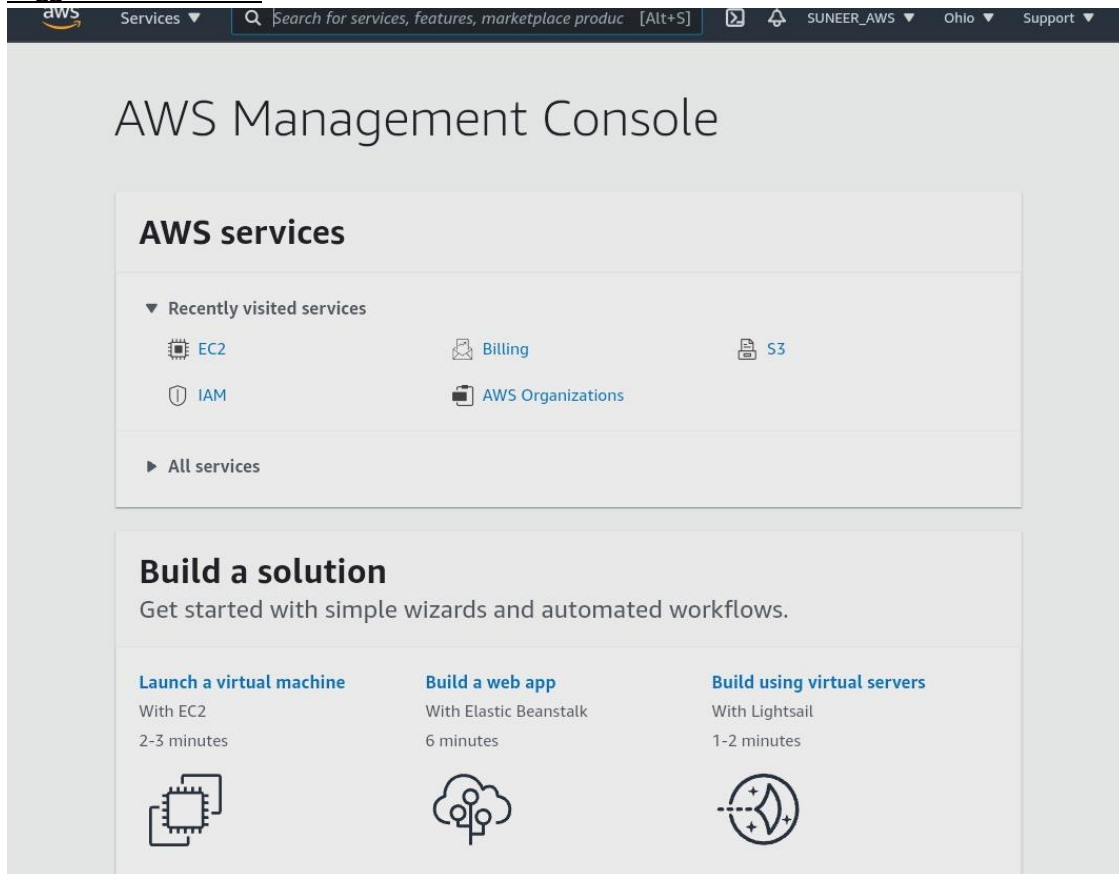


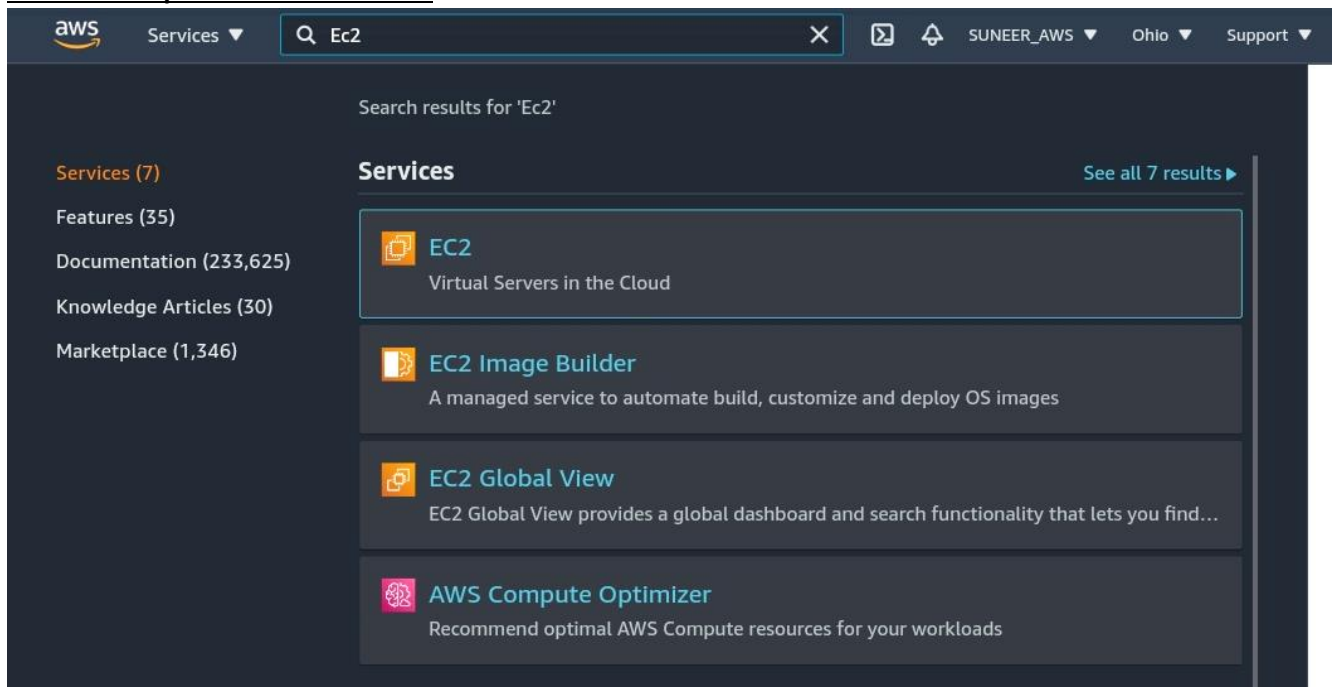
AWS Essentials Assignment -2

Working with EC2 Instances. Creating a new Linux 2 AMI based instance in the AWS and launching the instance.

➤ Logged into the AWS



➤ Search and open EC2 from Services



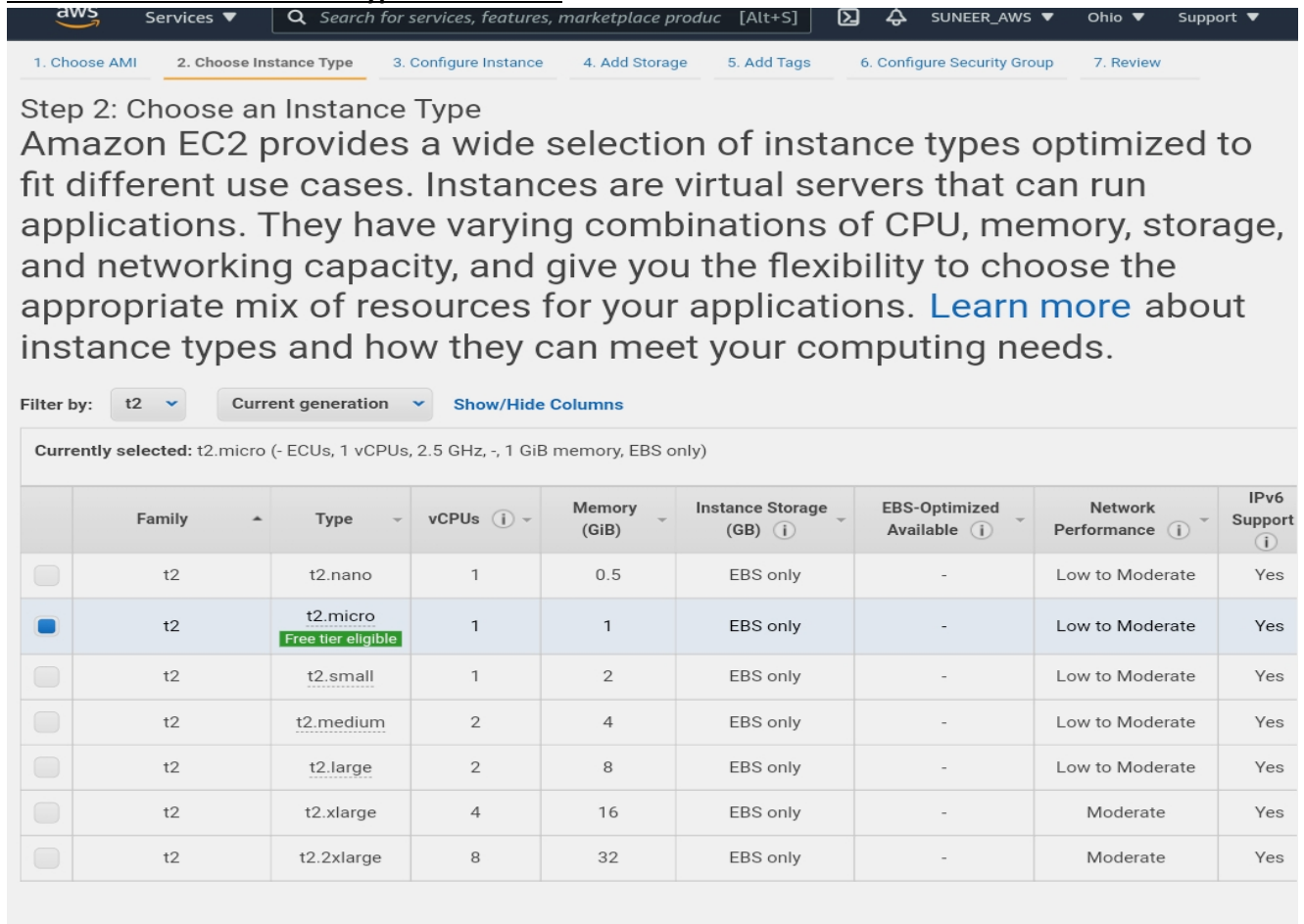
➤ Click on the “Launch Instances” for creating new instance

The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, 'Services' dropdown, a search bar, and user information. Below this, the left sidebar contains navigation links for 'New EC2 Experience', 'EC2 Dashboard', 'Events', 'Tags', 'Limits', and a dropdown for 'Instances'. The 'Instances' dropdown is expanded, showing options like 'Instances New', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances New', 'Dedicated Hosts', and 'Capacity Reservations'. The main content area is titled 'Instances' and includes buttons for 'Connect', 'Instance state', 'Actions', and 'Launch Instances'. A search bar for filtering instances is present. Below the search bar, a table header shows columns for 'Name', 'Instance ID', 'Instance state', and 'Instance type'. The table body is empty, displaying the message 'You do not have any instances in this region'.

➤ Select the “Amazon Linux 2 AMI” from the list

The screenshot displays the 'Quick Start' page in the AWS console. On the left, a sidebar lists 'My AMIs', 'AWS Marketplace', and 'Community AMIs', with a 'Free tier only' filter. The main area shows a list of AMIs. The first entry is 'Amazon Linux 2 AMI (HVM), SSD Volume Type' with AMI IDs 'ami-00dfe2c7ce89a450b (64-bit x86)' and 'ami-031dea1a744251b51 (64-bit Arm)'. It includes a 'Select' button and radio buttons for '64-bit (x86)' (selected) and '64-bit (Arm)'. A description states it has five years of support and is the successor to an older version. Below this, it lists 'Root device type: ebs', 'Virtualization type: hvm', 'ENA Enabled: Yes'. The second entry is 'macOS Big Sur 11.5.2' with AMI ID 'ami-0b1674fbc9847f6d', also with a 'Select' button and '64-bit (Mac)' specification. A description notes it's an EBS-backed image with AWS CLI, Xcode, and Homebrew.

➤ **Select “t2.micro” as instance type from the list**



Step 2: Choose an Instance Type

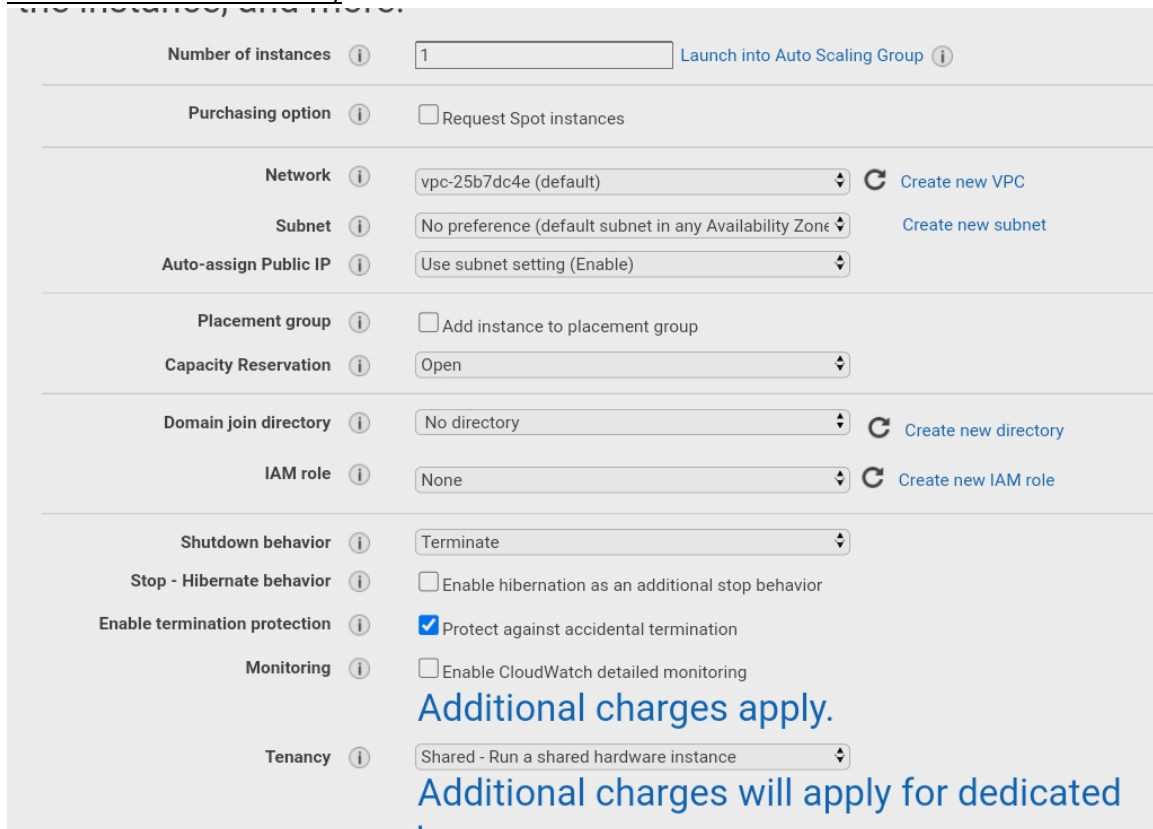
Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources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

Filter by: **t2** **Current generation** [Show/Hide Columns](#)

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, ~, 1 GiB memory, EBS only)

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

➤ **Select Shutdown behavior as Terminate and Enable termination protection ON (protect against accidental termination of the instance)**



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

Purchasing option ☐ Request Spot instances

Network [Create new VPC](#)

Subnet [Create new subnet](#)

Auto-assign Public IP

Placement group ☐ Add instance to placement group

Capacity Reservation

Domain join directory [Create new directory](#)

IAM role [Create new IAM role](#)

Shutdown behavior

Stop - Hibernate behavior ☐ Enable hibernation as an additional stop behavior

Enable termination protection ☒ Protect against accidental termination

Monitoring ☐ Enable CloudWatch detailed monitoring

Tenancy

Additional charges apply.

Additional charges will apply for dedicated tenancy.

➤ **Click on ADD Tag for mentioning name to the instance**




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 (128 characters maximum)	Value (256 characters maximum)	Instances 	Volumes 	Network Interfaces 
This resource currently has no tags				
Choose the Add tag button or click to add a Name tag . Make sure your IAM policy includes permissions to create tags.				
<div>Add Tag (Up to 50 tags maximum)</div>				

➤ **Fill the Key field as “Name” and the Value field as “mynewserver” (This will tag the instance name to “mynewserver”) and continue.**

aws Services Search for services, features, marketplace produc [Alt+S] SUNEER_AWS Ohio Support




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

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Key (128 characters maximum)	Value (256 characters maximum)	Instances 	Volumes 	Network Interfaces 
name	mynewserver	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<div>Add another tag (Up to 50 tags maximum)</div>				

- Next we need to create a new security group (select create a new security group and enter the group name, then select the type as “All traffic” and Source as “Anywhere” .) and continue.

aws

Services

Search for services, features, marketplace produc [Alt+S]

SUNEER_AWS

Ohio

Support

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
All traffic	All	0 - 65535	Anywhere	0.0.0.0/0, ::/0

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.

- Now review the all configurations we have selected for the instance and launch

AMI Details

Edit AMI

Free tier eligible

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-00dfe2c7ce89a450b

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. This AMI is the successor of the Amazon Linux AMI that is a...

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	-	1	1	EBS only	-	Low to Moderate

Security Groups

Edit security groups

Security group name

mynewsecuritygroup

Description

launch-wizard-1 created 2021-09-14T20:03:25.828+03:00

Type	Protocol	Port Range	Source	Description
All traffic	All	All	0.0.0.0/0	
All traffic	All	All	::/0	

Instance Details

Edit instance details

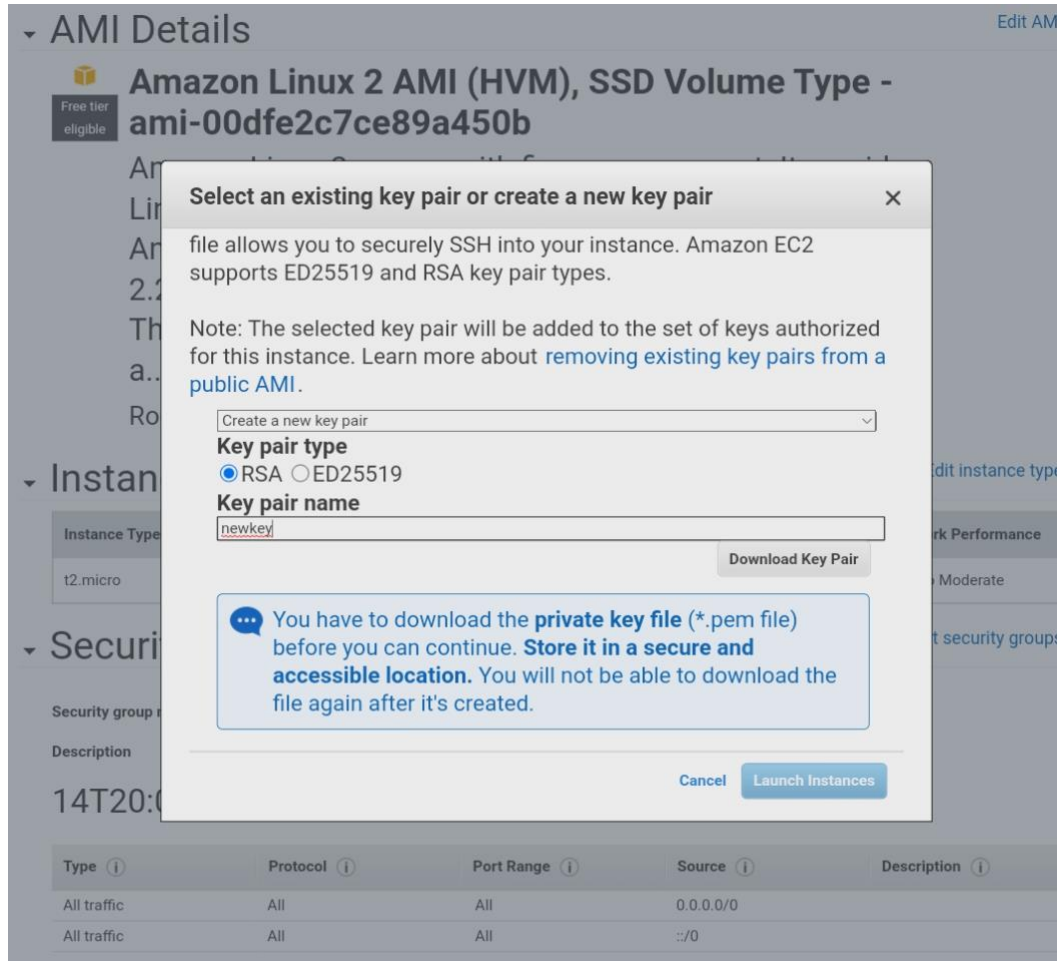
Storage

Edit storage

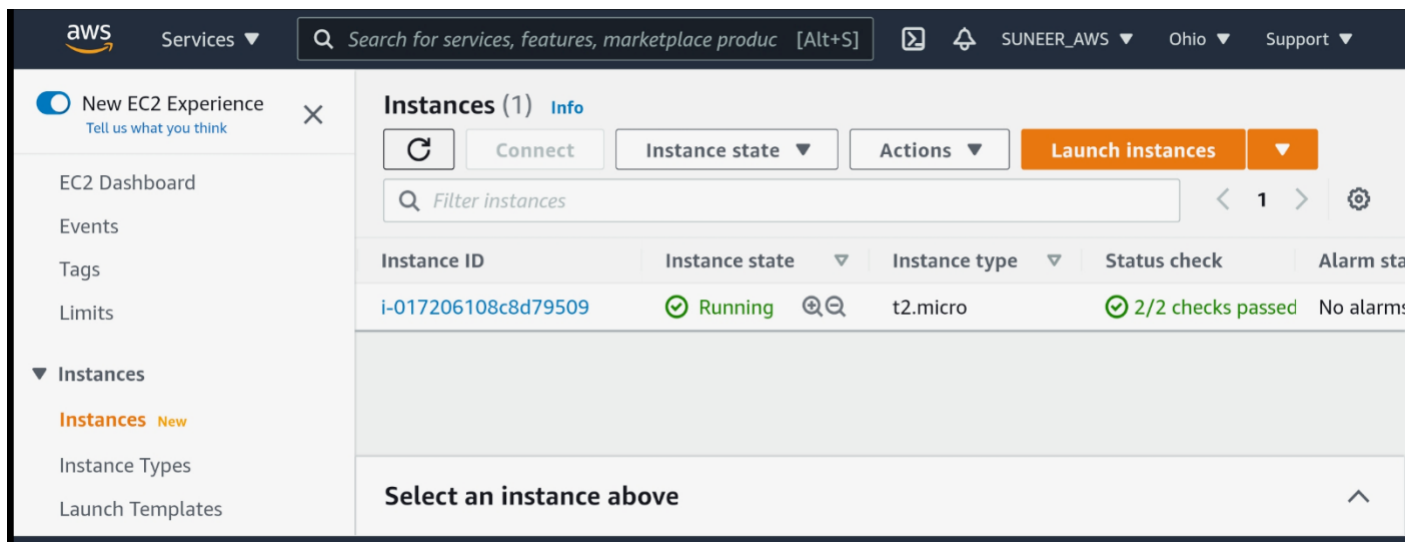
Tags

Edit tags

- Next we need to create a new key pair and select RSA as type, then enter the name for the key pair as “newkey” and download . Then Launch the Instance.



- Few minutes later the instance will be in running state after the 2 status checks passed.



➤ Now select the instance and click Connect

The screenshot shows the AWS Management Console interface. The top navigation bar includes the AWS logo, 'Services' dropdown, a search bar, and user/region information (SUNEER_AWS, Ohio). The left sidebar shows the 'Instances' menu. The main content area displays 'Instances (1)' with a table containing one instance: 'mynewserver' with ID 'i-017206108c8d79509', state 'Running', and type 't2.micro'. The 'Connect' button is visible above the table.

Name	Instance ID	Instance state	Instance type
mynewserver	i-017206108c8d79509	Running	t2.micro

➤ Now connect the instance

The screenshot shows the 'Connect to instance' dialog box in the AWS Management Console. The 'EC2 Instance Connect' tab is selected. The dialog displays the instance ID 'i-017206108c8d79509' and the public IP address '18.217.68.207'. The user name 'ec2-user' is entered in the 'User name' field. A note states: 'Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.' The 'Connect' button is visible at the bottom right.

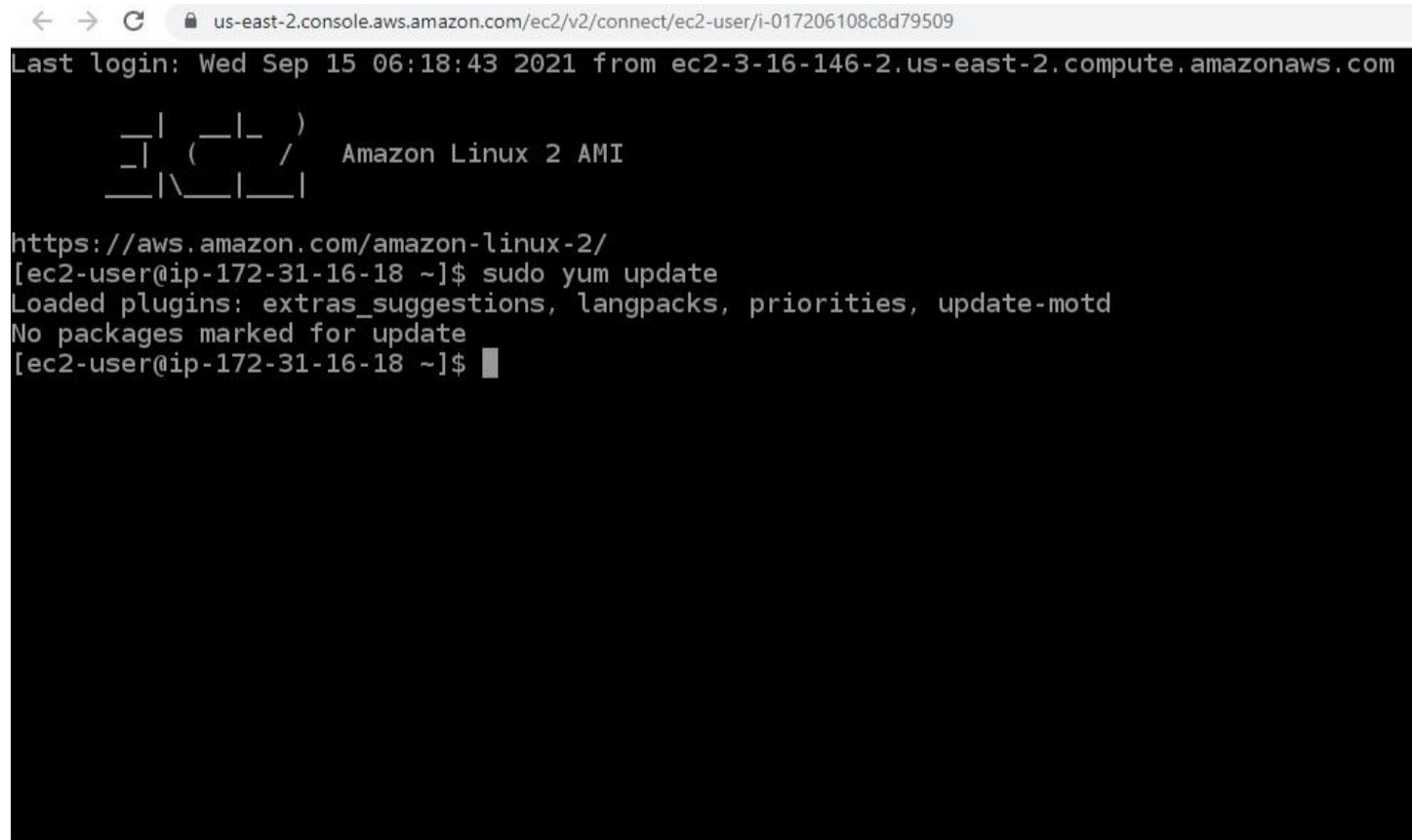
Instance ID: i-017206108c8d79509

Public IP address: 18.217.68.207

User name: ec2-user

Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

➤ Instance is Successfully Connected . Update command is executed in the instance .



The screenshot shows the AWS Management Console interface for an Amazon EC2 instance. The browser address bar displays the URL: `us-east-2.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-017206108c8d79509`. The terminal window shows the following content:

```
Last login: Wed Sep 15 06:18:43 2021 from ec2-3-16-146-2.us-east-2.compute.amazonaws.com

  _ | _ | _ )
 _ | ( _ | /   Amazon Linux 2 AMI
 _ | \ _ | _ |

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-16-18 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
No packages marked for update
[ec2-user@ip-172-31-16-18 ~]$
```

i-017206108c8d79509 (mynewserver)

Public IPs: 18.217.68.207 Private IPs: 172.31.16.18