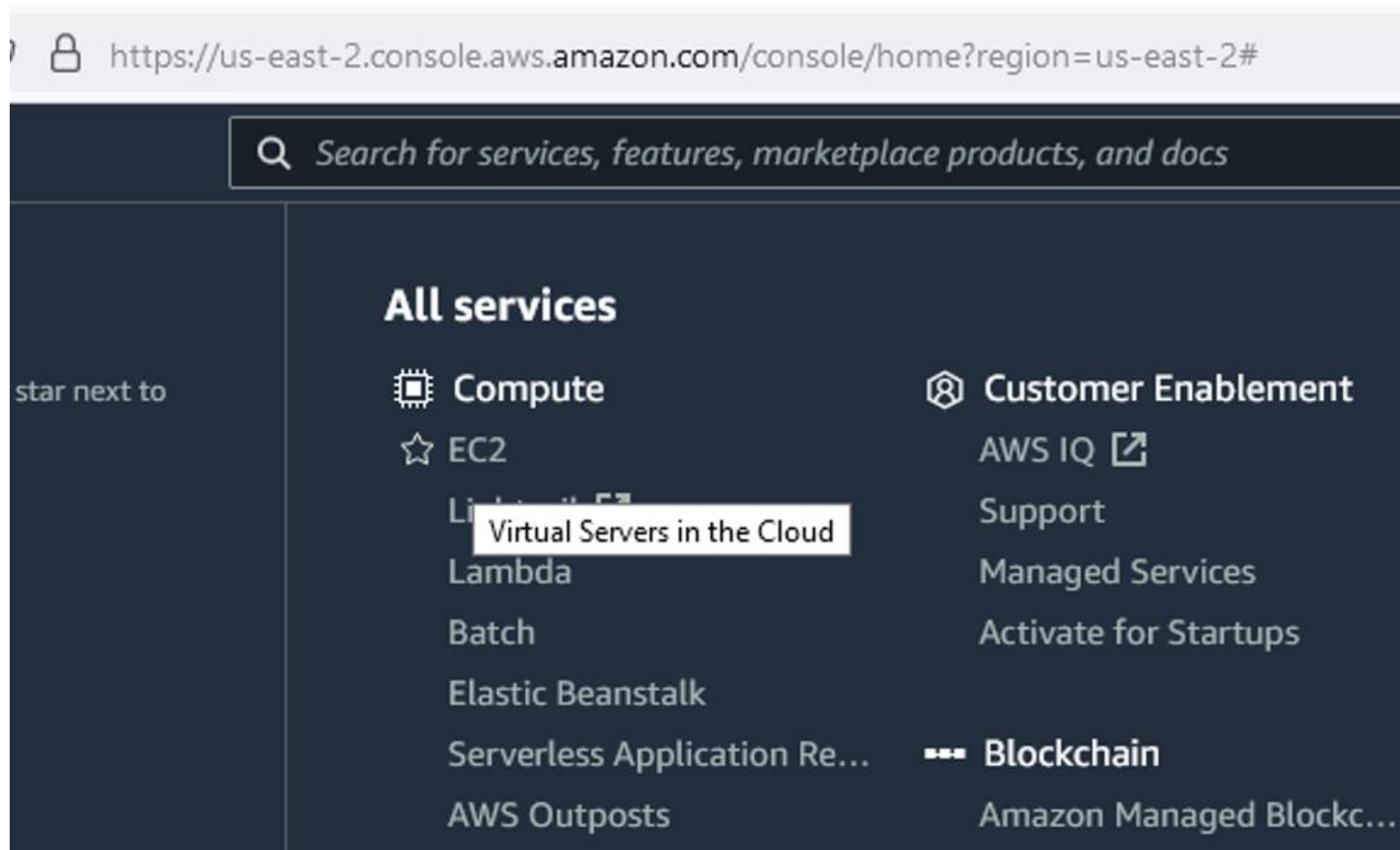


Implement Apache Web Server On Cloud

(Launch Apache Web Server Using AWS EC2)

Launch EC2 Instance



Find EC2 Service

Launch EC2 Instance

 New EC2 Experience
Tell us what you think 

EC2 Dashboard New

Events

Tags

Limits

▼ **Instances**

Instances New

Instance Types

Launch Templates

Spot Requests

Resources



You are using the following Amazon EC2 resources in the US East (Ohio) Region:

Instances (running)	0	Dedicated Hosts	0
Elastic IPs	0	Instances	0
Key pairs	1	Load balancers	0
Placement groups	0	Security groups	1
Snapshots	0	Volumes	0

View Key Pair

aws Services ▾ Search for services, features, marketplace products, and docs [Alt+S] vipin.gupta ▾

New EC2 Experience Tell us what you think ✕

EC2 Dashboard **New**

Events

Tags

Limits

Key pairs (1)

Filter key pairs

<input type="checkbox"/>	Name ▾	Fingerprint ▾	ID
<input type="checkbox"/>	vipingupta	6d:af:53:c0:aa:a2:e9:3c:2d:7a:69:9b:27...	key-03978ed447621e819

Launch EC2 Instance

The screenshot shows the AWS Management Console interface for EC2 instances. The browser address bar indicates the URL is `https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=`. The navigation bar includes the AWS logo, 'Services' dropdown, search, and user profile 'vipin.gupta' in the 'Ohio' region. The left sidebar contains navigation options: 'New EC2 Experience', 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances' (expanded), 'Instances', 'Instance Types', 'Launch Templates', and 'Spot Requests'. The main content area is titled 'Instances Info' and features a toolbar with 'Refresh', 'Connect', 'Instance state', and 'Actions' buttons. The 'Launch instances' button is highlighted in orange, and its dropdown menu is open, showing 'Launch instances' and 'Launch instance from template' options. Below the toolbar is a search bar labeled 'Filter instances' and a table with columns 'Name', 'Instance ID', and 'Instance state'. The table is currently empty, displaying the message 'No matching instances found'.

Click on “Launch Instances”

Launch EC2 Instance

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

Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

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

[Search by Systems Manager parameter](#)

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Free tier only 



Amazon Linux
Free tier eligible

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0d8d212151031f51c (64-bit x86) / ami-0950ad18d0a34dad9 (64-bit Arm)

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 approaching end of life on December 31, 2020 and has been removed from this wizard.

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

Select

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



macOS Big Sur 11.4 - ami-0081f6423dfc57802

The macOS Big Sur AMI is an EBS-backed, AWS-supported image. This AMI includes the AWS Command Line Interface (CLI), AWS SDK for Python (Boto3), and the AWS CLI.

Select

64-bit (Mac)

Select Linux 2 AMI which is also Free tier eligible

Launch EC2 Instance

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 families 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

Cancel

Previous

Review and Launch

Next: Configure Instance Details

Launch EC2 Instance

1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

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



[Launch into Auto Scaling Group](#)



Purchasing option



Request Spot instances

Network



vpc-fee37a95 (default)



[Create new VPC](#)

Subnet



No preference (default subnet in any Availability Zone)



[Create new subnet](#)

Auto-assign Public IP



Use subnet setting (Enable)



Launch EC2 Instance

1. Choose AMI 2. Choose Instance Type 3. Configure Instance **4. Add Storage** 5. Add Tags 6. Configure Security Group 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 <small>i</small>	Device <small>i</small>	Snapshot <small>i</small>	Size (GiB) <small>i</small>	Volume Type <small>i</small>	IOPS <small>i</small>	Throughput (MB/s) <small>i</small>	Delete on Termination <small>i</small>	Encryption <small>i</small>
Root	/dev/xvda	snap-0e49f571b1ca30ad6	<input type="text" value="8"/>	General Purpose S <small>v</small>	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt <small>v</small>

Add New Volume

Launch EC2 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 ⓘ	
<input type="text" value="Name"/>	<input type="text" value="Apache Web Server"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="X"/>

(Up to 50 tags maximum)

Cancel

Previous

Review and Launch

Next: Configure Security Group

Launch EC2 Instance

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

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
HTTP ▾	TCP	80	Custom ▾ 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop
HTTPS ▾	TCP	443	Custom ▾ 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop

Add Rule

Cancel Previous **Review and Launch**

Create security group. Allow traffic on 22, 80 and 443 ports.

Launch EC2 Instance

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, webserver, 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](#)



Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0d8d212151031f51c

Free tier eligible

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

[Cancel](#)

[Previous](#)

[Launch](#)

Launch EC2 Instance

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

vipingupta



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

Cancel

Launch Instances

Select key pair.

Launch EC2 Instance

Launch Status



Initiating Instance Launches

Please do not close your browser while this is loading

Creating security groups... Successful

Authorizing inbound rules...

View Instances

Launch Status



Your instances are now launching

The following instance launches have been initiated: [i-04fecc6c42dcc9aed](#) [View launch log](#)



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](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: User Guide](#)
- [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](#)

View Instance Details

Note down Public IPv4 address

Instances (1/1) Info Refresh Connect Instance state Actions Launch instances

Filter instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 D
Apache Web S...	i-04fecc6c42dcc9aed	Running	t2.micro	2/2 checks passed	No alarms	us-east-2a	ec2-52-15-85...

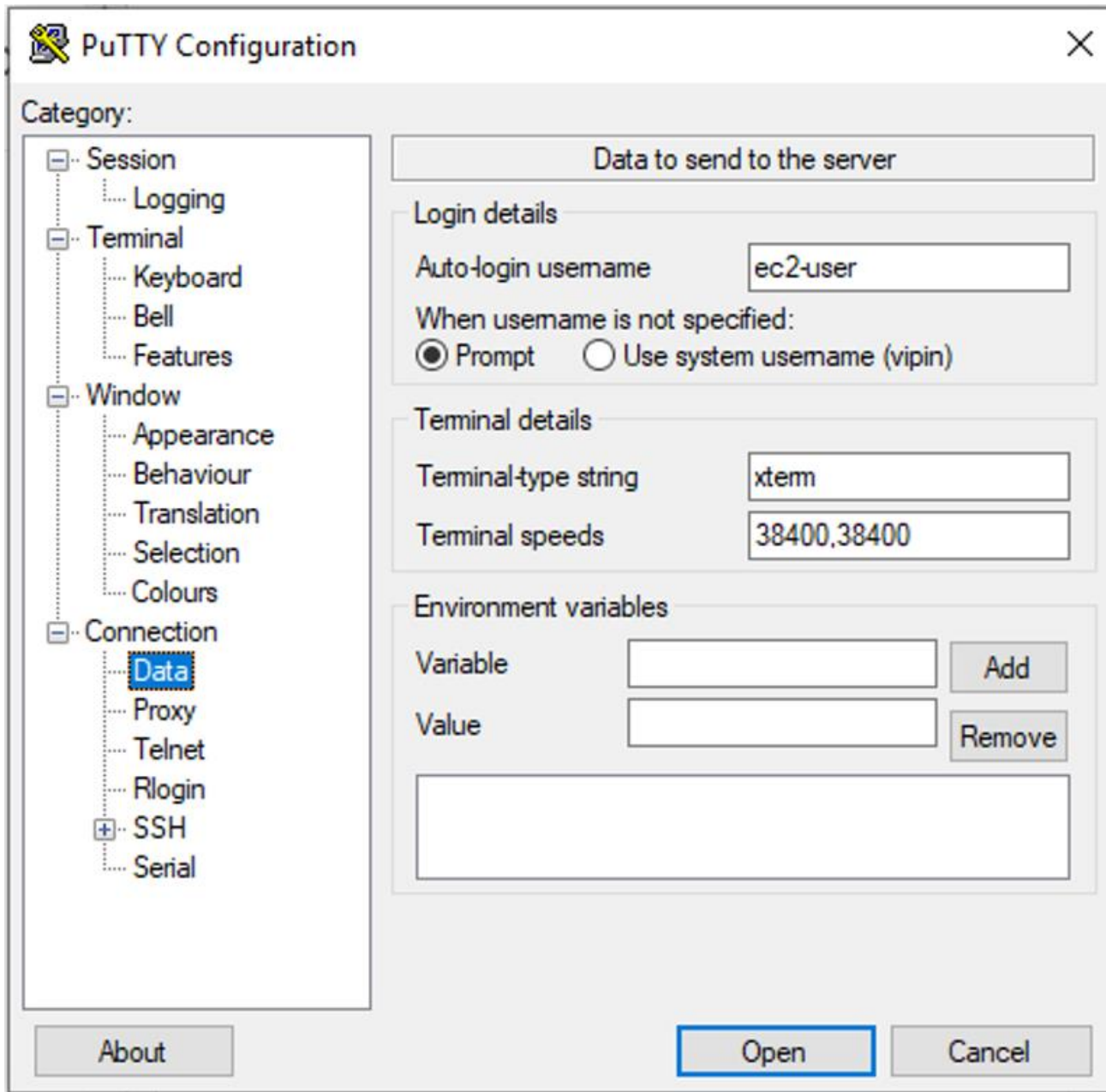
Instance: i-04fecc6c42dcc9aed (Apache Web Server)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

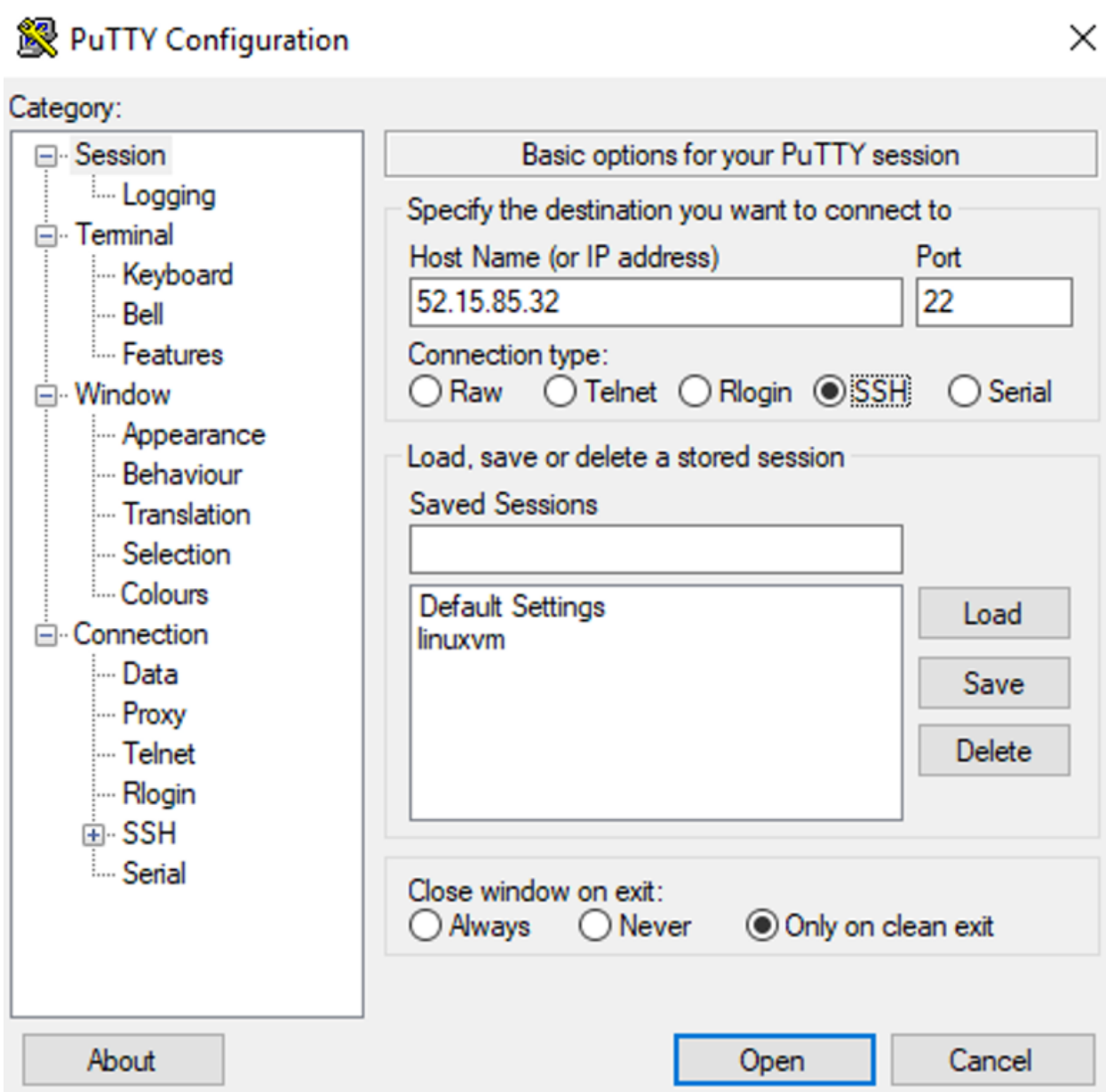
Instance summary Info

Instance ID i-04fecc6c42dcc9aed (Apache Web Server)	Public IPv4 address 52.15.85.32 open address	Private IPv4 addresses 172.31.10.197
Instance state Running	Public IPv4 DNS ec2-52-15-85-32.us-east-2.compute.amazonaws.com open address	Private IPv4 DNS ip-172-31-10-197.us-east-2.compute.internal
Instance type t2.micro	Elastic IP addresses -	VPC ID vpc-fee37a95

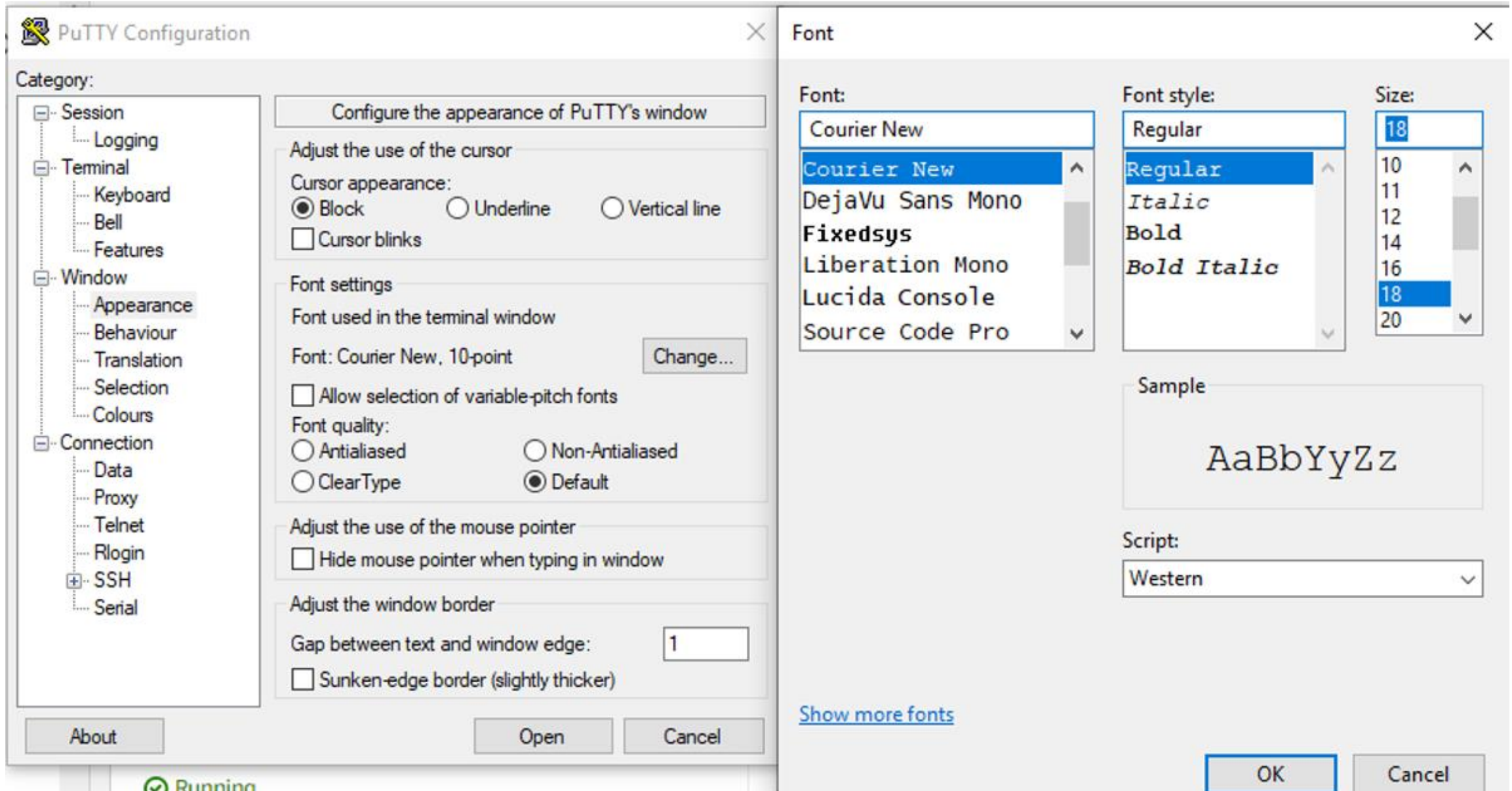
Access EC2 Instance Using Putty



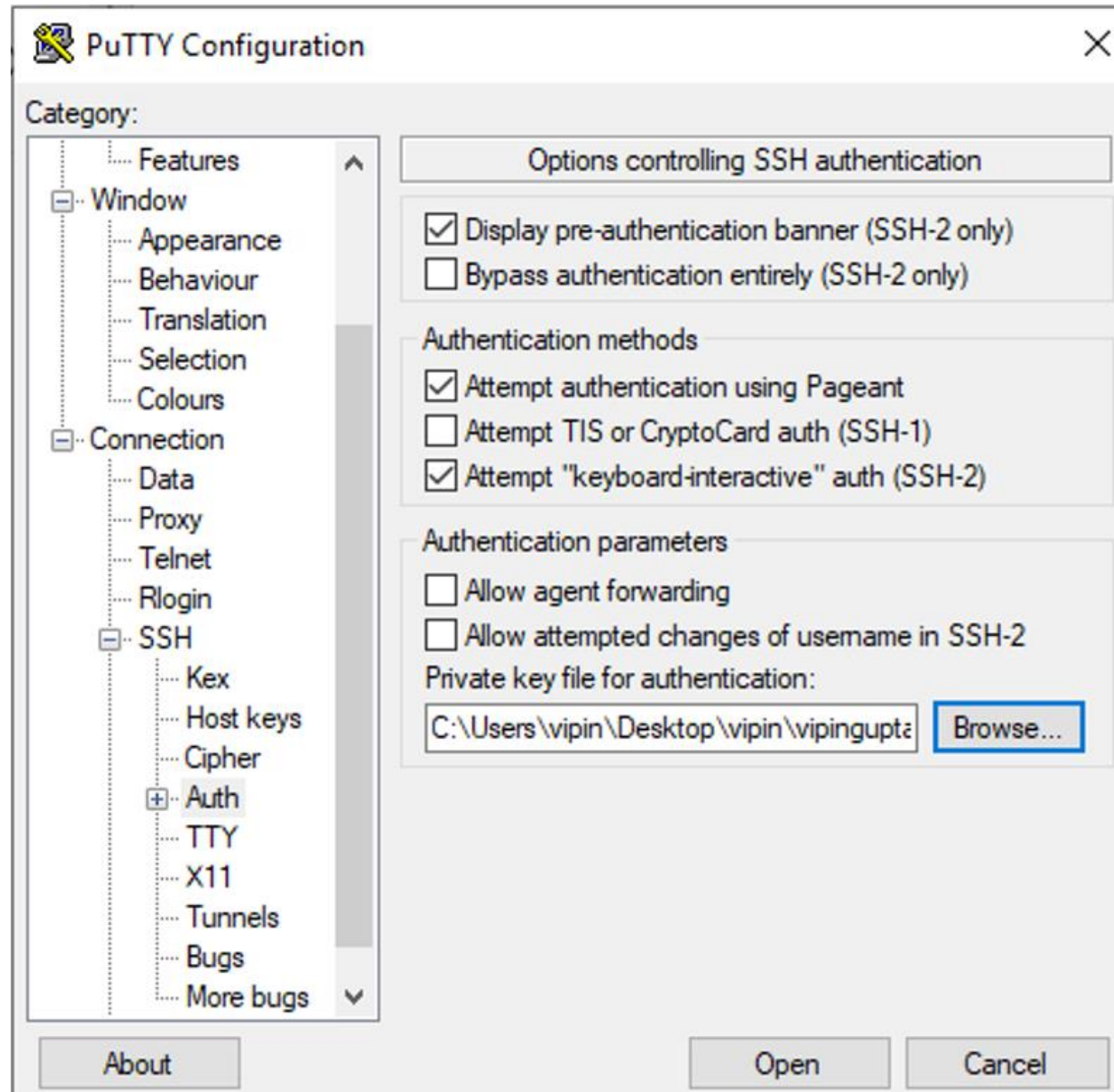
Access EC2 Instance Using Putty



Access EC2 Instance Using Putty



Access EC2 Instance Using Putty



Access EC2 Instance Using Putty

```
ec2-user@ip-172-31-10-197:~  
Using username "ec2-user".  
Authenticating with public key "imported-openssh-key"  
  
  ____|  |____ )  
  |  |  (_____/   Amazon Linux 2 AMI  
  ____| \_____|_____|  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-10-197 ~]$ █
```

Install Apache Web Server On EC2 Instance

```
[ec2-user@ip-172-31-10-197 ~]$ sudo -s  
[root@ip-172-31-10-197 ec2-user]#  
[root@ip-172-31-10-197 ec2-user]# rpm -q httpd  
package httpd is not installed  
[root@ip-172-31-10-197 ec2-user]#  
[root@ip-172-31-10-197 ec2-user]# yum -q install httpd
```

Install Apache Web Server On EC2 Instance

```
[root@ip-172-31-10-197 ec2-user]# yum -q install httpd
```

```
=====
Package                Arch      Version                Repository            Size
=====
Installing:
httpd                   x86_64    2.4.46-1.amzn2         amzn2-core            1.3 M
Installing for dependencies:
apr                     x86_64    1.6.3-5.amzn2.0.2     amzn2-core            118 k
apr-util                x86_64    1.6.1-5.amzn2.0.2     amzn2-core            99 k
apr-util-bdb            x86_64    1.6.1-5.amzn2.0.2     amzn2-core            19 k
generic-logos-httpd    noarch    18.0.0-4.amzn2        amzn2-core            19 k
httpd-filesystem       noarch    2.4.46-1.amzn2        amzn2-core            23 k
httpd-tools             x86_64    2.4.46-1.amzn2        amzn2-core            87 k
mailcap                 noarch    2.1.41-2.amzn2        amzn2-core            31 k
mod_http2               x86_64    1.15.14-2.amzn2       amzn2-core            147 k
=====
```

Transaction Summary

```
=====
Install 1 Package (+8 Dependent packages)
```

```
Is this ok [y/d/N]: y
```

```
[root@ip-172-31-10-197 ec2-user]# _
```

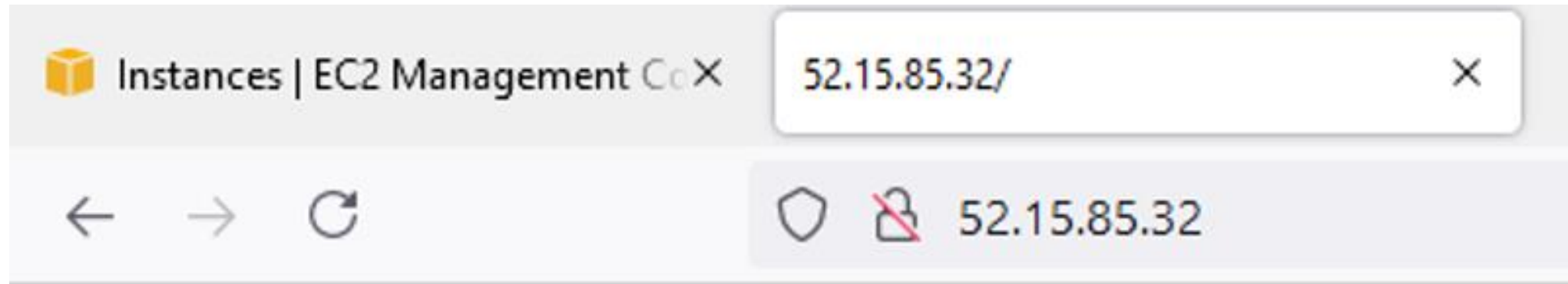
Create Web Page

```
root@ip-172-31-10-197 ec2-user]# cd
root@ip-172-31-10-197 ~]#
root@ip-172-31-10-197 ~]# cd /var/www/html
root@ip-172-31-10-197 html]#
root@ip-172-31-10-197 html]# ls
root@ip-172-31-10-197 html]#
root@ip-172-31-10-197 html]# cat >index.html
Apache Web Server running in Cloud
root@ip-172-31-10-197 html]#
```

Start Apache Web Server On EC2 Instance

```
[root@ip-172-31-10-197 html]#  
[root@ip-172-31-10-197 html]# systemctl start httpd  
[root@ip-172-31-10-197 html]#  
[root@ip-172-31-10-197 html]# systemctl enable httpd  
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service  
to /usr/lib/systemd/system/httpd.service.  
[root@ip-172-31-10-197 html]# _
```

Verify



Apache Web Server running in Cloud