssh - Convert | +
← → 🔒 ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#CreateNatGateway:
Apps New Tab Search G Inbox (157) - 2019p... M Inbox (1,144) - vish... M Inbox (252) - 2019p... Gmail YouTube Maps E 29th APRIL - Googl... YAMLLint - The YAM...

Header: AWS Services Resource Groups visheshgargavi Mumbai Support

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Screenshot of the AWS VPC Elastic IP addresses interface:

Elastic IP addresses

Name	Public IPv4 address	Allocation ID	Associated instance
No Elastic IP addresses found			

[Allocate Elastic IP address](#)

Navigation: Instances | EC2 | Elastic IP address | multi hybrid cloud | 10th July - Go... | 13.234.238.76 | AWS: aws_sec... | AWS: aws_inst... | ssh - Convert | +
← → 🔒 ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#Addresses:
Apps New Tab Search G Inbox (157) - 2019p... M Inbox (1,144) - vish... M Inbox (252) - 2019p... Gmail YouTube Maps E 29th APRIL - Googl... YAMLLint - The YAM...

Header: AWS Services Resource Groups visheshgargavi Mumbai Support

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The screenshot shows the AWS VPC service interface. The left sidebar lists various VPC components: New VPC Experience, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, DHCP Options Sets, Elastic IPs (selected), Managed Prefix Lists, Endpoints, Endpoint Services, NAT Gateways, and Peering Connections. The main content area is titled "Elastic IP addresses" and displays a table with columns: Name, Public IPv4 address, Allocation ID, and Associated instance. A search bar at the top of the table says "Filter Elastic IP addresses". An orange button labeled "Allocate Elastic IP address" is visible. The status message "No Elastic IP addresses found" is displayed below the table.

The screenshot shows the "Create route table" page under the "Route Tables" section. It has fields for "Name tag" (lws subnet 2-1b) and "VPC" (vpc_0475f41d90b88e79). Below these are sections for "Required" and "Optional" route entries. At the bottom right are "Cancel" and "Create" buttons. The status message "A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection." is displayed above the form.

Screenshot of the AWS VPC Dashboard (ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#) showing resources by region in the Asia Pacific (Mumbai) region.

Resources by Region

Category	Count	Region
VPCs	Mumbai 2	Mumbai
NAT Gateways	Mumbai 0	Mumbai
Subnets	Mumbai 5	Mumbai
VPC Peering Connections	Mumbai 0	Mumbai
Route Tables	Mumbai 4	Mumbai
Network ACLs	Mumbai 2	Mumbai
Internet Gateways	Mumbai 2	Mumbai
Security Groups	Mumbai 8	Mumbai

Service Health

Current Status	Details
Amazon EC2 - Asia Pacific (Mumbai)	Service is operating normally

Additional Information

- VPC Documentation
- All VPC Resources
- Forums
- Report an Issue

Transit Gateway Network Manager

Network Manager enables centrally manage your global network across AWS and on-premises. [Learn more](#)

Screenshot of the Step 1: Select a VPC Configuration wizard (https://ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstanceWizard:wizardSelector).

Step 1: Select a VPC Configuration

VPC with a Single Public Subnet

In addition to containing a public subnet, this configuration adds a private subnet whose instances are not addressable from the Internet. Instances in the private subnet can establish outbound connections to the Internet via the public subnet using Network Address Translation (NAT).

Creates:

A /16 network with two /24 subnets. Public subnet instances use Elastic IPs to access the Internet. Private subnet instances access the Internet via Network Address Translation (NAT). (Hourly charges for NAT devices apply.)

Select

Cancel and Exit

Screenshot of the AWS VPC Network ACLs page showing a list of existing Network ACLs.

The list table has the following columns:

- Name
- Network ACL ID
- Associated with
- Default
- VPC
- Owner

The table shows three entries:

Name	Network ACL ID	Associated with	Default	VPC	Owner
subnet-d7ead0bf					
subnet-2f3e5663					
subnet-881daff3					

A modal window titled "Create network ACL" is open, showing the details for a new Network ACL named "acl-d138fcba".

Details of the new Network ACL:

- Network ACL ID: acl-d138fcba
- Associated with: 3 Subnets
- Default: Yes
- VPC: vpc-15f8e57d
- Owner: 4109142551

Screenshot of the AWS VPC Network ACLs page showing the "Edit Outbound Rules" section for the Network ACL "acl-d138fcba".

The table has the following columns:

- Rule #
- Type
- Protocol
- Port Range
- Destination
- Allow / Deny

The table shows two rules:

Rule #	Type	Protocol	Port Range	Destination	Allow / Deny
100	ALL Traffic	ALL	ALL	0.0.0.0/0	ALLOW
*	ALL Traffic	ALL	ALL	0.0.0.0/0	DENY

Screenshot of the AWS VPC Network ACL configuration page.

The URL in the browser is `ap-south-1.console.aws.amazon.com/vpc/home?region=ap-south-1#acl:sort=isDefault`.

The left sidebar shows the following navigation:

- New VPC Experience
- Managed Prefix Lists [New](#)
- Endpoints
- Endpoint Services
- NAT Gateways
- Peering Connections
- SECURITY**
 - Network ACLs** (highlighted)
 - Security Groups [New](#)
- VIRTUAL PRIVATE NETWORK (VPN)**
 - Customer Gateways
 - Virtual Private Gateways
 - Site-to-Site VPN

The main content area displays the "Create network ACL" section with the following details:

Name	Network ACL ID	Associated with	Default	VPC	Owner
acl-d138fcba	3 Subnets	Yes	vpc-15f8e57d	4109142551	visheshgargavi

Below this, the "Edit inbound rules" section shows the following table:

Rule #	Type	Protocol	Port Range	Source	Allow / Deny
100	ALL Traffic	ALL	ALL	0.0.0.0/0	ALLOW
*	ALL Traffic	ALL	ALL	0.0.0.0/0	DENY

At the bottom of the page, there are links for Feedback, English (US), and other system status indicators.

Create NAT Gateway

Create a NAT gateway and assign it an Elastic IP address. [Learn more.](#)

Subnet*

subnet-0f08f8e95e47c6426

▼ C ⓘ

Elastic IP Allocation ID*

eipalloc-05c7eebc03d14478a

▼ C ⓘ

[Allocate Elastic IP address](#) ⓘ

Elastic IP address (13.234.148.162) allocated.

Key (128 characters maximum)

Value (256 characters maximum)

Name

NAT gateway form my pvc

Add Tag

49 remaining (Up to 50 tags maximum)

* Required

Cancel

Create a NAT

Create NAT Gateway



Your **NAT gateway has been created.**

Note: In order to use your NAT gateway, ensure that you edit your route tables to include a route with the following NAT gateway.
[Find out more.](#)

NAT Gateway ID nat-0e106ccb84a7eff1d4

[Edit route tables](#)

[Close](#)

```
[ec2-user@ip-192-168-1-140:~]
```

```
[ec2-user@ip-192-168-1-140 ~]$ rpm -q docker
package docker is not installed
[ec2-user@ip-192-168-1-140 ~]$ rpm -q docker-ce
package docker-ce is not installed
[ec2-user@ip-192-168-1-140 ~]$ sudo yum install docker*
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
^C
```

```
Exiting on user cancel
```

```
[ec2-user@ip-192-168-1-140 ~]$ ping goo.gl
PING goo.gl (172.217.166.78) 56(84) bytes of data.
```

```
^C
```

```
-- goo.gl ping statistics --
```

```
214 packets transmitted, 0 received, 100% packet loss, time 218091ms
```

```
^C
```

```
[ec2-user@ip-192-168-1-140 ~]$ sudo yum install docker*
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
^C
```

```
Exiting on user cancel
```

```
[ec2-user@ip-192-168-1-140 ~]$ ping goo.gl
PING goo.gl (216.58.203.46) 56(84) bytes of data.
```

```
^C
```

```
-- goo.gl ping statistics --
```

```
5 packets transmitted, 0 received, 100% packet loss, time 4078ms
```

```
^C
```

```
[ec2-user@ip-192-168-1-140 ~]$  
[ec2-user@ip-192-168-1-140 ~]$  
[ec2-user@ip-192-168-1-140 ~]$ route -n  
(kernel IP routing table)  
Destination      Gateway        Genmask        Flags Metric Ref    Use Iface  
0.0.0.0          192.168.1.1   0.0.0.0       UG     0      0        0 eth0  
169.254.169.254 0.0.0.0      255.255.255.255 UH     0      0        0 eth0  
192.168.1.0      0.0.0.0      255.255.255.0   U      0      0        0 eth0  
[ec2-user@ip-192-168-1-140 ~]$
```

New VPC Experience Tell us what you think

Create NAT Gateway Actions ▾

VPC Dashboard [New](#)

Filter by VPC:

Name	NAT Gateway ID	Status	Status Message	Elastic IP Address	Private IP Address	Network
vpc-06e0f5...	nat-0e106c684a7...	available	-	13.234.148.162	192.168.0.77	eni-01

Owner: 417149810339
lnvpc

▼ VIRTUAL PRIVATE CLOUD

Your VPCs

Subnets

Route Tables

Internet Gateways [New](#)

Egress Only Internet Gateways [New](#)

DHCP Options Sets [New](#)

Elastic IPs [New](#)

NAT Gateway: nat-0e106c684a7eff1d4

Details Monitoring Tags

NAT Gateway ID	Status	Elastic IP Address
nat-0e106c684a7eff1d4	available	13.234.148.162

New VPC Experience

Tell us what you think

VPC Dashboard [New](#)

Filter by VPC:

vpc-06eff5...

Create NAT Gateway Actions ▾

Filter by tags and attributes or search by keyword

1 to 1 of

Name	NAT Gateway ID	Status	Status Message	Elastic IP Address	Private IP Address	New
NATgat... nat-0e106c684a7...	available	-	13.234.148.162	192.168.0.77	eni-0	

vpc-06eff523196467eaca

lwpvc

Owner: 417149810339

VIRTUAL PRIVATE CLOUD

Your VPCs

Subnets

Route Tables

Internet Gateways [New](#)

Egress Only Internet Gateways [New](#)

DHCP Options Sets [New](#)

Elastic IPs [New](#)

NAT Gateway: nat-0e106c684a7eff1d4

Details Monitoring Tags

NAT Gateway ID	Status
nat-0e106c684a7eff1d4	available

Elastic IP Address 13.234.148.162

New VPC Experience [Tell us what you think](#)

VPC Dashboard [New](#)

Filter by VPC: [vpc-06ef5...](#)

Create route table Actions ▾

Route Table ID : rtb-0f2a0a87be213bd3f Add filter

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC
lwrt_nat	rtb-0f2a0a87be213bd3f	-	-	No	vpc-06ef523196467eaca lwvpc

Owner: 417149810339

VIRTUAL PRIVATE CLOUD

Your VPCs Subnets

Route Table: rtb-0f2a0a87be213bd3f

Summary Route Table Subnet Associations Edge Associations Route Propagation Tags

Route Table ID	Main VPC	No
rtb-0f2a0a87be213bd3f	vpc-06ef523196467eaca lwvpc	417149810339

Route Tables

Internet Gateways [New](#)
Egress Only Internet Gateways [New](#)
DHCP Options Sets [New](#)
Elastic IPs [New](#)

Edit routes

Destination

192.168.0.0/16

Target

local

Status

active

Propagated

No

[Add route](#)[Edit](#)[Delete](#)[Edit](#)*** Required**

- Egress Only Internet Gateway
- Instance
- Internet Gateway
- NAT Gateway



- Network Interface

- Outpost Local Gateway

- Peering Connection

- Transit Gateway

[Cancel](#)[Save](#)

Route Tables > Edit routes

Edit routes

✓ Routes successfully edited

Close

Route Tables > Edit subnet associations

Edit subnet associations

Route table rfb-0f2a0a87be213bd3f (wrt_nat)

Associated subnets

subnet-0d502f2818bffff67

Filter by attributes or search by keyword				
Subnet ID	IPv4 CIDR	IPv6 CIDR	Current Route Table	
<input type="checkbox"/> subnet-0f0818e95e476426 wwssubnet1	192.168.0.0/24	-	rfb-0b1aa61aa6d851395b	
<input checked="" type="checkbox"/> subnet-0d502f2818bffff67 wwssubnet2-1b	192.168.1.0/24	-	Main	

* Required

```
Vimal Daga's screen 1 2016-10-07-2020
```

```
[ec2-user@ip-192-168-1-140 ~]$ [ec2-user@ip-192-168-1-140 ~]$ [ec2-user@ip-192-168-1-140 ~]$ sudo yum install docker* ) loaded plugins: extras_suggestions, langpacks, priorities, update-motd amzn2-core
```

```
vp amzn2extra-docker
```

```
Filter(1/3): amzn2-core/2/x86_64/group_gz
```

```
(2/3): amzn2-core/2/x86_64/updateinfo
```

```
{3/3}: amzn2-core/2/x86_64/primary_db
```

	3.7 kB	00:00:
	3.0 kB	00:00:
	2.5 kB	00:00:
	223 kB	00:00:
42%	[=====	
	0.0 B/s	
	18 MB	-.-:-:

```
lwp Owner
```

```
▼ VIM
```

```
Cloud You
```

```
Sub
```

```
Role
```

```
Inte
```

```
Egr
```

```
Gat
```

```
DHC
```

```
Elast
```

```
[ec2-user@ip-192-168-1-140 ~]$  
[ec2-user@ip-192-168-1-140 ~]$  
[ec2-user@ip-192-168-1-140 ~]$ sudo yum install docker*  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
amzn2-core  
amzn2extra-docker  
(1/3): amzn2-core/2/x86_64/group_gz | 3.7 kB 00:  
(2/3): amzn2-core/2/x86_64/updateinfo | 2.5 kB 00:  
(3/3): amzn2-core/2/x86_64/primary_db | 223 kB 00:  
        0.0 B/s | 18 MB 00:  
-----
```