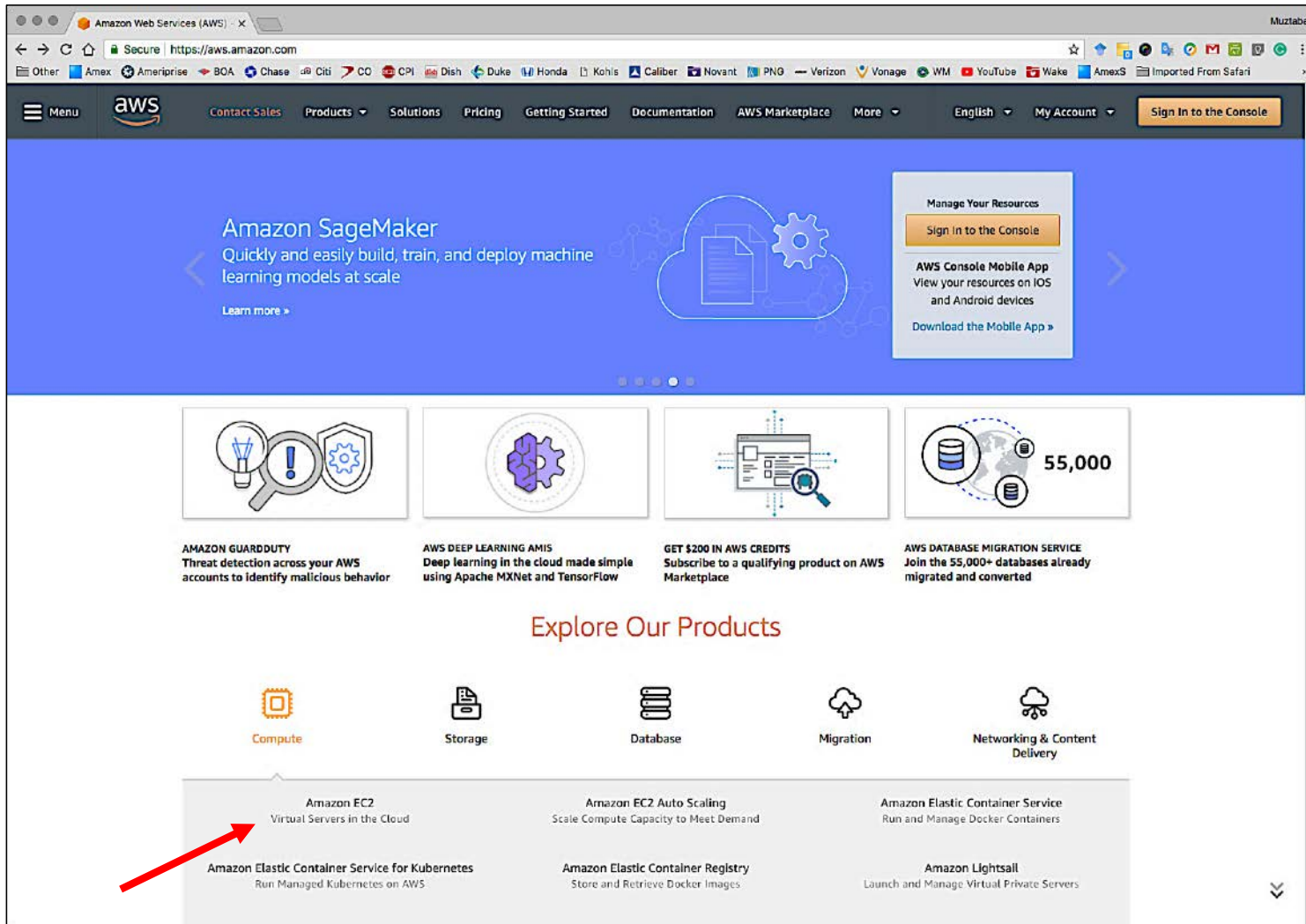


# Amazon Web Services

**Tutorial**



Visit  
<https://aws.amazon.com>

Amazon EC2

Secure and resizable compute capacity in the cloud. Launch applications when needed without upfront commitments.

Get started with Amazon EC2

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers.

Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction. It provides you with complete control of your computing resources and lets you run on Amazon's proven computing environment. Amazon EC2 reduces the time required to obtain and boot new server instances to minutes, allowing you to quickly scale capacity, both up and down, as your computing requirements change. Amazon EC2 changes the economics of computing by allowing you to pay only for capacity that you actually use. Amazon EC2 provides developers the tools to build failure resilient applications and isolate them from common failure scenarios.

Try Amazon EC2 for Free

AWS Free Tier includes 750 hours of Linux and Windows t2.micro instances each month for one year. To stay within the Free Tier, use only EC2 Micro instances.

[View AWS Free Tier details >>](#)

## Benefits

<b>ELASTIC WEB-SCALE COMPUTING</b>	<b>COMPLETELY CONTROLLED</b>	<b>FLEXIBLE CLOUD HOSTING SERVICES</b>
Amazon EC2 enables you to increase or decrease capacity within minutes, not hours or days. You can provision...	You have complete control of your instances including network and the ability to interact with the...	You have the choice of multiple instance types, operating systems, and frameworks. Amazon EC2 allows...

You need to create a new amazon account or can use your existing

To verify your identity, Amazon will ask for your credit card. It will not charge you.

Amazon EC2

AWS Management Console

Muhtaba

Securehttps://console.aws.amazon.com/console/home?region=us-east-1/#

OtherAmexAmeripriseBOAChaseCitiCOPIDishDukeHondaKohlsCaliberNovantPNGVerizonVonageWMYouTubeWakeAmexSImported From Safari

awsServicesResource Groups

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AWS services

Find a service by name or feature (for example, EC2, S3 or VM, storage).

> Recently visited services

< All services

Compute

EC2

Lightsail

Elastic Container Service

Lambda

Batch

Elastic Beanstalk

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S3

EFS

Glacier

Storage Gateway

Database

Relational Database Service

DynamoDB

ElastiCache

Amazon Redshift

Migration

AWS Migration Hub

Application Discovery Service

Database Migration Service

Server Migration Service

Snowball

Networking & Content Delivery

VPC

CloudFront

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AWS DeepLens

Amazon Lex

Machine Learning

Amazon Polly

Rekognition

Amazon Transcribe

Amazon Translate

Analytics

Mobile Services

Mobile Hub

AWS AppSync

Device Farm

Mobile Analytics

AR & VR

Amazon Sumerian

Application Integration

Step Functions

Amazon MQ

Simple Notification Service

Simple Queue Service

SWF

Customer Engagement

Amazon Connect

Pinpoint

Simple Email Service

Business Productivity

Alexa for Business

Amazon Chime

WorkDocs

WorkMail

Desktop & App Streaming

WorkSpaces

AppStream 2.0

Helpful tips

Manage your costs

Get real-time billing alerts based on your cost and usage budgets. [Start now](#)

Create an organization

Use AWS Organizations for policy-based management of multiple AWS accounts. [Start now](#)

Explore AWS

Amazon Relational Database Service (RDS)

RDS manages and scales your database for you. RDS supports Aurora, MySQL, PostgreSQL, MariaDB, Oracle, and SQL Server. [Learn more](#)

Real-Time Analytics with Amazon Kinesis

Stream and analyze real-time data, so you can get timely insights and react quickly. [Learn more](#)

Get Started with Containers on AWS

Amazon ECS helps you build and scale containers for any size application. [Learn more](#)

AWS Marketplace

Discover, procure, and deploy popular software products that run on AWS. [Learn more](#)

Have feedback?

[Submit feedback](#) to tell us about your experience with the AWS Management Console.



Amazon EC2

EC2 Management Console

Muhtaba

Secure

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Home:

Other

Amex

Ameriprise

BOA

Chase

Citi

CO

CPI

Dish

Duke

Honda

Kohls

Caliber

Novant

PNG

Verizon

Vonage

WM

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Woke

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Resource Groups

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Spot Requests

Reserved Instances

Dedicated Hosts

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Compliance

Automations

Patch Compliance

Patch Baselines

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) region:

0 Running Instances

0 Dedicated Hosts

1 Volumes

1 Key Pairs

0 Placement Groups

1 Elastic IPs

0 Snapshots

0 Load Balancers

2 Security Groups

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 Instance.

Launch Instance

Note: Your instances will

Launch Instance

Launch Instance from template

Service Health

Service Status:

US East (N. Virginia):

This service is operating normally

Availability Zone Status:

us-east-1a:

Availability zone is operating normally

us-east-1b:

Availability zone is operating normally

us-east-1c:

Availability zone is operating normally

us-east-1d:

Availability zone is operating normally

us-east-1e:

Availability zone is operating normally

us-east-1f:

Availability zone is operating normally

Service Health Dashboard

Scheduled Events

US East (N. Virginia):

No events

Account Attributes

Supported Platforms

VPC

Default VPC

vpc-cc0a99b7

Resource ID length management

Additional Information

Getting Started Guide

Documentation

All EC2 Resources

Forums

Pricing

Contact Us

AWS Marketplace

Find free software trial products in the AWS Marketplace from the EC2 Launch Wizard . Or try these popular AMIs:

Barrocloud CloudGen Firewall for AWS - PAYG

Provided by Barracuda Networks, Inc.

Rating

Starting from \$0.60/hr or from \$4,599/yr (12% savings) for software + AWS usage fees

View all Infrastructure Software

Matillion ETL for Snowflake

Provided by Matillion

Rating

Starting from \$1.37/hr or from \$9,950/yr (17% savings) for software + AWS usage fees

View all Business Software

Splunk Insights for AWS Cloud Monitoring

Provided by Splunk Inc.

Rating

Bring Your Own License + AWS usage fees

View all Developer Tools

Find more software on AWS Marketplace

Amazon EC2 Management Console

Step 1: Choose an Amazon Machine Image (AMI)









Quick Start

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only

 Amazon Linux Free tier eligible	<b>Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-1853ac65</b> 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	Select 64-bit
 Amazon Linux Free tier eligible	<b>Amazon Linux 2 LTS Candidate AMI 2017.12.0 (HVM), SSD Volume Type - ami-428aa836</b> 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    ENA Enabled: Yes	Select 64-bit
 Red Hat Free tier eligible	<b>Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-26e6bc5c</b> Red Hat Enterprise Linux version 7.4 (HVM), EBS General Purpose (SSD) Volume Type Root device type: ebs    Virtualization type: hvm    ENA Enabled: Yes	Select 64-bit
 SUSE Linux Free tier eligible	<b>SUSE Linux Enterprise Server 12 SP3 (HVM), SSD Volume Type - ami-62bda218</b> 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    ENA Enabled: Yes	Select 64-bit
 Ubuntu Free tier eligible	<b>Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-43a15f3e</b> Ubuntu Server 16.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical ( <a href="http://www.ubuntu.com/cloud/services">http://www.ubuntu.com/cloud/services</a> ). Root device type: ebs    Virtualization type: hvm    ENA Enabled: Yes	Select 64-bit
 Windows Free tier eligible	<b>Microsoft Windows Server 2016 Base - ami-ed14c790</b> Microsoft Windows 2016 Datacenter edition. [English] Root device type: ebs    Virtualization type: hvm    ENA Enabled: Yes	Select 64-bit
 Deep Learning AMI (Ubuntu) Version 6.0 - ami-bc09d9c1 Free tier eligible	<b>Deep Learning AMI (Ubuntu) Version 6.0 - ami-bc09d9c1</b> Comes with latest binaries of deep learning frameworks pre-installed in separate virtual environments: MXNet, TensorFlow, Caffe, Caffe2, PyTorch, Keras, Chainer, Theano and CNTK. Fully configured with Nvidia CUDA, cuDNN and NCCL as well as Intel MKL-DNN Root device type: ebs    Virtualization type: hvm    ENA Enabled: Yes	Select 64-bit
 Amazon Linux Free tier eligible	<b>Deep Learning AMI (Amazon Linux) Version 6.0 - ami-6637e51b</b> Comes with latest binaries of deep learning frameworks pre-installed in separate virtual environments: MXNet, TensorFlow, Caffe, Caffe2, PyTorch, Keras, Chainer, Theano and CNTK. Fully configured with Nvidia CUDA, cuDNN and NCCL as well as Intel MKL-DNN Root device type: ebs    Virtualization type: hvm    ENA Enabled: Yes	Select 64-bit

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Select a free Linux machine

Select a free tier eligible type

Amazon EC2 Management Console

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

### 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 (GiB)	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	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
<input type="checkbox"/>	General purpose	m5.12xlarge	48	192	EBS only	Yes	10 Gigabit	Yes
<input type="checkbox"/>	General purpose	m5.24xlarge	96	384	EBS only	Yes	25 Gigabit	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
<input type="checkbox"/>	General purpose	m4.4xlarge	16	64	EBS only	Yes	High	Yes
<input type="checkbox"/>	General purpose	m4.10xlarge	40	160	EBS only	Yes	10 Gigabit	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details

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Amazon EC2

EC2 Management Console

Muztaba

Securehttps://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

OtherAmexAmeripriseBDAChaseCitiCOCPIDishDukeHondaKehleCaliberNovantPNGVerizonVonageWMYouTubeWakeAmexSImported From Safari

ServicesResource Groups

mustafa.fuad@gmail.comN. VirginiaSupport

1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. 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

1

Launch into Auto Scaling Group

Purchasing option

☐ Request Spot instances

Network

vpc-cc0a99b7 (default)

Create new VPC

Subnet

No preference (default subnet in any Availability Zone)

Create new subnet

Auto-assign Public IP

Use subnet setting (Enable)

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

Advanced Details

Cancel

Previous

Review and Launch

Next: Add Storage

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Press Next



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Services Resource Groups

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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 ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Throughput (MB/s) ⓘ	Delete on Termination ⓘ	Encrypted ⓘ
Root	/dev/sda1	snap-0e1cfc902770c514d	10	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

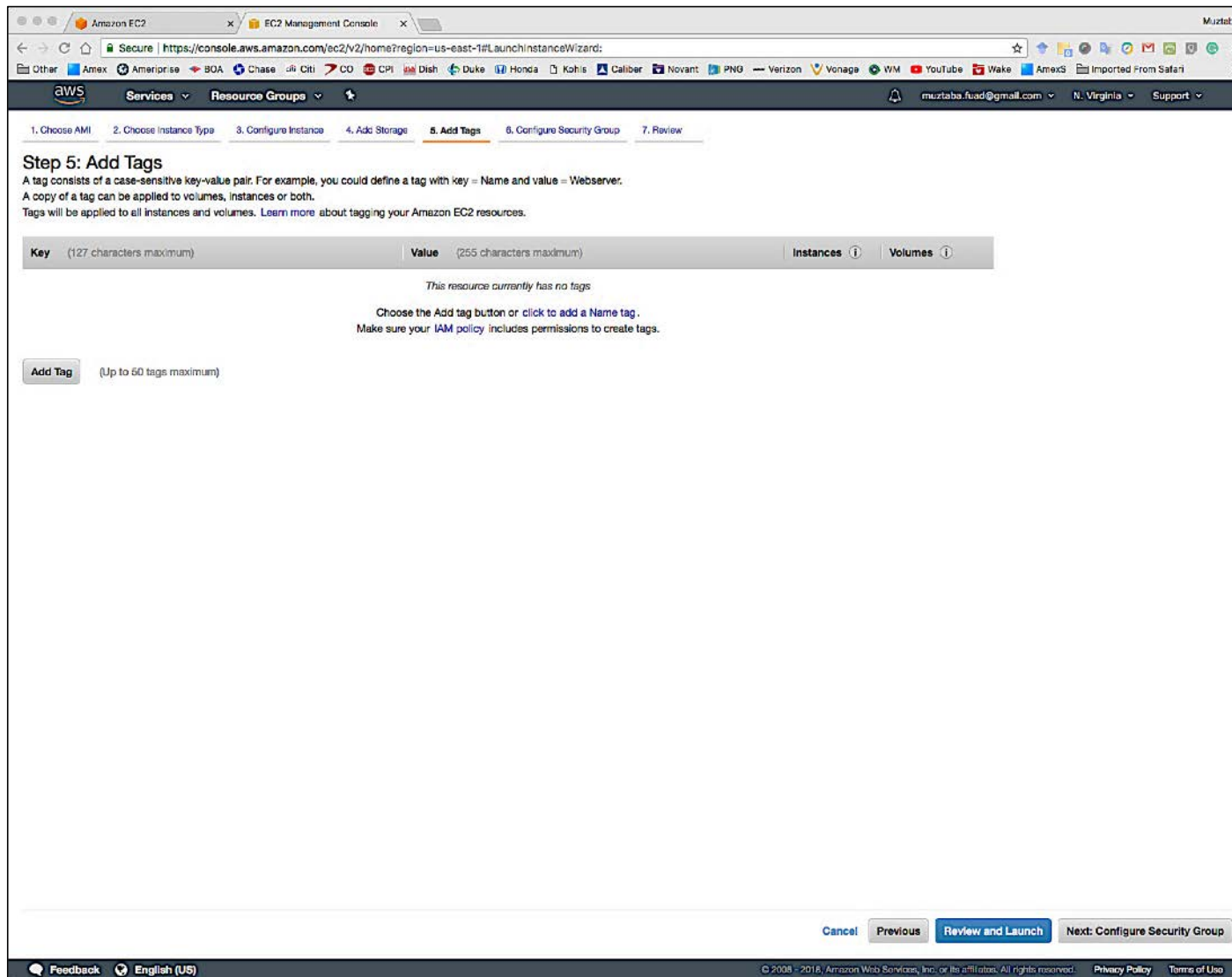
Next: Add Tags

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Press Next



Press Next

Amazon EC2

EC2 Management Console

Murataba

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Services

Resource Groups

mustafa.fusd@gmail.com N. Virginia Support

1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. 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.

CancelPreviousReview and Launch

Feedback

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Amazon EC2

EC2 Management Console

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ServicesResource Groups

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1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. 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, launch-wizard-2, 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

Free tier eligible

Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-28ebbc5c

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

Root Device Type: ebsVirtualization types: hvm

Edit AMI

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

Edit instance type

Security Groups

Security group name

launch-wizard-2

Description

launch-wizard-2 created 2018-03-28T10:51:56.211-04:00

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

Edit security groups

Instance Details

Edit instance details

Storage

Edit storage

Tags

Edit tags

Cancel

Previous

Launch

Feedback

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Amazon EC2 Management Console

Step 7: Review Instance Launch

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

Improve your instances' security. Your security group, launch-wizard-2, 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

Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-28ebbc5c

Free tier eligible

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

Root Device Type: ebs Virtualization type: hvm

Instance Type

Instance Type	ECUs	vCPUs	Memory
t2.micro	Variable	1	1

Security Groups

Security group name	Description
launch-wizard-2	launch-wizard-2 created 2018-03-10

Type: SSH Protocol: TCP

Instance Details

Storage

Tags

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.

Create a new key pair

Key pair name

Download Key Pair

You have to download the **private key file** (\*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.

Cancel Launch Instances

1. Give a name to your private key file

2. Download the file (with extension .pem) and save it in the disk

3. Press "Launch Instance"

## EC2 Dashboard

EC2 Management Console

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

Services Resource Groups

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ELASTIC BLOCK STORE  
Volumes  
Snapshots  
NETWORK & SECURITY  
Security Groups  
Elastic IPs  
Placement Groups  
Key Pairs  
Network Interfaces  
LOAD BALANCING

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
Virtual Machine 1	i-02635c8f8998c4136	t2.micro	us-east-1c	running	2/2 checks ...	None	ec2-54-209-248-56.co...	54.209.248.56	-
test	i-0b4e55a0b865a3a...	t2.micro	us-east-1c	terminated		None		-	-

Instance: i-02635c8f8998c4136 (Virtual Machine 1) Public DNS: ec2-54-209-248-56.compute-1.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID	i-02635c8f8998c4136	Public DNS (IPv4)	ec2-54-209-248-56.compute-1.amazonaws.com
Instance state	running	IPv4 Public IP	54.209.248.56
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-172-31-34-122.ec2.internal
Availability zone	us-east-1c	Private IPs	172.31.34.122
Security groups	launch-wizard-2 . view inbound rules	Secondary private IPs	
Scheduled events	No scheduled events	VPC ID	vpc-cc0a99b7
AMI ID	RHEL-7.4_HVM-20180103-x86_64-2-Hourly2-GP2 (ami-26ebbc5c)	Subnet ID	subnet-68281335
Platform	-	Network interfaces	eth0
IAM role	-	Source/dest. check	True

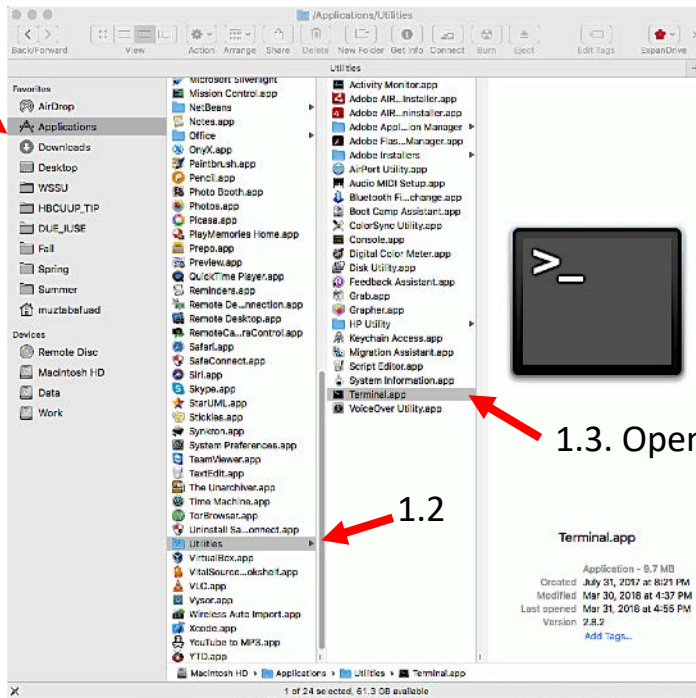
Feedback English (US)

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## If you are using a Mac machine:

1. Open a finder window

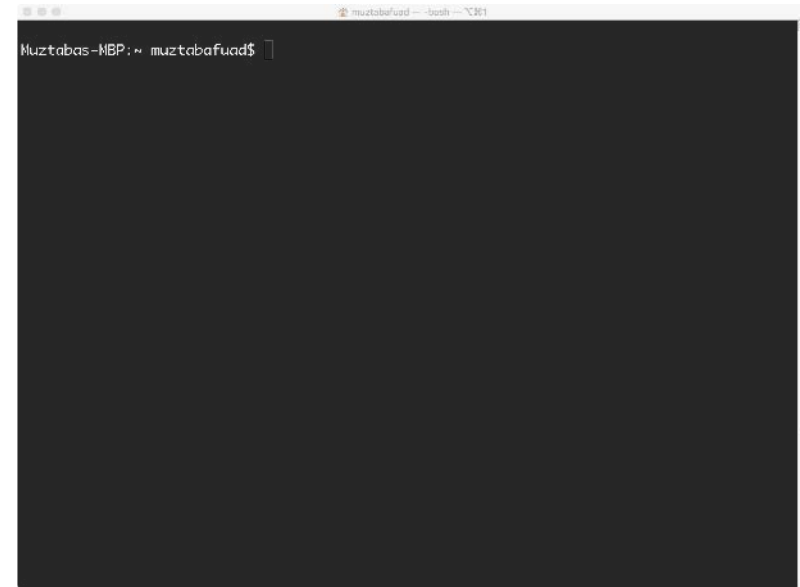
1.1



1.3. Open terminal

1.2

2. A new terminal window will open



3. Copy your .pem file from where you saved before to the current folder

Type in your terminal window:

```
cp [path to your .pem file] [.]
```

Here is an example:

```
cp Downloads/vm1.pem .
```

You can also use Finder window to copy the file

## If you are using a Mac machine:

### 4. Change the permission of the .pem file

Type in your terminal window:

```
chmod 600 [name of your .pem file]
```

Here is an example:

```
chmod 600 vm1.pem
```

### 5. Now login to your AWS instance

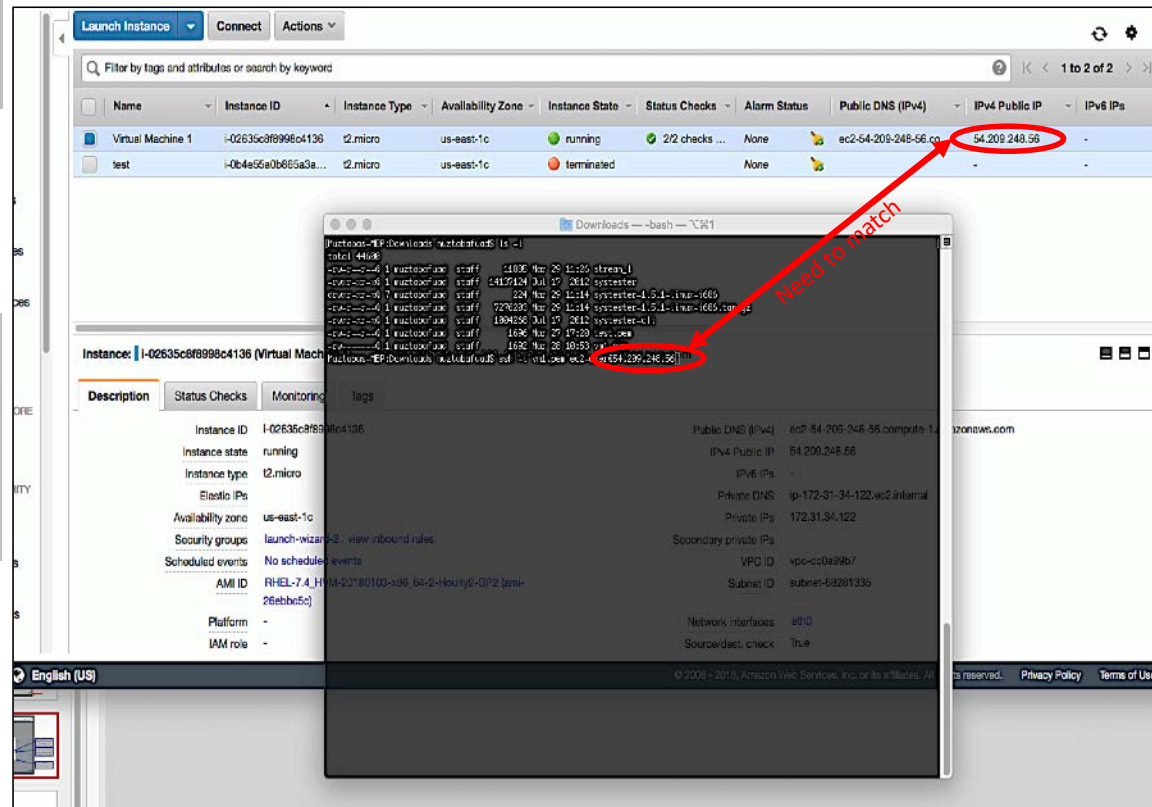
Type in your terminal window:

```
ssh -i [name of your .pem file] ec2-user@[ip address of your instance]
```

Here is an example:

```
ssh -i vm1.pem ec2-user@54.209.248.56
```

Type yes if you are prompted





## If you are using a Mac machine:

### 6. Do the following:

6.1 Download the 2 benchmarking software `systester-cli` and `phoronix.tar.gz` from Canvas.

6.2 Open another terminal window by selecting the terminal window and then clicking the menu “Shell” and clicking on “New Tab”.

6.3 Change to the folder where you saved the above two files in step 6.1 by using the following command

```
cd [path to the folder where you saved the files]
```

So for example:

```
cd /muztabafuad/Downloads
```

6.4 Now use the following command 2 times to upload the 2 files that you downloaded in step 6.1 into your cloud instance

```
scp -i [path to your .pem file] [systester-cli or phoronix.tar.gz] ec2-user@ip address of your instance]
```

So for example:

```
scp -i vm1.pem systester-cli ec2-user@ 54.209.248.56:~
```

**If you are using a Mac machine:**

7. Now you are ready to run the two benchmark software on your instance.

7.1 Go back to the terminal window of Step 5 by clicking the corresponding terminal tab.

7.2 Type in **ls -l** and see whether you can find the two files that you have uploaded

**If you are using a Mac machine:**

8. To Run Systester, write the following command on the terminal:

**./systester-cli**

9. To run Phoronix for the first time, write the following commands in sequence:

**9.1. tar -xvzf phoronix.tar.gz**

**9.2 cd phoronix**

**9.3 sudo yum groupinstall "Development Tools"**

**9.2 sudo yum install php-cli php-xml**

**9.3 sudo ./phoronix-test-suite force-install iozone**

**9.4 ./phoronix-test-suite benchmark iozone**

**Select the corresponding parameters once you run Phoronix**

**9.5 Subsequent run of phoronix should be only step 9.4**

## If you are using a Windows machine:

1. Download Putty from <https://the.earth.li/~sgtatham/putty/latest/w64/putty-64bit-0.70-installer.msi> and install it in your computer.
2. Locate your .pem file and convert it to be used with Putty
  - 2.1. Run PuttyGen by choosing All Programs>Putty>PuttyGen
  - 2.2 Under **Type of key to generate**, choose **RSA**.



3. Choose **Load**. By default, PuttyGen displays only files with the extension **.ppk** . To locate your **.pem** file, select the option to display files of all types.

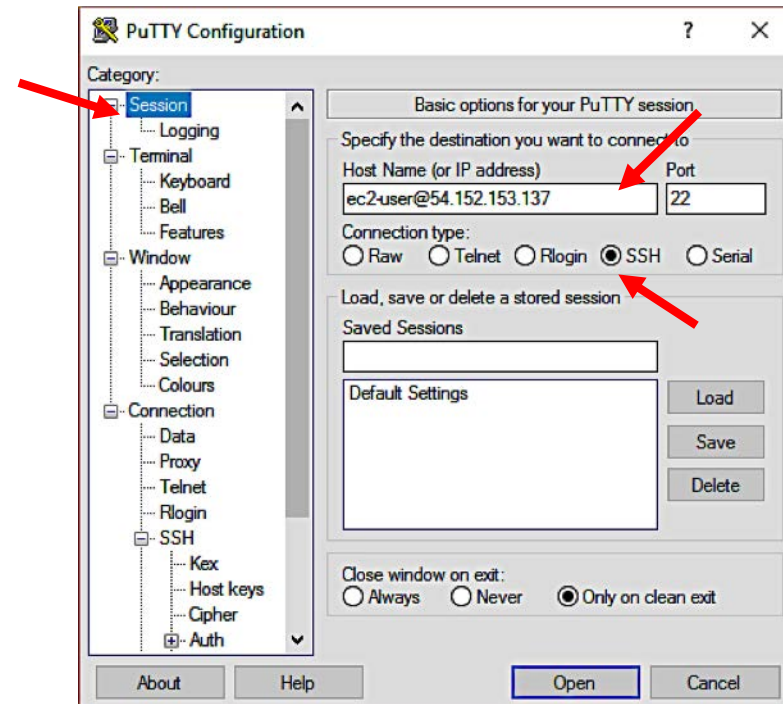


4. Select your **.pem** file, and then choose Open. Choose **OK** to dismiss any confirmation dialog box.
  - 4.1 Choose **Save private key** to save the key in the format that PuTTY can use (has **.ppk** extension).
  - 4.2 PuttyGen displays a warning about saving the key without a passphrase. Choose **Yes**.



## If you are using a Windows machine:

5. Start PuTTY (from the Start menu, choose All Programs > PuTTY > PuTTY).
  - 5.1 In the Category pane, choose **Session** and complete the following fields:
  - 5.2 In the **Host Name box**, enter user\_name @ ip address of your instance
  - 5.3 Under **Connection type**, choose SSH

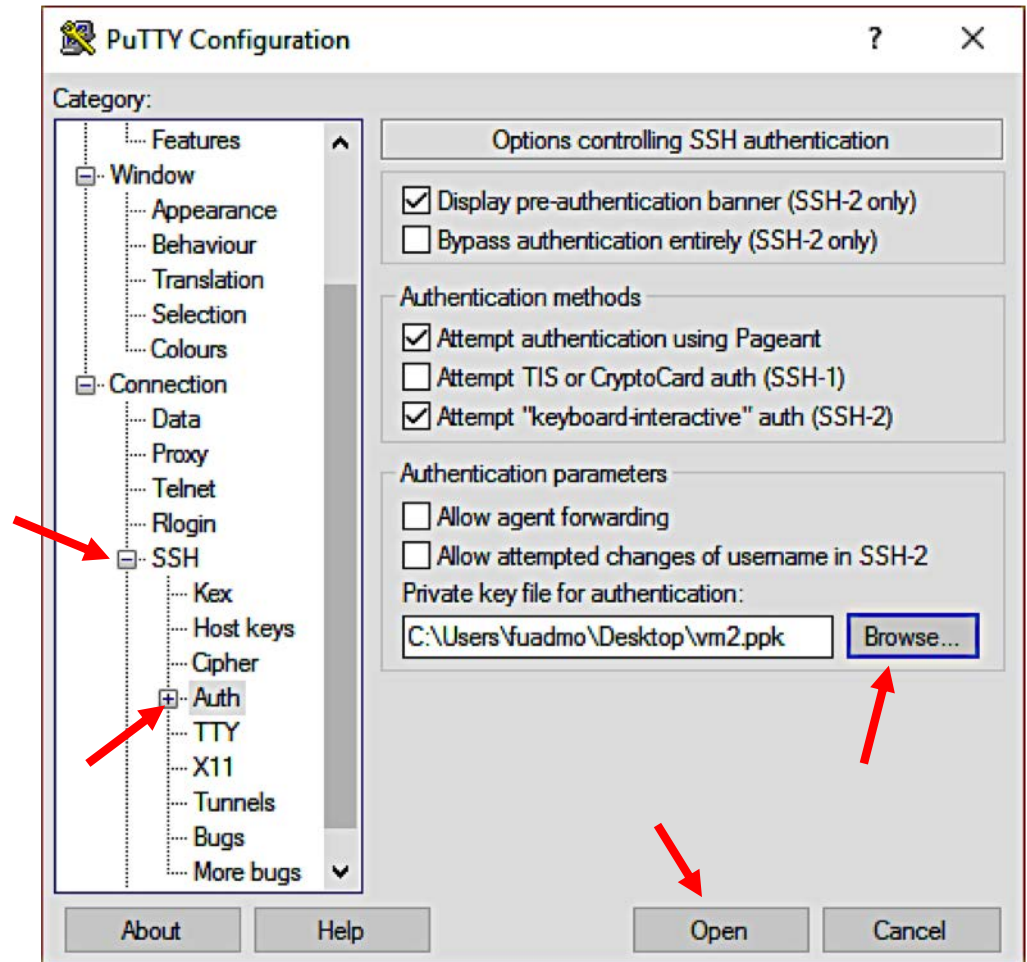


If you are using a Windows machine:

6. In the Category pane, expand **Connection**, expand **SSH**, and then choose **Auth**.

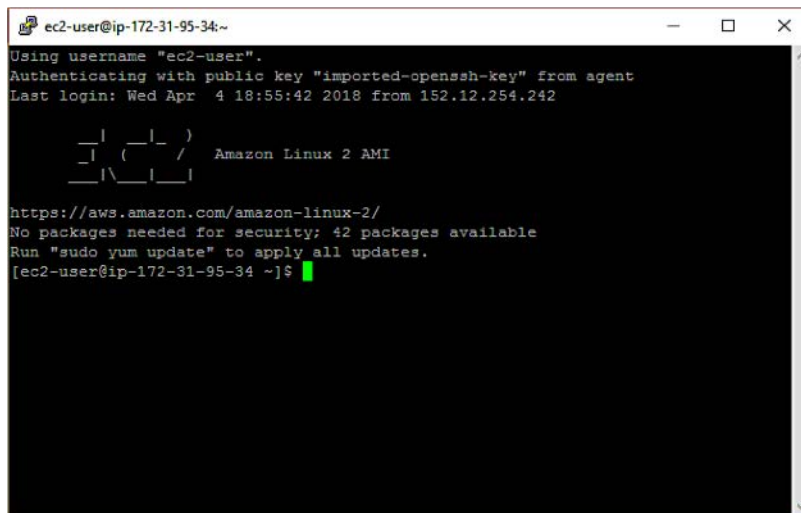
6.1 Choose Browse and Select the .ppk file that you generated for your key pair, and then choose Open.

6.2 Choose **Open** to start the PuTTY session.



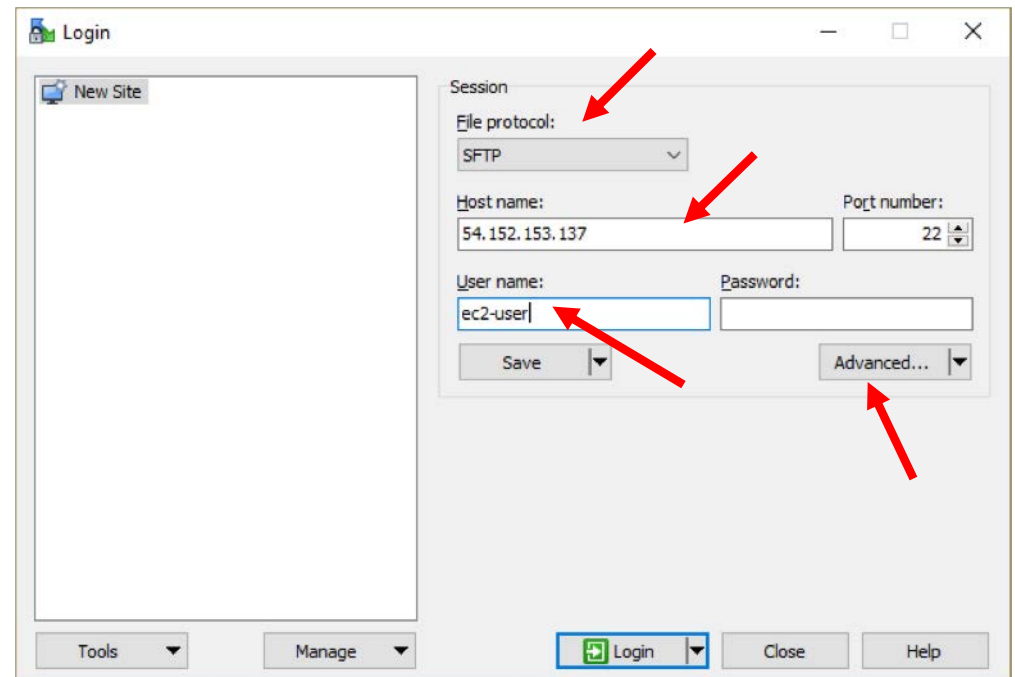
## If you are using a Windows machine:

- If this is the first time you have connected to this instance, PuTTY displays a security alert dialog box that asks whether you trust the host you are connecting to.
- Choose Yes. A window opens and you are connected to your instance.



## If you are using a Windows machine:

7. Download the 2 benchmarking software `systester-cli` and `phoronix.tar.gz` from Canvas.
8. Download and install WinSCP from <http://winscp.net/eng/download.php>. For most users, the default installation options are OK.
9. Start WinSCP.
10. At the WinSCP login screen, for **Host name**, enter the IP address of your instance and for **User Name** enter `ec2-user`. **File Protocol** should be `SFTP`.
11. Now click **Advanced**.



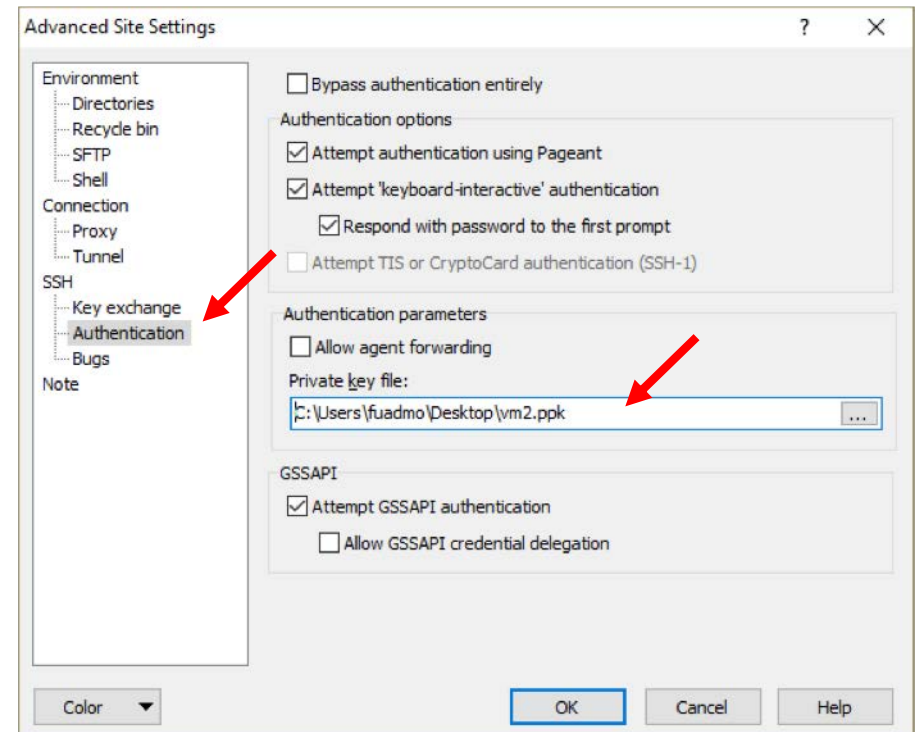
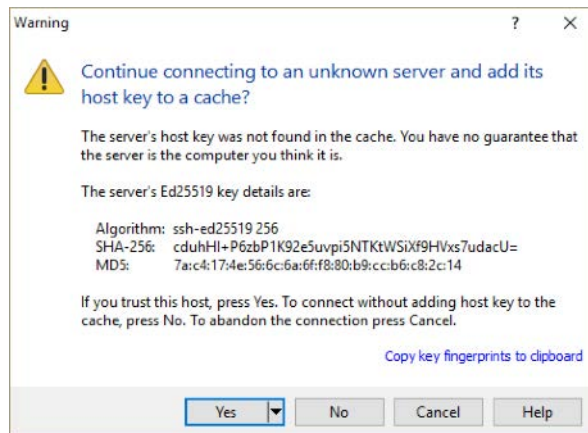


## If you are using a Windows machine:

12. Click Authentication and under Private key file, browse for the converted **.ppk** file and select the file.

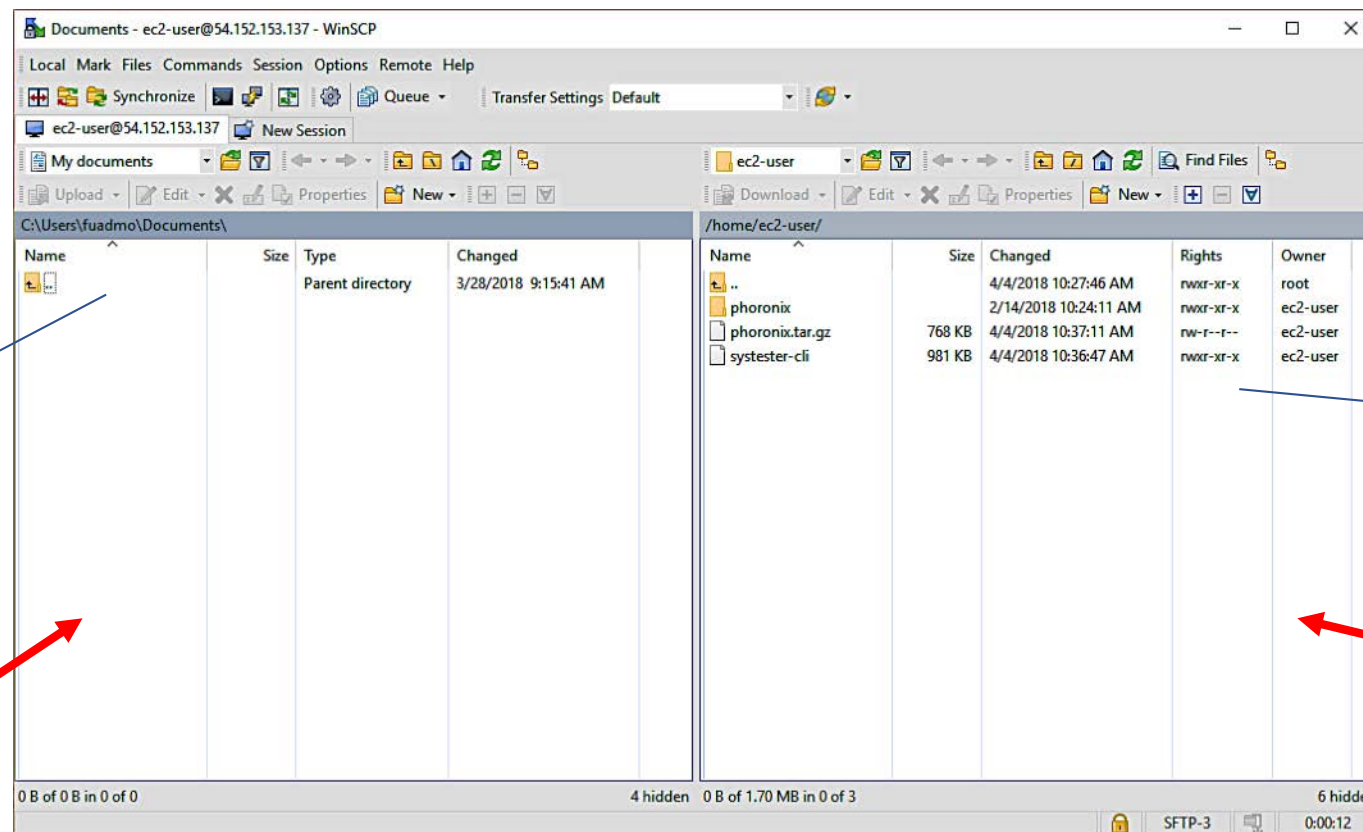
13. Now press **OK**.

14. WinSCP might show you a warning; just press **Yes**.



## If you are using a Windows machine:

After the connection is established, in the connection window your Linux instance is on the right and your local machine is on the left. You can drag and drop files directly into the remote file system from your local machine. For more information on WinSCP, see the project documentation at <http://winscp.net/eng/docs/start>.



**If you are using a Windows machine:**

- **The rest of the steps are similar to steps 8 and 9 for macs.**

**Important:** Once you're done experimenting with the AWS instance, DO NOT forget to **stop** the instance. You can always login, go to the EC2 dashboard and **start** the instance later.

The screenshot shows the AWS Management Console interface. The left sidebar contains navigation links for EC2 Dashboard, Events, Tags, Reports, Limits, INSTANCES, IMAGES, ELASTIC BLOCK STORE, and NETWORK & SECURITY. The main content area displays a table of EC2 instances. The 'Actions' dropdown menu is open, showing options like Connect, Get Windows Password, Launch More Like This, Instance State, Instance Settings, Image, Networking, and CloudWatch Monitoring. The 'Stop' option is highlighted under the 'Instance State' category. The instance 'Virtual Machine 2' is selected, and its details are shown below, including its ID, state (running), type (t2.micro), and various network and security settings.

Name	Instance ID	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
Virtual Machine 1	i-02635c8f	us-east-1a	stopped	2/2 checks ...	None	ec2-54-152-153-137.compute-1.amazonaws.com
Virtual Machine 2	i-090ff1c0	us-east-1a	running	2/2 checks ...	None	ec2-54-152-153-137.compute-1.amazonaws.com

Instance: i-090ff1c069946c02c (Virtual Machine 2) Public DNS: ec2-54-152-153-137.compute-1.amazonaws.com

Description	Status Checks	Monitoring	Tags
Instance ID	i-090ff1c069946c02c		
Instance state	running		
Instance type	t2.micro		
Elastic IPs			
Availability zone	us-east-1a		
Security groups	launch-wizard-3, view inbound rules		
Scheduled events	No scheduled events		
AMI ID	amzn2-ami-hvm-2017.12.0.20180115-x86_64-gp2		

Public DNS (IPv4) ec2-54-152-153-137.compute-1.amazonaws.com  
IPv4 Public IP 54.152.153.137  
IPv6 IPs -  
Private DNS ip-172-31-95-34.ec2.internal  
Private IPs 172.31.95.34  
Secondary private IPs  
VPC ID vpc-cc0a99b7  
Subnet ID subnet-33bc861c