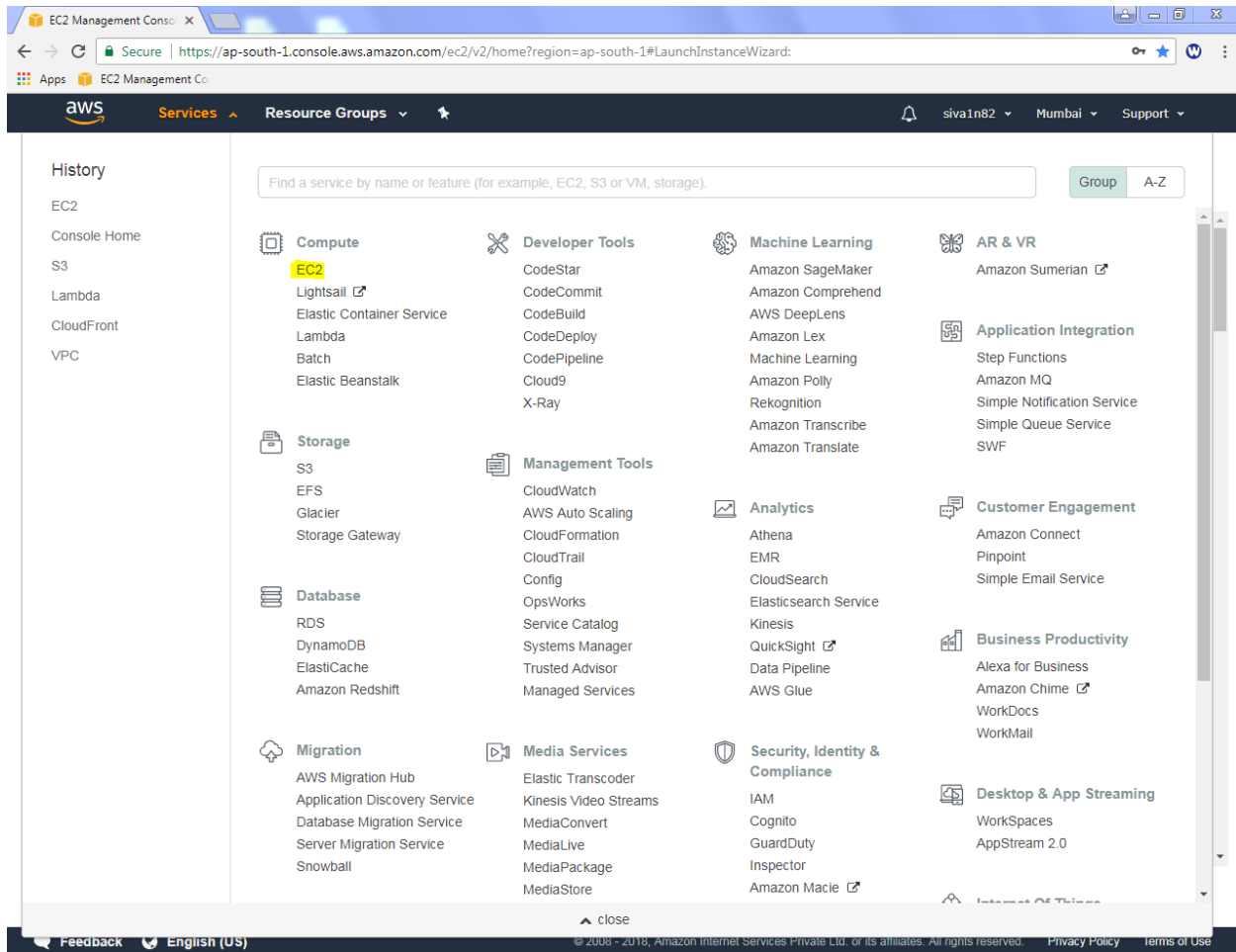


Configure VPN between Mumbai and Ohio – Lab 2 of 4

In mumbai region, Click “EC2”



Click “Launch Instance”.

The screenshot displays the AWS Management Console for the Asia Pacific (Mumbai) region. The left-hand navigation pane shows the 'EC2 Dashboard' with various categories like INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, LOAD BALANCING, and AUTO SCALING. The main content area is titled 'Resources' and lists the following counts for Amazon EC2 resources: 0 Running Instances, 0 Elastic IPs, 0 Dedicated Hosts, 0 Snapshots, 0 Volumes, 0 Load Balancers, 9 Key Pairs, 4 Security Groups, and 0 Placement Groups. A prominent green 'Launch Instance' button is visible under the 'Create Instance' section. To the right, the 'Account Attributes' panel shows details for the Default VPC (vpc-a655a2ce) and links to additional information and the AWS Marketplace. The bottom of the console features a footer with 'Feedback', 'English (US)', and copyright information for 2008-2018.

Select “Amazon Linux”

The screenshot shows the AWS Management Console interface for the 'Launch Instance Wizard'. The browser address bar indicates the URL: <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>. The console header shows the AWS logo, navigation tabs for Services and Resource Groups, and user information (siva1n82, Mumbai, Support).

The wizard progress bar at the top indicates the current step: **1. Choose AMI**, followed by 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review.

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.

Quick Start

On the left, there is a sidebar with filters: **My AMIs**, **AWS Marketplace**, **Community AMIs**, and a checkbox for **Free tier only** (which is currently unchecked).

The main content area displays a list of AMIs. The first AMI, **Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-531a4c3c**, is highlighted with a yellow background. Below it, several other AMIs are listed, including Amazon Linux 2 LTS Candidate, SUSE Linux Enterprise Server, Red Hat Enterprise Linux, and Ubuntu Server. Each entry includes a description, root device type, virtualization type, and a 'Select' button.

Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-531a4c3c

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

Amazon Linux 2 LTS Candidate AMI 2017.12.0 (HVM), SSD Volume Type - ami-3b2f7954

Amazon Linux 2 is the next generation of Amazon Linux. It includes the latest LTS kernel (4.9) tuned for enhanced performance on Amazon EC2, systemd support, newer versions of glibc, gcc and binutils, and an additional set of core packages for performance and security improvements.

Root device type: ebs Virtualization type: hvm

SUSE Linux Enterprise Server 12 SP3 (HVM), SSD Volume Type - ami-f7267298

SUSE Linux Enterprise Server 12 Service Pack 3 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.

Root device type: ebs Virtualization type: hvm

Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-e60e5a89

Red Hat Enterprise Linux version 7.4 (HVM), EBS General Purpose (SSD) Volume Type

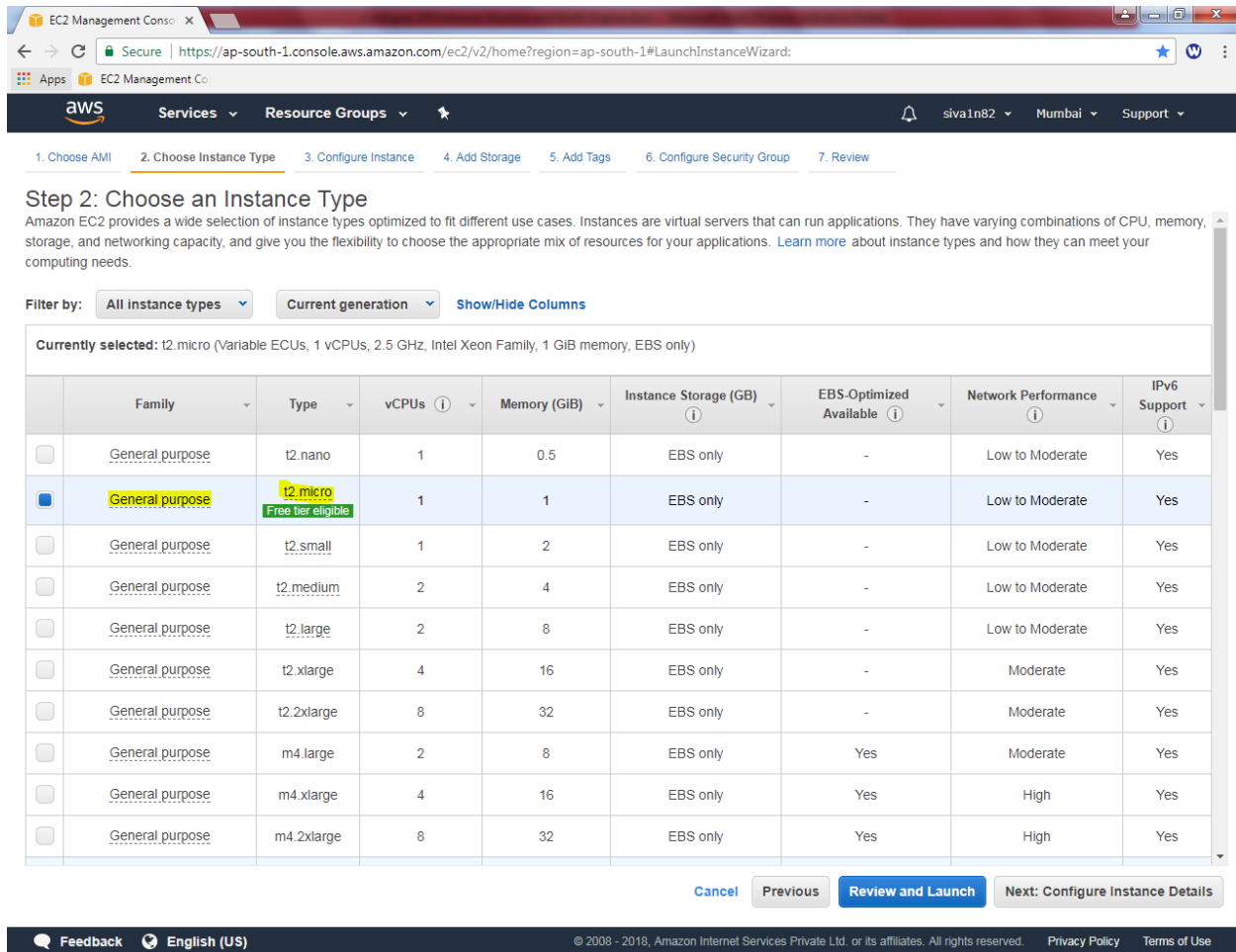
Root device type: ebs Virtualization type: hvm

Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-5d055232

Ubuntu Server 16.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

The footer of the console shows a **Feedback** link, the language **English (US)**, and copyright information: © 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. It also includes links for **Privacy Policy** and **Terms of Use**.

Select General purpose “t2.micro”.



Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: **All instance types** **Current generation** [Show/Hide Columns](#)

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free Tier eligible</small>	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	m4.large	2	8	EBS only	Yes	Moderate	Yes
<input type="checkbox"/>	General purpose	m4.xlarge	4	16	EBS only	Yes	High	Yes
<input type="checkbox"/>	General purpose	m4.2xlarge	8	32	EBS only	Yes	High	Yes

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

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Click “Next”.

In Network, select Sansbound_VPC_Mumbai

Subnet, select Sansbound_Mumbai_Public_subnet

Auto assign Public IP – Disable.

The screenshot shows the AWS Management Console interface for configuring an EC2 instance. The page is titled 'Step 3: Configure Instance Details'. The 'Auto-assign Public IP' dropdown is set to 'Use subnet setting (Disable)'. The 'Primary IP' field is set to '10.0.2.25'. The 'Next: Add Storage' button is visible at the bottom right.

Step 3: Configure Instance Details

Network *i* vpc-09fe2261 | Sansbound_VPC_Mumbai [Create new VPC](#)

Subnet *i* subnet-07d1c44a | Sansbound_Mumbai_Public_sub [Create new subnet](#)
251 IP Addresses available

Auto-assign Public IP *i* Use subnet setting (Disable)

IAM role *i* None [Create new IAM role](#)

Shutdown behavior *i* Stop

Enable termination protection *i* ☐ Protect against accidental termination

Monitoring *i* ☐ Enable CloudWatch detailed monitoring
Additional charges apply.

Tenancy *i* Shared - Run a shared hardware instance
Additional charges will apply for dedicated tenancy.

T2 Unlimited *i* ☐ Enable
Additional charges may apply

Network interfaces *i*

Device	Network Interface	Subnet	Primary IP	Secondary IP addresses	IPv6 IPs
eth0	New network interface	subnet-07d1c44a	10.0.2.25	Add IP	

[Add Device](#)

Advanced Details

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

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Type the IP of VPN server as 10.0.2.25 and click “Next”.

Leave default settings and click “next”.

The screenshot shows the AWS Management Console interface for the 'Launch Instance Wizard'. The browser address bar indicates the URL: <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>. The navigation bar at the top includes the AWS logo, 'Services', 'Resource Groups', and user information (siva1n82, Mumbai, Support). The wizard progress bar shows seven steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage (active), 5. Add Tags, 6. Configure Security Group, and 7. Review.

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-0fbaf6369a5a7ca56	<input type="text" value="8"/>	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

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

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Name: Linux VPN Server Mumbai

The screenshot shows the AWS Management Console interface for the 'Launch Instance Wizard'. The 'Add Tags' step is active, showing a table for adding tags. The 'Name' tag is added with the value 'Linux VPN Server Mumbai'. The 'Instances' and 'Volumes' checkboxes are both checked. The 'Review and Launch' button is highlighted.

Key	Value	Instances	Volumes
Name	Linux VPN Server Mumbai	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

Click "Next".

Create a new Security Group Name : Mumbai_Linux_Sec_Group

EC2 Management Console

Secure | <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>

Apps EC2 Management Console

Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

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Allow 22 port as default. Click Review and Launch.

Click "Launch".

EC2 Management Console

Secure | <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>

Apps EC2 Management Console

Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

⚠ Improve your instances' security. Your security group, Mumbai_Linux_Sec_Group, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

▼ AMI Details [Edit AMI](#)

Free tier eligible **Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-531a4c3c**

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

▼ Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

▼ Security Groups [Edit security groups](#)

Security group name: Mumbai_Linux_Sec_Group

Description: Mumbai_Linux_Sec_Group

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

► Instance Details [Edit instance details](#)

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

Feedback English (US)

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Click choose an existing key pair and select the key.

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

Select a key pair

Eveningaws

☒ I acknowledge that I have access to the selected private key file (Eveningaws.pem), and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

Click "Launch Instances".

Click the highlighted area to view instance.

Page 10 of 40

The screenshot shows the AWS Management Console interface for the EC2 Launch Wizard. The browser address bar displays the URL: <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>. The console header includes the AWS logo, navigation tabs for Services and Resource Groups, and user information for 'siva1n82' in the 'Mumbai' region. The main content area is titled 'Launch Status' and features two informational boxes. The first box, with a green checkmark, states 'Your instances are now launching' and provides the instance ID 'i-03c01944bdd567f8b' with a link to 'View launch log'. The second box, with an information icon, is titled 'Get notified of estimated charges' and explains that billing alerts can be set up to receive email notifications when charges exceed a defined threshold. Below these boxes, a section titled 'How to connect to your instances' explains that instances will be in a 'running' state and provides instructions on how to monitor and connect to them. A dropdown menu titled 'Here are some helpful resources to get you started' lists links to Linux instance connection guides, AWS Free Usage Tier information, the Amazon EC2 User Guide, and the Amazon EC2 Discussion Forum. Further down, a section titled 'While your instances are launching you can also' lists links to create status check alarms, attach EBS volumes, and manage security groups. A blue 'View Instances' button is located at the bottom right of the main content area. The footer contains a feedback link, language selection (English (US)), and copyright information for Amazon Internet Services Private Ltd.

EC2 Management Console

Secure | <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>

Apps EC2 Management Console

aws Services Resource Groups

siva1n82 Mumbai Support

Launch Status

✓ **Your instances are now launching**

The following instance launches have been initiated: **i-03c01944bdd567f8b** [View launch log](#)

i **Get notified of estimated charges**

Create [billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

▼ **Here are some helpful resources to get you started**

- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

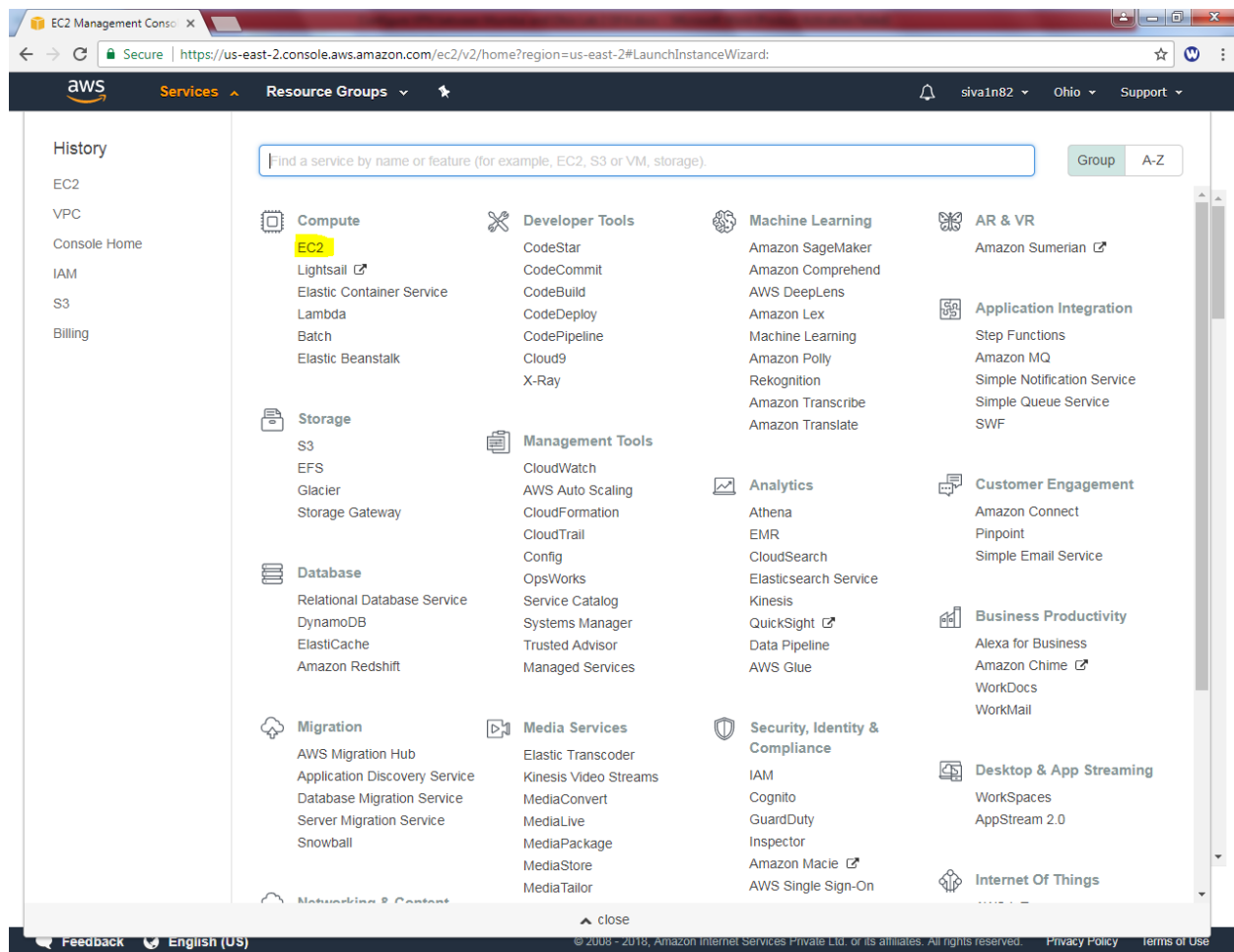
While your instances are launching you can also

- [Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)
- [Create and attach additional EBS volumes](#) (Additional charges may apply)
- [Manage security groups](#)

[View Instances](#)

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Go to Ohio region, Click “EC2”.



Click “Launch instance”.

The screenshot displays the AWS Management Console for the EC2 service in the US East (Ohio) region. The left-hand navigation pane lists various EC2-related services, including INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, LOAD BALANCING, and AUTO SCALING. The main content area is titled 'Resources' and shows a summary of existing EC2 resources: 0 Running Instances, 0 Elastic IPs, 0 Dedicated Hosts, 0 Snapshots, 0 Volumes, 0 Load Balancers, 2 Key Pairs, and 5 Security Groups. A prominent blue banner promotes EC2 Spot instances. Below this, the 'Create Instance' section is visible, with the 'Launch Instance' button highlighted by a yellow rectangle. To the right of the main content, the 'Account Attributes' and 'Additional Information' sections are partially visible, showing details like 'Supported Platforms' and 'Getting Started Guide'.

Click “Amazon Linux AMI”.

The screenshot shows the AWS Management Console interface for the 'Launch Instance Wizard'. The browser address bar shows the URL: <https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:>. The navigation bar includes the AWS logo, 'Services', 'Resource Groups', and user information 'siva1n82', 'Ohio', and 'Support'. The wizard progress bar shows steps: 1. Choose AMI (active), 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review. A 'Cancel and Exit' link is in the top right.

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.

Quick Start 1 to 35 of 35 AMIs

AMI	Description	Root device type	Virtualization type	Architecture	Action
Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-f63b1193	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.	ebs	hvm	64-bit	Select
Amazon Linux 2 LTS Candidate AMI 2017.12.0 (HVM), SSD Volume Type - ami-710e2414	Amazon Linux 2 is the next generation of Amazon Linux. It includes the latest LTS kernel (4.9) tuned for enhanced performance on Amazon EC2, systemd support, newer versions of glibc, gcc and binutils, and an additional set of core packages for performance and security improvements.	ebs	hvm	64-bit	Select
SUSE Linux Enterprise Server 12 SP3 (HVM), SSD Volume Type - ami-75143f10	SUSE Linux Enterprise Server 12 Service Pack 3 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.	ebs	hvm	64-bit	Select
Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-0b1e356e	Red Hat Enterprise Linux version 7.4 (HVM), EBS General Purpose (SSD) Volume Type	ebs	hvm	64-bit	Select
Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-965e6bf3	Ubuntu Server 16.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).	ebs	hvm	64-bit	Select

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Select General Purpose (t2.micro).

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: **All instance types** **Current generation** [Show/Hide Columns](#)

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	m5.large	2	8	EBS only	Yes	Up to 10 Gigabit	Yes
<input type="checkbox"/>	General purpose	m5.xlarge	4	16	EBS only	Yes	Up to 10 Gigabit	Yes
<input type="checkbox"/>	General purpose	m5.2xlarge	8	32	EBS only	Yes	Up to 10 Gigabit	Yes
<input type="checkbox"/>	General purpose	m5.4xlarge	16	64	EBS only	Yes	Up to 10 Gigabit	Yes

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

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Click “Next”.

Select network as “Sanbound_Ohio_VPC”, subnet as “Sansbound Private Subnet” and Auto-assign Public IP as disable.

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-0d56fb65 | Sansbound_Ohio_VPC [Create new VPC](#)

Subnet subnet-f1ff1d8b | Sansbound_Public_Subnet_Ohio | [Create new subnet](#)
251 IP Addresses available

Auto-assign Public IP Use subnet setting (Disable)

IAM role None [Create new IAM role](#)

Shutdown behavior Stop

Enable termination protection ☐ Protect against accidental termination

Monitoring ☐ Enable CloudWatch detailed monitoring
[Additional charges apply.](#)

Tenancy Shared - Run a shared hardware instance
[Additional charges will apply for dedicated tenancy.](#)

T2 Unlimited ☐ Enable
[Additional charges may apply](#)

Network interfaces

Device	Network Interface	Subnet	Primary IP	Secondary IP addresses	IPv6 IPs
eth0	New network interface	subnet-f1ff1d8b	192.168.2.25	Add IP	

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

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Assign the interface ip as 192.168.2.25 and click "Next".

Leave default settings and click “Next”.

The screenshot shows the AWS Management Console interface for the 'Launch Instance Wizard'. The breadcrumb trail at the top indicates the current step is '4. Add Storage'. The main heading is 'Step 4: Add Storage', followed by a descriptive paragraph about storage options. Below this is a table with columns for Volume Type, Device, Snapshot, Size (GiB), Volume Type, IOPS, Throughput (MB/s), Delete on Termination, and Encrypted. The table contains one row for the 'Root' volume, which is a 'General Purpose SSD (GP2)' of size 8 GiB, with IOPS of 100 / 3000 and Throughput of N/A. The 'Delete on Termination' checkbox is checked, and the volume is 'Not Encrypted'. An 'Add New Volume' button is located below the table. A light blue box contains a note about free tier eligibility. At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Tags'. The footer includes a 'Feedback' link, 'English (US)' language selection, and copyright information.

Volume Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Throughput (MB/s) ⓘ	Delete on Termination ⓘ	Encrypted ⓘ
Root	/dev/xvda	snap-0da722d3235fa8c7c	8	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

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

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Key as name and Value “VPN Linux Server Ohio”.

EC2 Management Console

Secure | <https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard>

Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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 (127 characters maximum)	Value (255 characters maximum)	Instances ⓘ	Volumes ⓘ
Name	VPN Linux Server Ohio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

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Click “Next”.

Create a new security group as Ohio_Linux_Sec_Group.

The screenshot shows the AWS Management Console interface for the 'Configure Security Group' step. The breadcrumb trail at the top indicates the sequence: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group (current step), and 7. Review. The page title is 'Step 6: Configure Security Group'. A descriptive paragraph explains that a security group is a set of firewall rules and provides instructions on how to configure it. Below this, there are two radio buttons for 'Assign a security group': 'Create a new security group' (selected) and 'Select an existing security group'. Under 'Create a new security group', there are input fields for 'Security group name' and 'Description', both containing the text 'Ohio_Linux_Sec_Group'. Below these fields is a table for adding security rules. The table has columns for Type, Protocol, Port Range, Source, and Description. One rule is already added: Type 'SSH', Protocol 'TCP', Port Range '22', Source 'Custom 0.0.0.0/0', and Description 'e.g. SSH for Admin Desktop'. An 'Add Rule' button is located below the table. A yellow warning box contains a warning icon and text: 'Warning: Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.' At the bottom right, there are three buttons: 'Cancel', 'Previous', and 'Review and Launch'. The footer of the console shows 'Feedback', 'English (US)', and copyright information for Amazon Internet Services Private Ltd.

EC2 Management Console

Secure | <https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:>

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

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Click “Review and Launch”

Click “Launch”.

Step 7: Review Instance Launch
Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

⚠ Improve your instances' security. Your security group, Ohio_Linux_Sec_Group, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

▼ **AMI Details** [Edit AMI](#)

Free tier eligible **Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-f63b1193**
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

▼ **Instance Type** [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

▼ **Security Groups** [Edit security groups](#)

Security group name Ohio_Linux_Sec_Group
Description Ohio_Linux_Sec_Group

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

► **Instance Details** [Edit instance details](#)

► **Storage** [Edit storage](#)

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

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While launch instance, it asks for “Select an existing key pair or create a new key pair”. You can choose an existing key pair and choose the existing key. If you don’t have key need to generate the key.

Select an existing key pair or create a new key pair ✕

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair ▼

Select a key pair

siva_ohio ▼

☒ I acknowledge that I have access to the selected private key file (siva_ohio.pem), and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

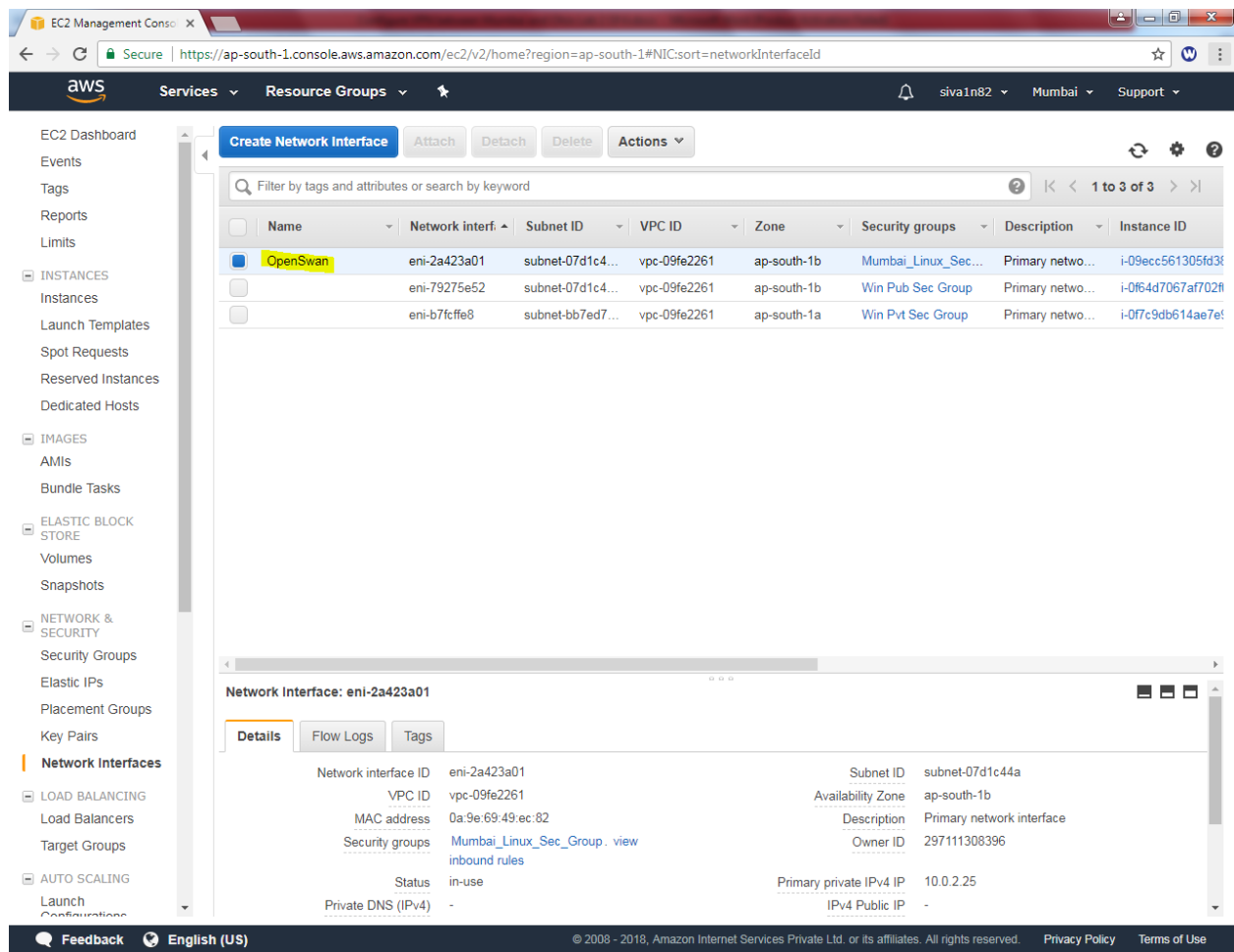
Click “Launch Instance”.

Goto “Mumbai”region.

The screenshot shows the AWS Management Console for the 'ap-south-1' region. The left sidebar contains the navigation menu with categories like INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, LOAD BALANCING, and AUTO SCALING. The 'INSTANCES' section is expanded, showing options like Launch Templates, Spot Requests, Reserved Instances, and Dedicated Hosts. The main content area displays a table of EC2 instances with columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, and Public DNS. There are three instances listed: 'Linux VPN Server ...' (running), 'Windows Public Se...' (stopped), and 'Windows Private S...' (stopped). Below the table, there is a prompt to 'Select an instance above'.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS
Linux VPN Server ...	i-09ecc561305fd387a	t2.micro	ap-south-1b	running	2/2 checks ...	None	
Windows Public Se...	i-0f64d7067af702fda	t2.micro	ap-south-1b	stopped		None	
Windows Private S...	i-0f7c9db614ae7e993	t2.micro	ap-south-1a	stopped		None	

Rename the interface as “Open Swan”.

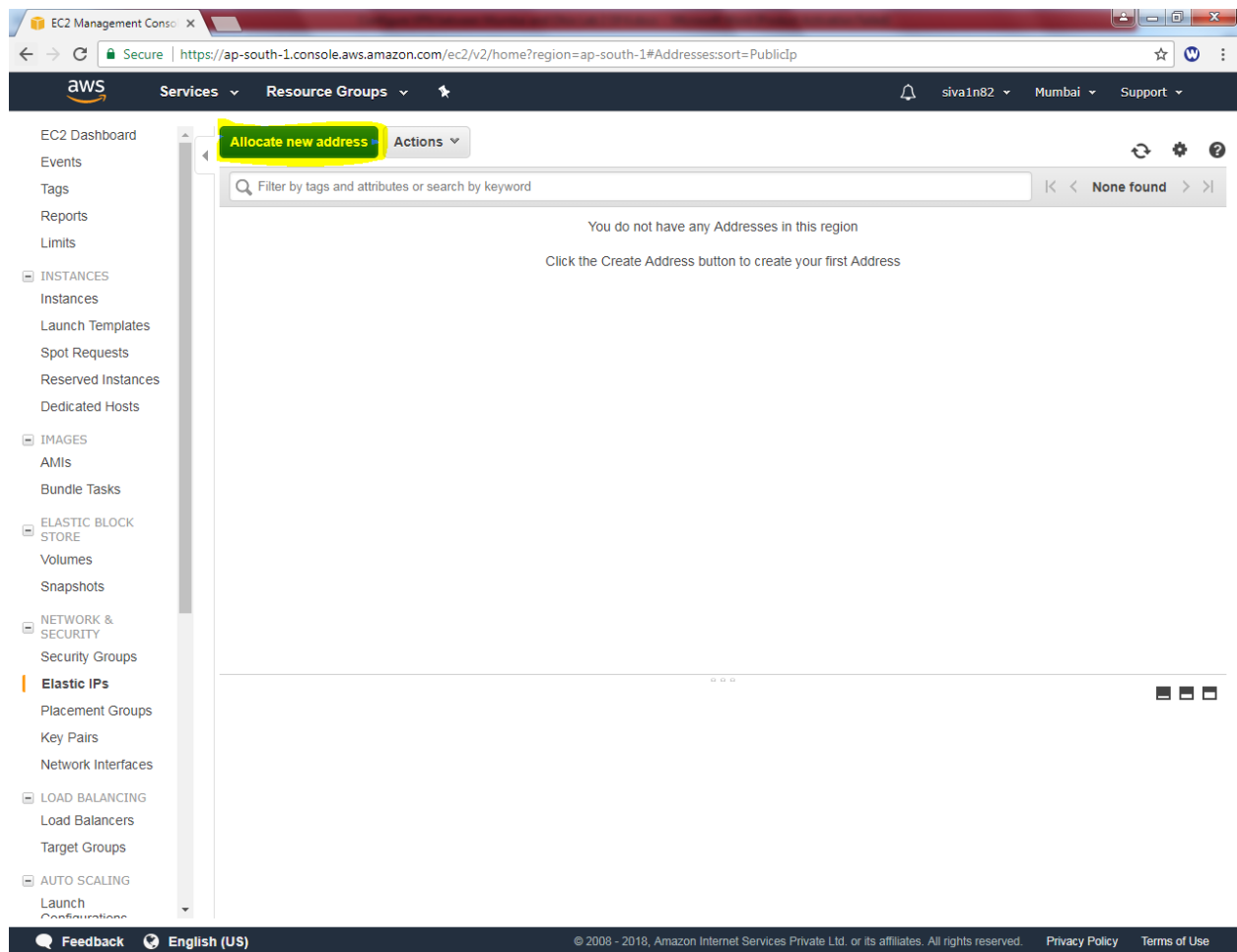


The screenshot shows the AWS Management Console for the 'ap-south-1' region. The left sidebar contains navigation links for various AWS services. The main content area displays the 'Network Interfaces' page. At the top, there are buttons for 'Create Network Interface', 'Attach', 'Detach', 'Delete', and 'Actions'. Below these is a search bar and a table listing network interfaces. The first interface, 'eni-2a423a01', is highlighted. Below the table, the details for 'eni-2a423a01' are shown, including its ID, VPC ID, Subnet ID, Availability Zone, MAC address, Security groups, Status, and IP addresses.

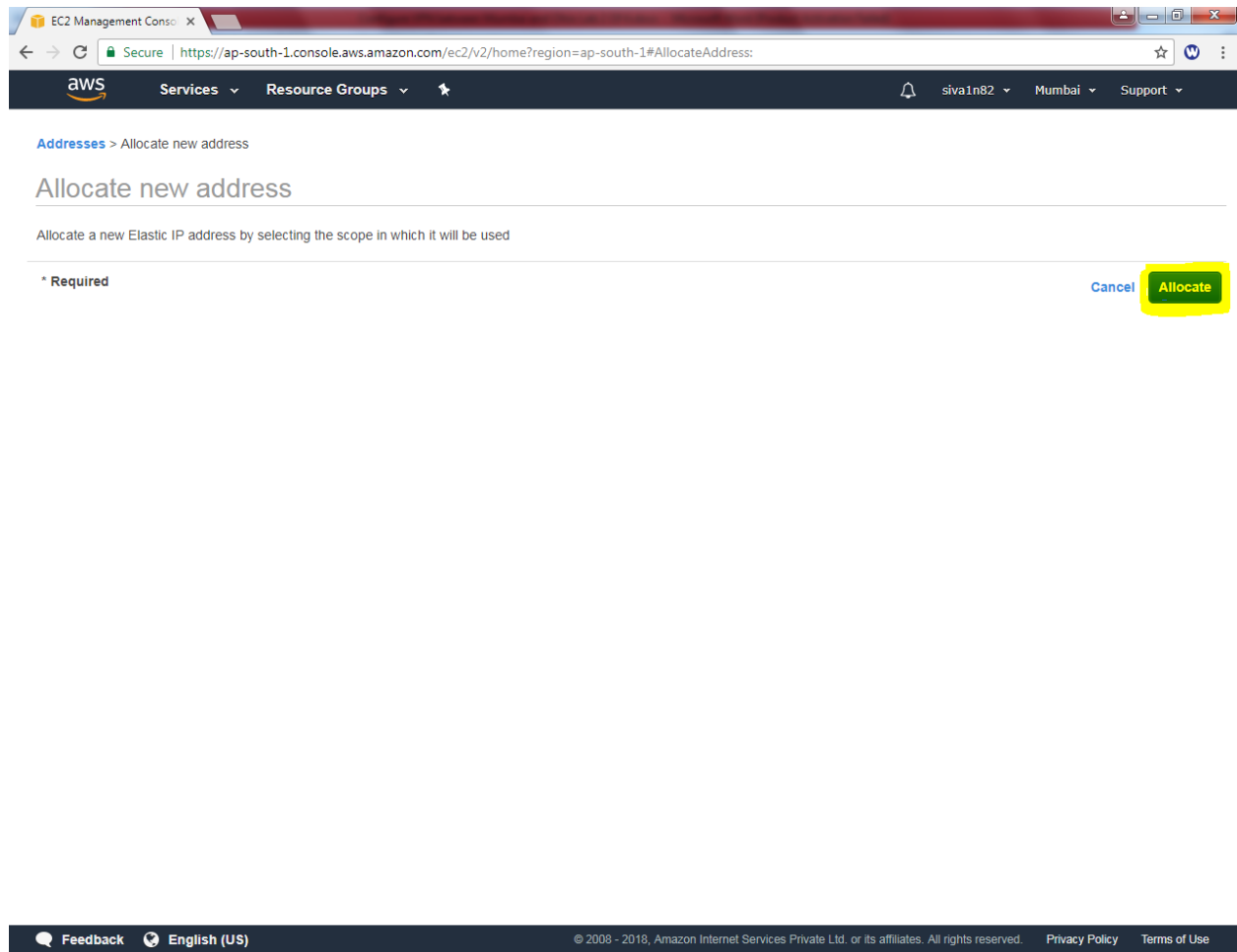
Name	Network interf.	Subnet ID	VPC ID	Zone	Security groups	Description	Instance ID
OpenSwan	eni-2a423a01	subnet-07d1c4...	vpc-09fe2261	ap-south-1b	Mumbai_Linux_Sec...	Primary netwo...	i-09ecc561305fd38
	eni-79275e52	subnet-07d1c4...	vpc-09fe2261	ap-south-1b	Win Pub Sec Group	Primary netwo...	i-0f64d7067af702f
	eni-b7cffe8	subnet-bb7ed7...	vpc-09fe2261	ap-south-1a	Win Pvt Sec Group	Primary netwo...	i-0f7c9db614ae7e9

Network interface ID		Subnet ID	
eni-2a423a01		subnet-07d1c44a	
VPC ID		Availability Zone	
vpc-09fe2261		ap-south-1b	
MAC address		Description	
0a:9e:69:49:ec:82		Primary network interface	
Security groups		Owner ID	
Mumbai_Linux_Sec_Group		297111308396	
Status		Primary private IPv4 IP	
in-use		10.0.2.25	
Private DNS (IPv4)		IPv4 Public IP	
-		-	

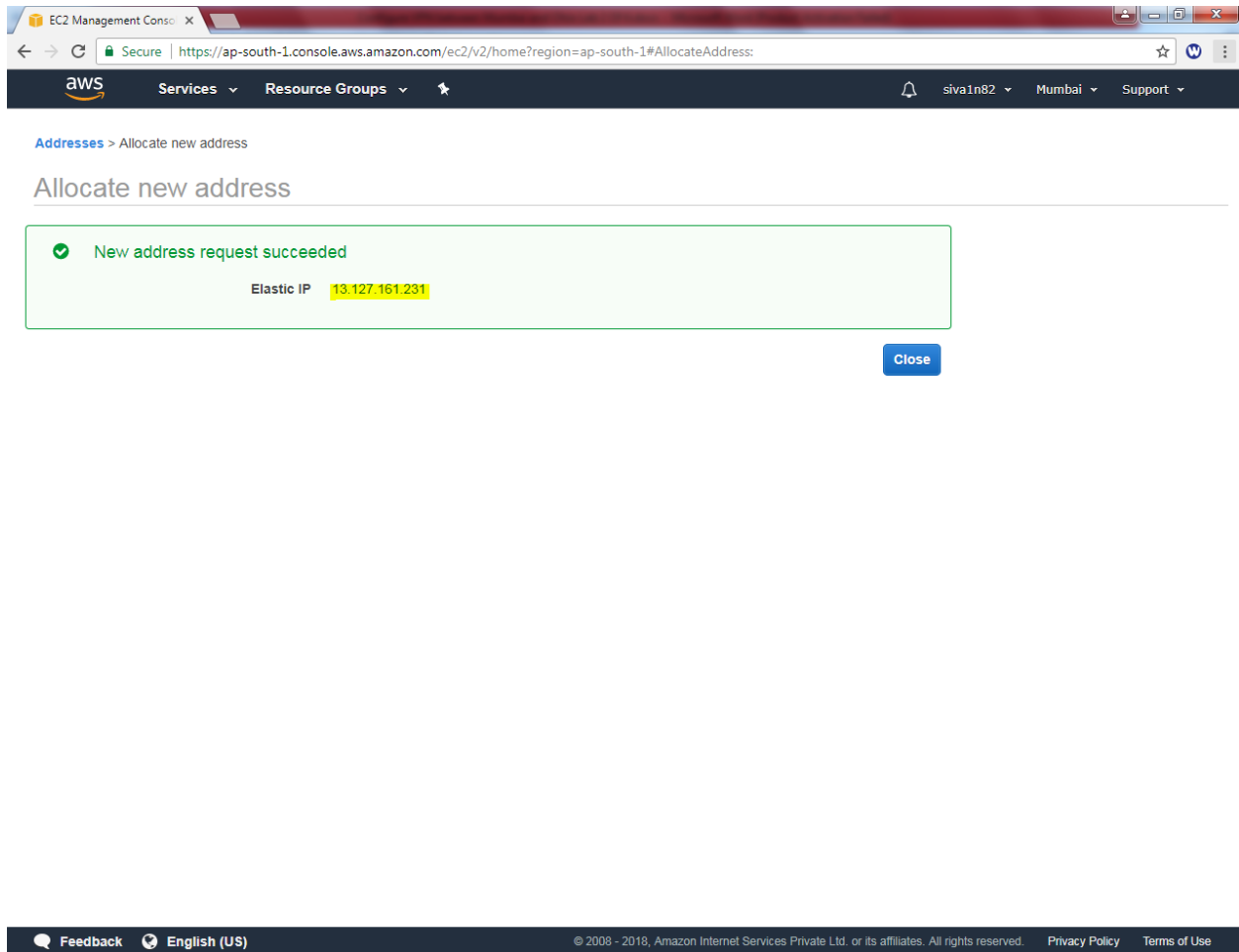
Click “Elastic IP” and then click “Allocate new address”.



Click “Allocate”.



Elastic IP has been assigned in Mumbai region.



Click “Close”.

Select the Elastic IP and right click Select “Associate address”

The screenshot shows the AWS Management Console interface. The left sidebar contains navigation links for EC2 Dashboard, INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, and LOAD BALANCING. The 'Elastic IPs' link under NETWORK & SECURITY is selected. The main content area displays a table of Elastic IP addresses. A right-click context menu is open over the first row, showing options: Release addresses, Associate address (highlighted in orange), Disassociate address, and Add/Edit Tags. Below the table, the details for the selected Elastic IP (13.127.161.231) are shown, including its Allocation ID (eipalloc-0685d828) and Scope (vpc).

Name	Elastic IP	Allocation ID	Instance	Private IP address	Scope	Association ID
	13.127.161.231	eipalloc-0685d828	-	-	vpc	-

Address: 13.127.161.231

Description | Tags

Elastic IP	13.127.161.231	Allocation ID	eipalloc-0685d828
Instance	-	Private IP address	-
Scope	vpc	Association ID	-
Public DNS	-	Network interface ID	-
Network interface owner	-		

Select the network interface.

EC2 Management Console

Secure | <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#AssociateAddress:PublicIp=13.127.161.231>

Services Resource Groups

Addresses > Associate address

Associate address

Select the instance OR network interface to which you want to associate this Elastic IP address (13.127.161.231)

Resource type ☐ Instance ☒ Network interface

Network interface

Private IP

Network Interface ID	Name
eni-b7fcfe8	
eni-2a423a01	OpenSwan
eni-79275e52	

Reassociation

Warning
If you associate an Elastic IP address with your instance, your current public IP address is released. [Learn more.](#)

* Required

Cancel Associate

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Select Private Ip address and click “Associate”.

EC2 Management Console

Secure | <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#AssociateAddress:PublicIp=13.127.161.231>

Services Resource Groups

Addresses > Associate address

Associate address

Select the instance OR network interface to which you want to associate this Elastic IP address (13.127.161.231)

Resource type

- ☐ Instance
- ☒ Network interface

Network interface eni-2a423a01

Private IP 10.0.2.25

Reassociation ☐ Allow Elastic IP to be reassociated if already attached

Warning

If you associate an Elastic IP address with your instance, your current public IP address is released. [Learn more.](#)

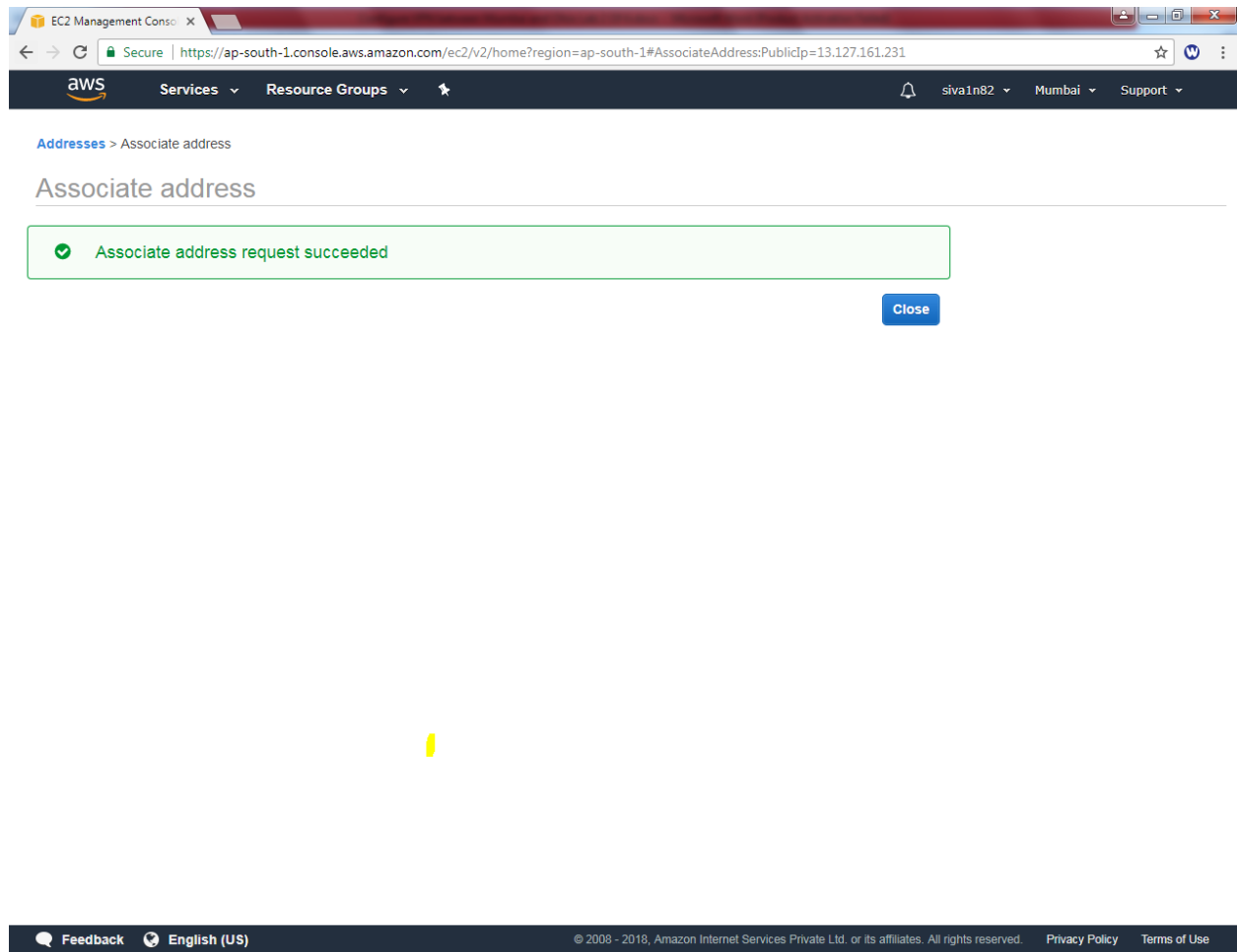
* Required

Cancel Associate

Feedback English (US)

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Associate address request succeeded.



Now the interface has been assigned with public ip address.

The screenshot displays the AWS Management Console interface for the ap-south-1 region. The left-hand navigation pane shows the 'Elastic IPs' section under 'NETWORK & SECURITY'. The main content area shows a table with one Elastic IP address assigned to an EC2 instance. Below the table, the details for the selected Elastic IP (13.127.161.231) are shown, including its allocation ID, private IP address, scope, and association ID.

Name	Elastic IP	Allocation ID	Instance	Private IP address	Scope	Association ID
	13.127.161.231	eipalloc-0685d828	i-09ecc561305fd387a	10.0.2.25	vpc	eipassoc-f088bb2b

Address: 13.127.161.231

Description

Elastic IP	13.127.161.231	Allocation ID	eipalloc-0685d828
Instance	i-09ecc561305fd387a	Private IP address	10.0.2.25
Scope	vpc	Association ID	eipassoc-f088bb2b
Public DNS		Network interface ID	eni-2a423a01
Network interface owner	297111308396		

Go to Ohio region,

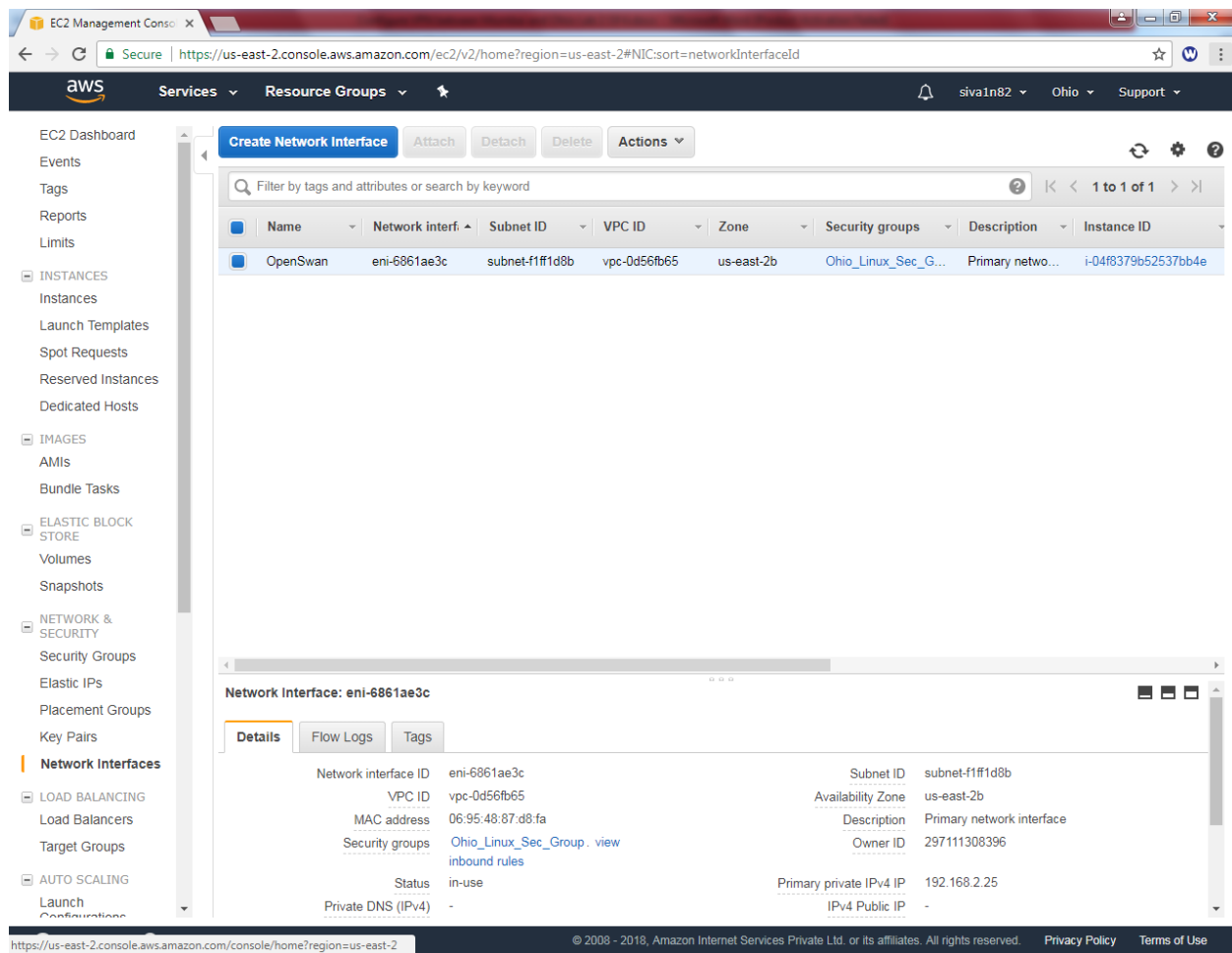
The screenshot displays the AWS Management Console interface for the EC2 service. The left-hand navigation pane lists various AWS services and categories, including EC2 Dashboard, INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, LOAD BALANCING, and AUTO SCALING. The main content area shows a list of EC2 instances with columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, and Public DNS. A single instance, 'VPN Linux Server Ohio', is listed with ID 'i-04f8379b52537bb4e', type 't2.micro', and state 'running'. Below the list, the details for this instance are shown, including its description, status checks, monitoring, and tags. The instance is located in the 'us-east-2b' availability zone and is associated with the 'Ohio_Linux_Sec_Group' security group. The private IP address is '192.168.2.25'.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS
VPN Linux Server Ohio	i-04f8379b52537bb4e	t2.micro	us-east-2b	running	2/2 checks ...	None	

Instance: **i-04f8379b52537bb4e (VPN Linux Server Ohio)** Private IP: 192.168.2.25

Description	
Instance ID	i-04f8379b52537bb4e
Instance state	running
Instance type	t2.micro
Elastic IPs	
Availability zone	us-east-2b
Security groups	Ohio_Linux_Sec_Group . view
Public DNS (IPv4)	-
IPv4 Public IP	-
IPv6 IPs	-
Private DNS	ip-192-168-2-25.us-east-2.compute.internal
Private IPs	192.168.2.25
Secondary private IPs	

Rename the interface name as “Openswan”.



The screenshot shows the AWS Management Console interface for Network Interfaces. The left sidebar contains navigation links for various AWS services. The main content area displays a table of network interfaces, with one interface selected and its details shown below.

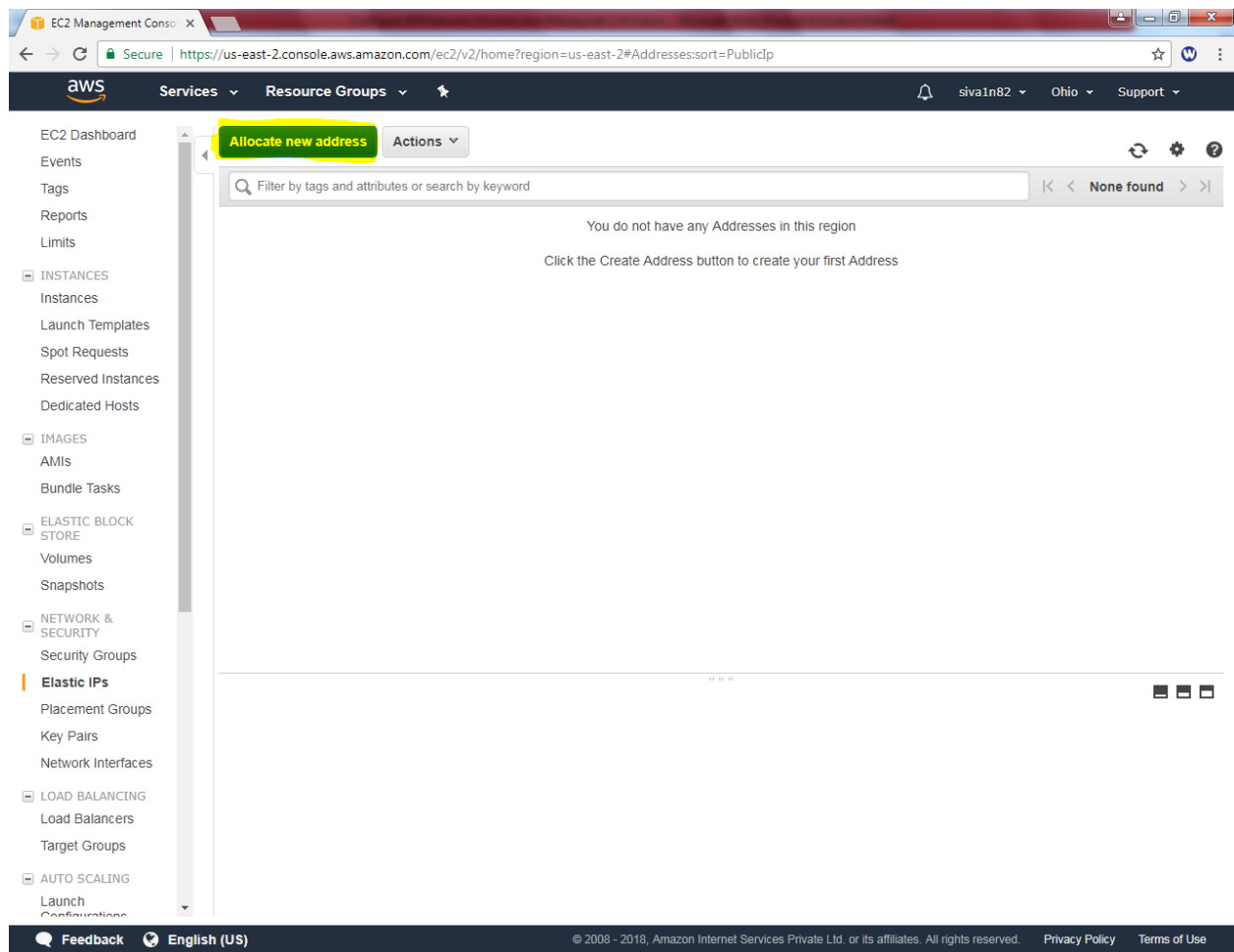
Network Interfaces Table:

Name	Network interface	Subnet ID	VPC ID	Zone	Security groups	Description	Instance ID
OpenSwan	eni-6861ae3c	subnet-f1ff1d8b	vpc-0d56fb65	us-east-2b	Ohio_Linux_Sec_G...	Primary netwo...	i-04f8379b52537bb4e

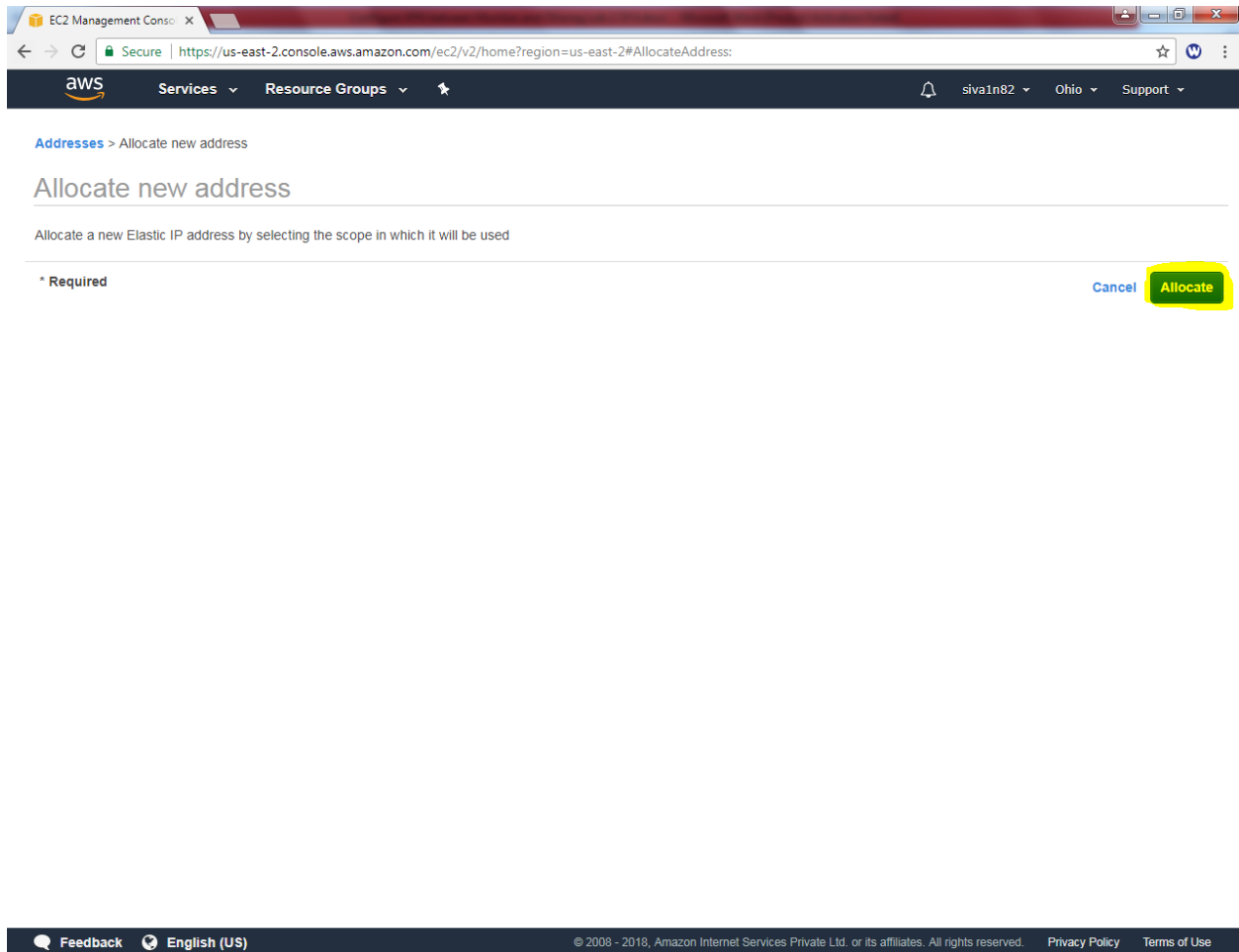
Network Interface: eni-6861ae3c Details:

Property	Value
Network interface ID	eni-6861ae3c
VPC ID	vpc-0d56fb65
Subnet ID	subnet-f1ff1d8b
MAC address	06:95:48:87:d8:fa
Availability Zone	us-east-2b
Security groups	Ohio_Linux_Sec_Group . view inbound rules
Description	Primary network interface
Status	in-use
Owner ID	297111308396
Primary private IPv4 IP	192.168.2.25
Private DNS (IPv4)	-
IPv4 Public IP	-

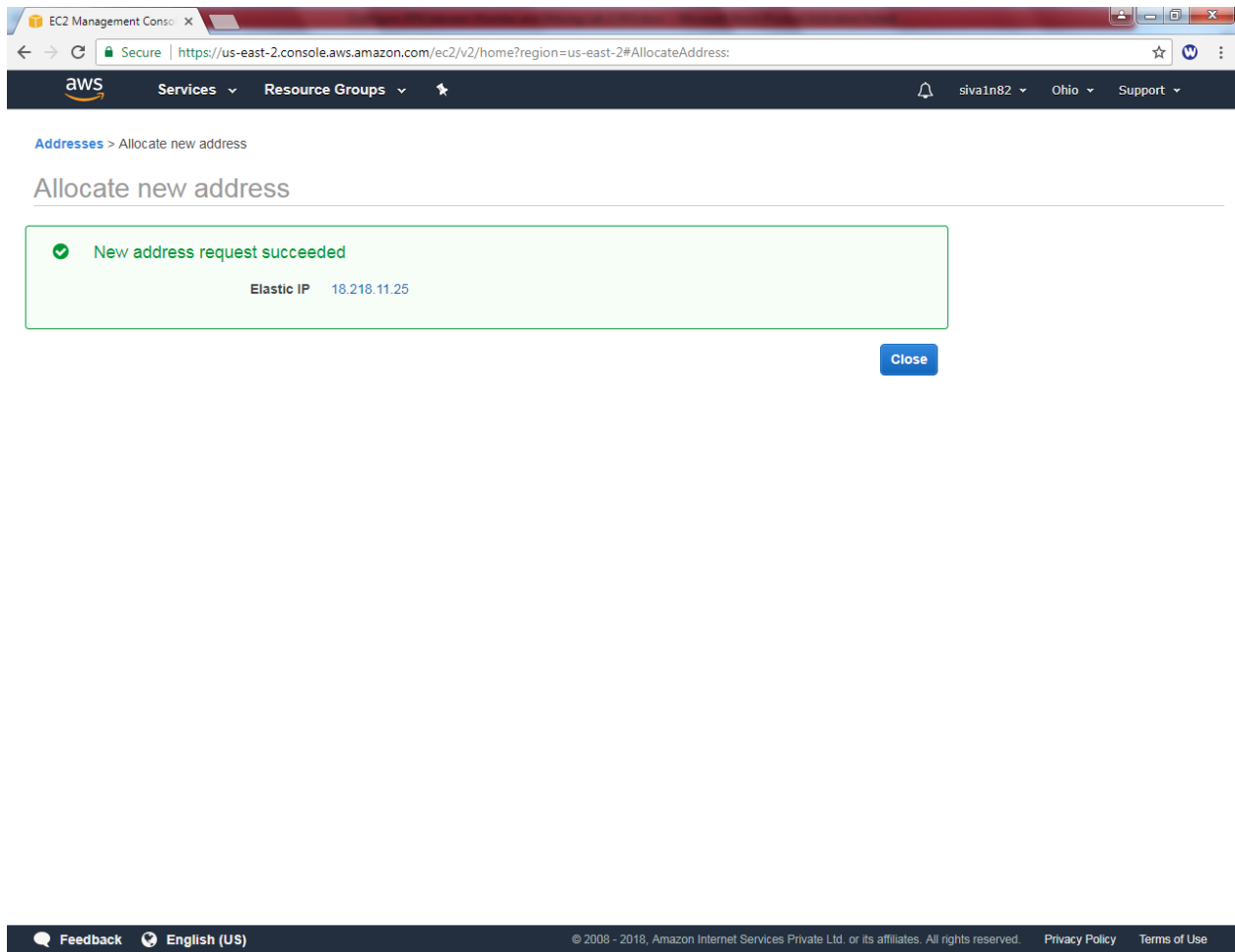
Click “Allocate new address”.



Click “Allocate”.



Elastic Ip has been provided.



The IP address needs to be associated. Select the IP and right click and then select “Associate address”.

The screenshot shows the AWS Management Console interface for managing Elastic IP addresses. The left sidebar contains navigation links for various AWS services, including EC2 Dashboard, INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, and LOAD BALANCING. The main content area displays a table of Elastic IP addresses. A context menu is open over the first row, showing options: Release addresses, Associate address, Disassociate address, and Add/Edit Tags. The 'Associate address' option is highlighted. Below the table, the details for the selected address are shown, including its description and tags.

Name	Elastic IP	Allocation ID	Instance	Private IP address	Scope	Association ID
	18.218.11.25	eipalloc-f63205d8	-	-	vpc	-

Address: 18.218.11.25

Description | **Tags**

Property	Value
Elastic IP	18.218.11.25
Instance	-
Scope	vpc
Public DNS	-
Network interface owner	-
Allocation ID	eipalloc-f63205d8
Private IP address	-
Association ID	-
Network interface ID	-

Select Resource type as “Network interface”, Select network interface and Private IP.

EC2 Management Console

Secure | <https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#AssociateAddress:PublicIp=18.218.11.25>

Services Resource Groups

Addresses > Associate address

Associate address

Select the instance OR network interface to which you want to associate this Elastic IP address (18.218.11.25)

Resource type

- ☐ Instance
- ☒ Network interface

Network interface eni-6861ae3c

Private IP 192.168.2.25

Reassociation ☐ Allow Elastic IP to be reassociated if already attached

Warning

If you associate an Elastic IP address with your instance, your current public IP address is released. [Learn more.](#)

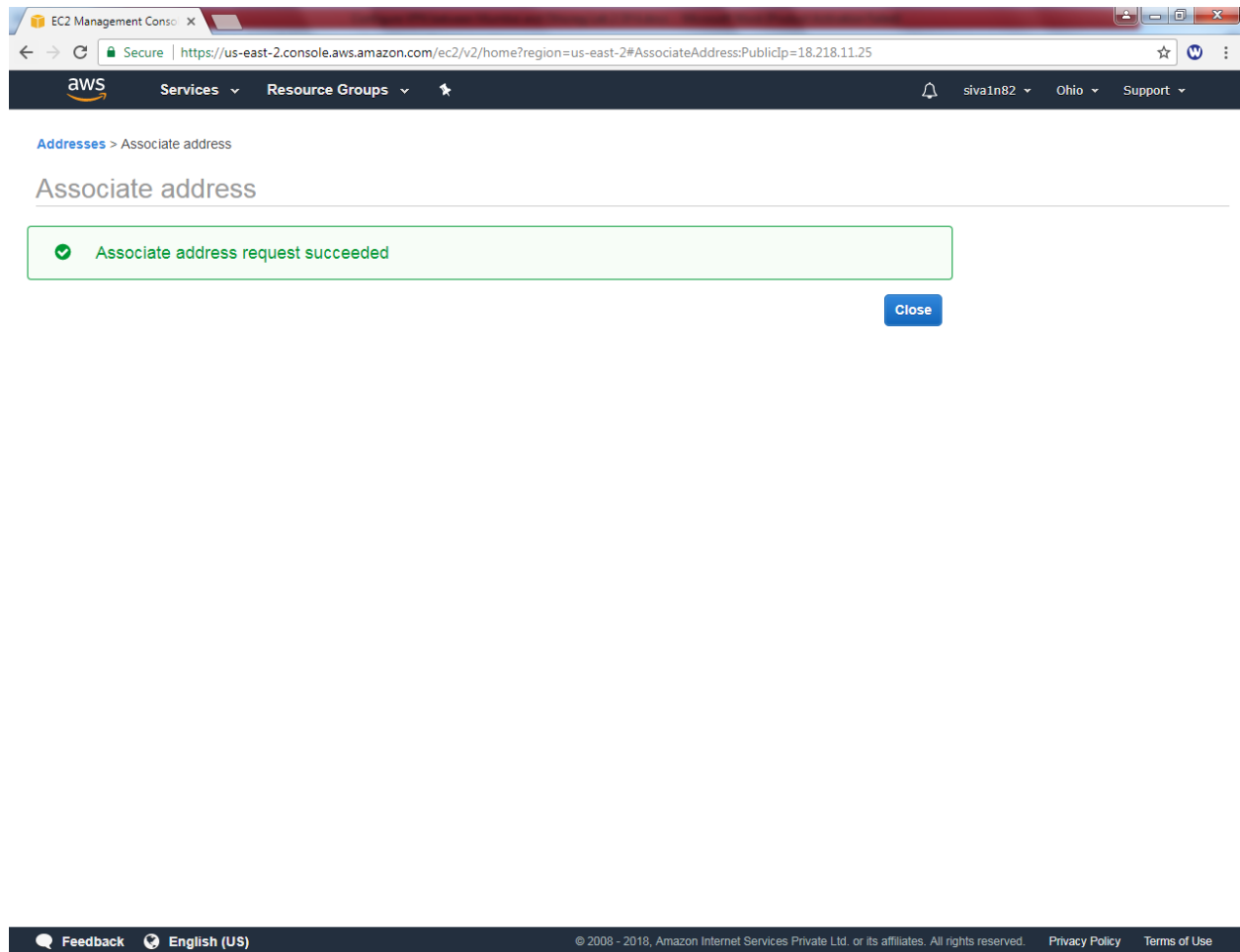
* Required

Cancel Associate

Feedback English (US)

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Click “Associate”.



Now Elastic ip has been assigned to interface.

The screenshot displays the AWS Management Console interface. The left-hand navigation pane shows the 'Elastic IPs' section under 'NETWORK & SECURITY'. The main content area shows a table with one Elastic IP address: 18.218.11.25. Below the table, the 'Description' tab is active, showing details for the selected Elastic IP.

Name	Elastic IP	Allocation ID	Instance	Private IP address	Scope	Association ID
	18.218.11.25	eipalloc-f63205d8	i-04f8379b52537bb...	192.168.2.25	vpc	eipassoc-e424302e

Address: 18.218.11.25

Description | Tags

Elastic IP	18.218.11.25	Allocation ID	eipalloc-f63205d8
Instance	i-04f8379b52537bb4e	Private IP address	192.168.2.25
Scope	vpc	Association ID	eipassoc-e424302e
Public DNS		Network interface ID	eni-6861ae3c
Network interface owner	297111308396		