

AWS EC2 installation

CS336 – Spring 2020

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Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Customer Enablement Events Explore More Q

The Amazon Builders' Library

How Amazon builds and operates software

[Learn more »](#)



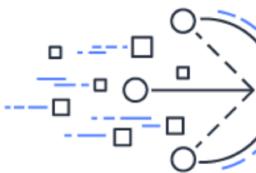
...



Amazon Lightsail
Everything you need to get started on AWS—for a low, predictable price



Amazon EC2 Spot Instances
Run fault-tolerant, stateless workloads for up to 90% off



AWS IoT Greengrass
Learn how to perform machine learning inference with AWS IoT Greengrass



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Sign in ⓘ

Email address of your AWS account

Or to sign in as an IAM user, enter your account ID or [account alias](#) instead.

Next

New to AWS?

[Create a new AWS account](#)

Amazon GuardDuty

Intelligent threat detection and continuous security monitoring.

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AWS Management Console

AWS services

Find Services

You can enter names, keywords or acronyms.

Example: Relational Database Service, database, RDS

▼ Recently visited services



EC2



RDS



Billing

► All services

Build a solution

Get started with simple wizards and automated workflows.

Launch a virtual machine

With EC2

2-3 minutes



Build a web app

With Elastic Beanstalk

6 minutes



Build using virtual servers

With Lightsail

1-2 minutes



Register a domain

With Route 53

3 minutes



Connect an IoT device

With AWS IoT

5 minutes



Start migrating to AWS

With CloudEndure Migration

1-2 minutes



Access resources on the go



Access the Management Console using the AWS Console Mobile App. [Learn more](#)

Explore AWS

AWS IQ

Connect with AWS Certified third-party experts for on-demand consultations and project help. [Get started](#)

Amazon EFS Infrequent Access

Reduce cloud file storage costs by up to 92%. [Learn more](#)

Amazon EMR

The EMR runtime for Apache Spark is up to 32X faster, delivering improved performance and lowering costs. [Learn more](#)

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Services ▾

Resource Groups ▾



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Support ▾

History

Console Home

EC2

RDS

Billing

Compute

EC2

Lightsail

ECR

ECS

EKS

Lambda

Batch

Elastic Beanstalk

Serverless Application Repository

AWS Outposts

EC2 Image Builder

Customer Enablement

AWS IQ

Support

Managed Services

Blockchain

Amazon Managed Blockchain

Satellite

Ground Station

Machine Learning

Amazon SageMaker

Amazon CodeGuru

Amazon Comprehend

Amazon Forecast

Amazon Fraud Detector

Amazon Kendra

Amazon Lex

Amazon Machine Learning

Amazon Personalize

Amazon Polly

Amazon Rekognition

Amazon Textract

Amazon Transcribe

Amazon Translate

AWS DeepLens

AWS DeepRacer

Amazon Augmented AI

Application Integration

Step Functions

Amazon EventBridge

Amazon MQ

Simple Notification Service

Simple Queue Service

SWF

AWS Cost Management

AWS Cost Explorer

AWS Budgets

AWS Marketplace Subscriptions

Customer Engagement

Amazon Connect

Pinpoint

Simple Email Service

Business Applications

Alexa for Business

Amazon Chime

WorkMail

End User Computing

WorkSpaces

AppStream 2.0

WorkDocs

WorkLink

Storage

S3

EFS

FSx

S3 Glacier

Storage Gateway

AWS Backup

Database

RDS

DynamoDB

ElastiCache

Neptune

Amazon Redshift

Amazon QLDB

Amazon DocumentDB

Managed Cassandra Service

Quantum Technologies

Amazon Braket

Management & Governance

AWS Organizations

CloudWatch

AWS Auto Scaling

CloudFormation

CloudTrail

Config

OpsWorks

Service Catalog

Systems Manager

AWS AppConfig

Trusted Advisor

Control Tower

AWS License Manager

AWS Well-Architected Tool

Personal Health Dashboard

Analytics

Athena

EMR

CloudSearch

Elasticsearch Service

Kinesis

QuickSight

Data Pipeline

AWS Data Exchange

AWS Glue

AWS Lake Formation

MSK

▲ close

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

Group A-Z



Submit feedback to tell us about your

New EC2 Experience
[Tell us what you think](#)

EC2 Dashboard [New](#)

Events [New](#)

Tags

Reports

Limits

INSTANCES

Instances

Instance Types

Launch Templates [New](#)

Spot Requests

Savings Plans

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Dedicated Hosts

Capacity Reservations

IMAGES

AMIs

Bundle Tasks

ELASTIC BLOCK STORE

Volumes

Snapshots

Lifecycle Manager

NETWORK & SECURITY

Security Groups

Elastic IPs [New](#)

Placement Groups [New](#)

Key Pairs [New](#)

[Keyboard Interface](#)

Welcome to the new EC2 console!

We're redesigning the EC2 console to make it easier to use and improve performance. We'll release new screens periodically. We encourage you to try them and let us know where we can make improvements. To switch between the old console and the new console, use the New EC2 Experience toggle.

EC2

Resources

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

Running instances	0	Elastic IPs	0	Dedicated Hosts	0
Snapshots	0	Volumes	0	Load balancers	0
Key pairs	0	Security groups	1	Placement groups	0

Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

[Launch instance](#)

Note: Your instances will launch in the US East (Ohio) Region

Service health

Region	Status
US East (Ohio)	This service is operating normally



[Service Health Dashboard](#)

Availability Zone status

Zone	Status
us-east-2a (use2-az1)	Availability Zone is operating normally
us-east-2b (use2-az2)	Availability Zone is operating normally

Scheduled events



US East (Ohio)

No scheduled events

Account attributes

Supported platforms

- VPC

Default VPC

vpc-2c69a747

Console experiments

[Settings](#)

Explore AWS

Save with AMD EPYC-Powered EC2 instances

Learn how you can use EC2 instances featuring AMD EPYC processors to deliver a 10% lower cost on compute and memory. [Read the solution brief](#)

Optimize your EC2 cost and performance with Spot Instances

Combine EC2 On-Demand, Spot, Savings Plans, and RIs in a single EC2 Auto Scaling Group to optimize EC2 performance and cost. [Learn more](#)

Easily launch third-party AMI products

AWS Marketplace has thousands of third-party AMI products that you can find, buy, and deploy with 1-click using the Amazon EC2 console. [Learn more](#)



1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

[Cancel and Exit](#)

Step 1: Choose an Amazon Machine Image (AMI)

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

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

Quick Start

◀ ⏪ 1 to 36 of 36 AMIs ⏩ ▶

My AMIs

**Amazon Linux 2 AMI (HVM), SSD Volume Type** - ami-0ed72083dbed1d548 (64-bit x86) / ami-07413a099547ecc89 (64-bit Arm)[Select](#)

AWS Marketplace

Amazon Linux

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.

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

Community AMIs

 Free tier only (i)**Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type** - ami-0cd3dfa4e37921605[Select](#)**Amazon Linux**

Free tier eligible

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

64-bit (x86)

**Red Hat Enterprise Linux 7.6 (HVM), SSD Volume Type** - ami-0b500ef59d8335eee (64-bit x86) / ami-0302c1ecc74930ba5 (64-bit Arm)[Select](#)**Red Hat**

Free tier eligible

Red Hat Enterprise Linux version 7.6 (HVM), EBS General Purpose (SSD) Volume Type

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

Root device type: ebs Virtualization type: hvm

**SUSE Linux Enterprise Server 15 (HVM), SSD Volume Type** - ami-0eb9f58db22854f8f[Select](#)**SUSE Linux**

Free tier eligible

SUSE Linux Enterprise Server 15 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.

64-bit (x86)

Root device type: ebs Virtualization type: hvm

**Ubuntu Server 18.04 LTS (HVM), SSD Volume Type** - ami-0f65671a86f061fcd (64-bit x86) / ami-0f2057f28f0a44d06 (64-bit Arm)[Select](#)

Free tier eligible

Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>). 64-bit (x86)
 64-bit (Arm)

Root device type: ebs Virtualization type: hvm

**Are you launching a database instance? Try Amazon RDS.**[Hide](#)

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale your database on AWS by automating time-consuming database management tasks. With RDS, you can easily



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 (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

Cancel

Previous

Review and Launch

Next: Configure Instance Details

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.

AMI Details

[Edit AMI](#)**Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0ed72083dbed1d548****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.

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**

launch-wizard-4

Description

launch-wizard-4 created 2019-02-27T15:23:25.307-05:00

Type	Protocol	Port Range	Source	Description
------	----------	------------	--------	-------------

This security group has no rules

Instance Details

[Edit instance details](#)

Storage

[Edit storage](#)

Tags

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



Services

Resource Groups



Valia

N. Virginia

Support

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.



Improve your instances'

Your instances may be accessible from the internet. You can also open additional ports.

AMI Details

**Amazon Linux AMI 2016**

Free tier eligible

The Amazon Linux AMI is an ideal choice for web servers, databases, and other applications built with Docker, PHP, MySQL, PostgreSQL, and Apache. It includes the latest versions of the most popular open source software.

Root Device Type: ebs Virtualization: Amazon VPC

Instance Type

Instance Type	ECUs
t2.micro	Variable

Security Groups

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](#).

Key pair name

MyPrivateKeyPair

1

2



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.

3

Complete the launch process.

IP addresses only. You can't connect to your servers. [Edit security groups](#)

[Edit AMI](#)

The repositories include...

[Edit instance type](#)[Network Performance](#)

Low to Moderate

[Edit security groups](#)

Launch Status

✓ Your instances are now launching

The following instance launches have been initiated: [i-0b730aa669c524fd5](#) [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](#)
- [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](#)

New EC2 Experience
Tell us what you think

Launch Instance

Connect

Actions ▾



Filter by tags and attributes or search by keyword

1 to 1 of 1

EC2 Dashboard

Events

Tags

Reports

Limits

▼ INSTANCES

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

▼ IMAGES

AMIs

Bundle Tasks

▼ ELASTIC BLOCK STORE

Volumes

Snapshots

Lifecycle Manager

▼ NETWORK & SECURITY

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
	i-0b730aa669c524fd5	t2.micro	us-east-2b	running	Initializing	None	ec2-3-17-58-253.us-ea...	3.17.58.253	-	myKeyPair

Instance: i-0b730aa669c524fd5 Public DNS: ec2-3-17-58-253.us-east-2.compute.amazonaws.com



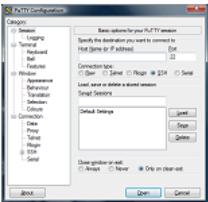
Description	Status Checks	Monitoring	Tags
-------------	---------------	------------	------

This will be the URL of your web application

Instance ID	i-0b730aa669c524fd5	Public DNS (IPv4)	ec2-3-17-58-253.us-east-2.compute.amazonaws.com
Instance state	running	IPv4 Public IP	3.17.58.253
Instance type	t2.micro	IPv6 IPs	-
Finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more	Elastic IPs	
Private DNS	ip-172-31-29-30.us-east-2.compute.internal	Availability zone	us-east-2b
Private IPs	172.31.29.30	Security groups	launch-wizard-1 , view inbound rules , view outbound rules
Secondary private IPs		Scheduled events	No scheduled events
VPC ID	vpc-2c69a747	AMI ID	amzn-ami-hvm-2018.03.0.20200206.0-x86_64-gp2 (ami-0998bf58313ab53da)
Subnet ID	subnet-5b507f21	Platform	-
Network interfaces	eth0	IAM role	-
Source/dest. check	True	Key pair name	myKeyPair
T2/T3 Unlimited	Disabled	Owner	574160230017
EBS-optimized	False	Launch time	March 3, 2020 at 10:55:30 PM UTC-5 (less than one hour)
Root device type	ebs	Termination protection	False
Root device	/dev/xvda	Lifecycle	normal

For Windows Users (1)

- Go to <http://www.putty.org> and download Putty.
-



Download PuTTY

PuTTY is an SSH and telnet client, developed originally by Simon Tatham for the Windows platform. PuTTY is open source software that is available with source code and is developed and supported by a group of volunteers.

You can download PuTTY [here](#).

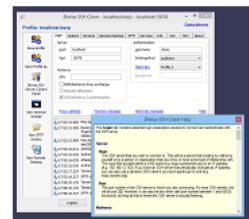
Below suggestions are independent of the authors of PuTTY. They are *not* to be seen as endorsements by the PuTTY project.

Bitvise SSH Client

Bitvise SSH Client is an SSH and SFTP client for Windows. It is developed and supported professionally by Bitvise. The SSH Client is robust, easy to install, easy to use, and supports all features supported by PuTTY, as well as the following:

- graphical SFTP file transfer;
- single-click Remote Desktop tunneling;
- auto-reconnecting capability;
- dynamic port forwarding through an integrated proxy;
- an FTP-to-SFTP protocol bridge.

Bitvise SSH Client is **free to use**. You can [download it here](#).



Bitvise SSH Server

Bitvise SSH Server is an SSH, SFTP and SCP server for Windows. It is robust, easy to install, easy to use, and includes



Alternative binary files

The installer packages above will provide versions of all of these (except PuTTYtel), but you can download standalone binaries one by one if you prefer.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

putty.exe (the SSH and Telnet client itself)

32-bit:	putty.exe	(or by FTP)	(signature)
64-bit:	putty.exe	(or by FTP)	(signature)

pscp.exe (an SCP client, i.e. command-line secure file copy)

32-bit:	pscp.exe	(or by FTP)	(signature)
64-bit:	pscp.exe	(or by FTP)	(signature)

psftp.exe (an SFTP client, i.e. general file transfer sessions much like FTP)

32-bit:	psftp.exe	(or by FTP)	(signature)
64-bit:	psftp.exe	(or by FTP)	(signature)

puttytel.exe (a Telnet-only client)

32-bit:	puttytel.exe	(or by FTP)	(signature)
64-bit:	puttytel.exe	(or by FTP)	(signature)

plink.exe (a command-line interface to the PuTTY back ends)

32-bit:	plink.exe	(or by FTP)	(signature)
64-bit:	plink.exe	(or by FTP)	(signature)

pageant.exe (an SSH authentication agent for PuTTY, PSCP, PSFTP, and Plink)

32-bit:	pageant.exe	(or by FTP)	(signature)
64-bit:	pageant.exe	(or by FTP)	(signature)

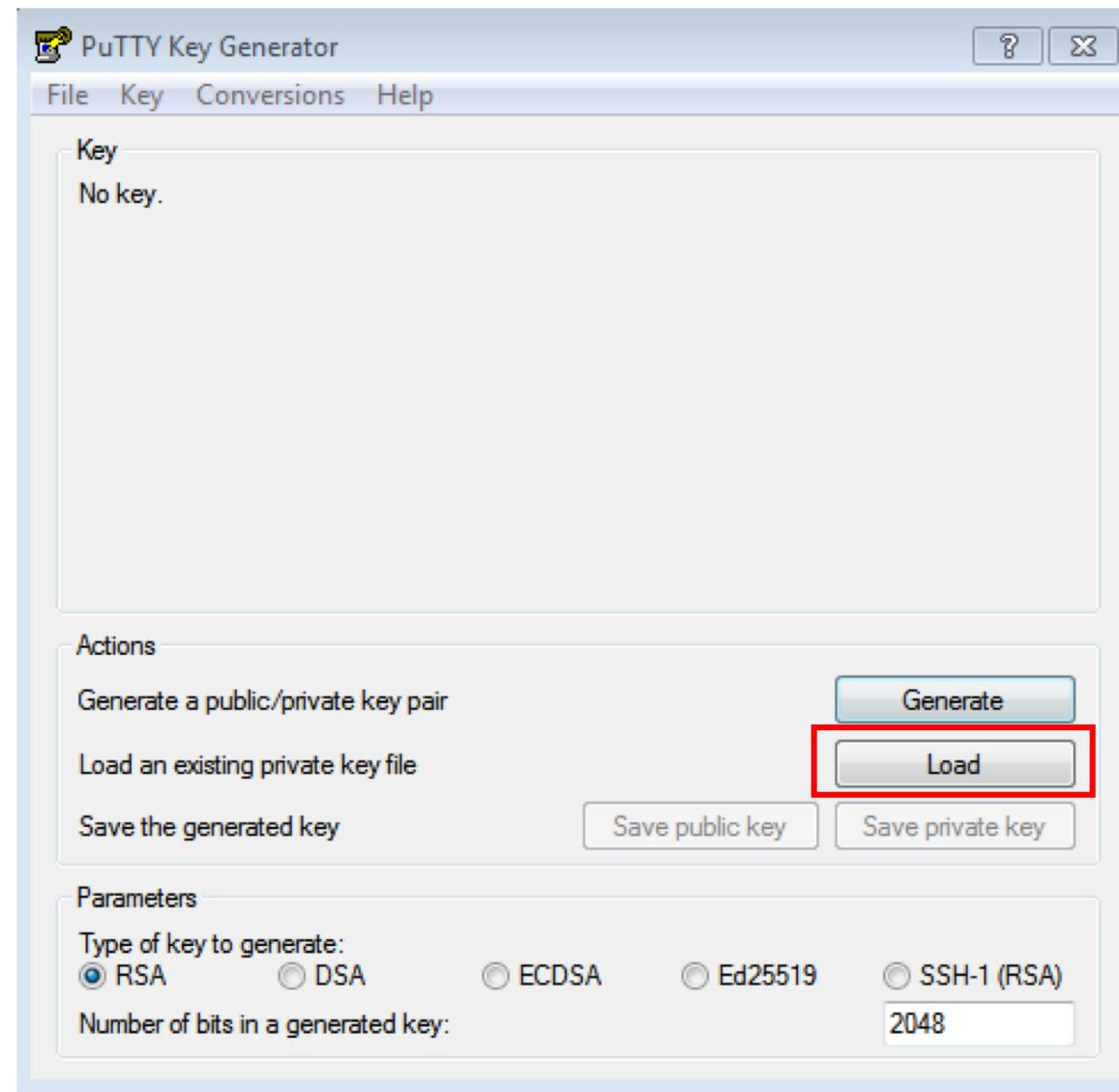
puttygen.exe (a RSA and DSA key generation utility)

32-bit:	puttygen.exe	(or by FTP)	(signature)
64-bit:	puttygen.exe	(or by FTP)	(signature)

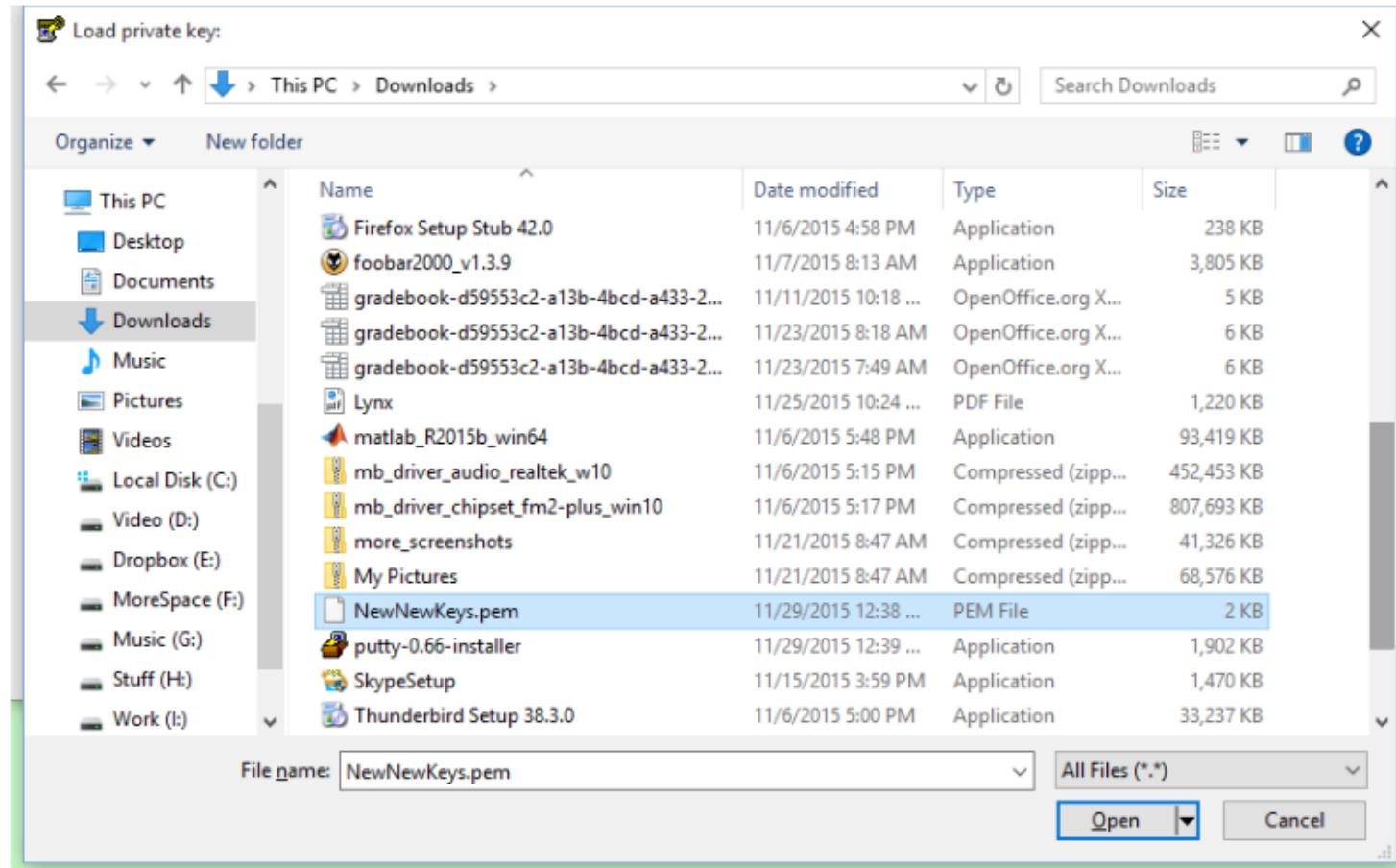
putty.zip (a ZIP archive of all the above)

32-bit:	putty.zip	(or by FTP)	(signature)
64-bit:	putty.zip	(or by FTP)	(signature)

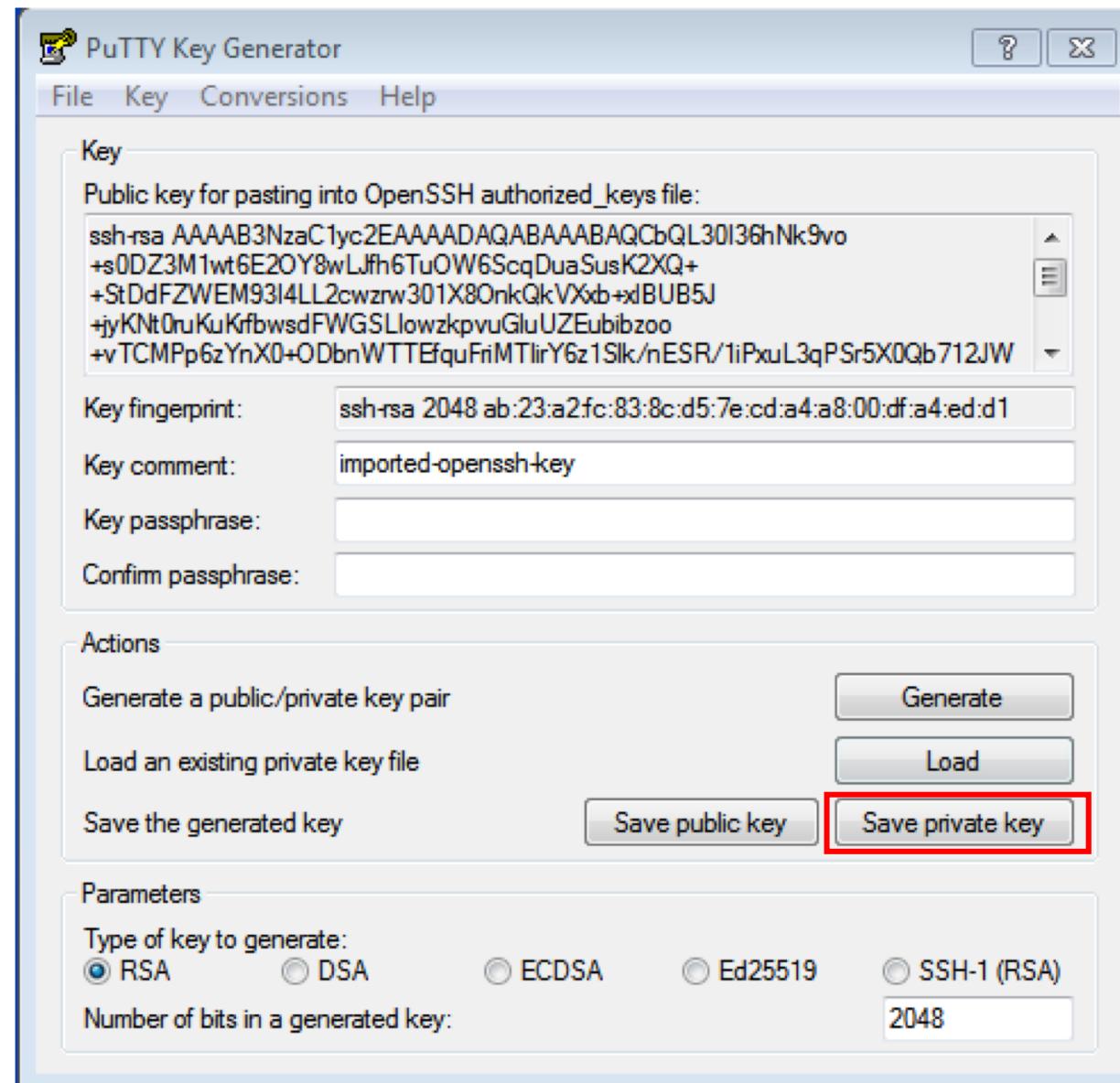
Open the PuTTY KeyGenerator application (puttygen.exe) (2)



Select the key you downloaded before (3)

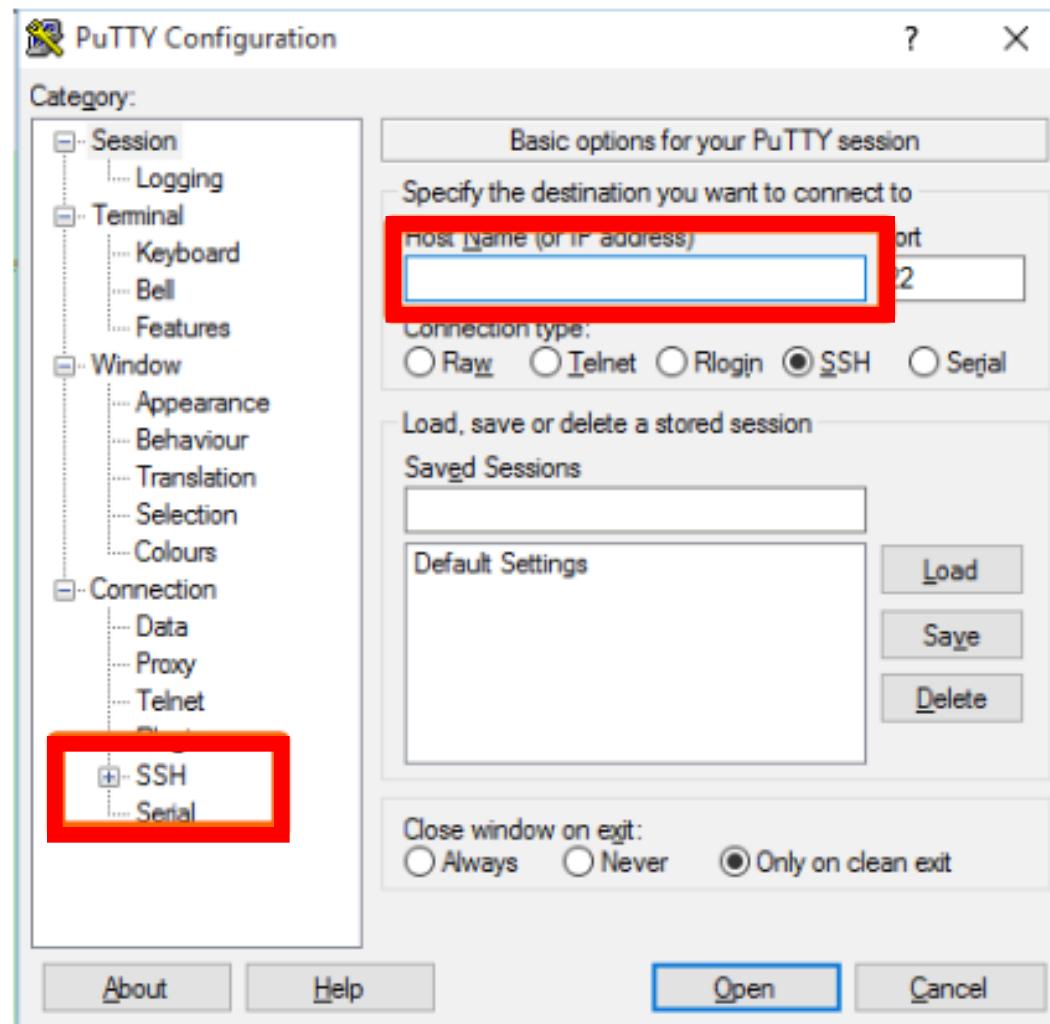


Save the private key in your computer (4)

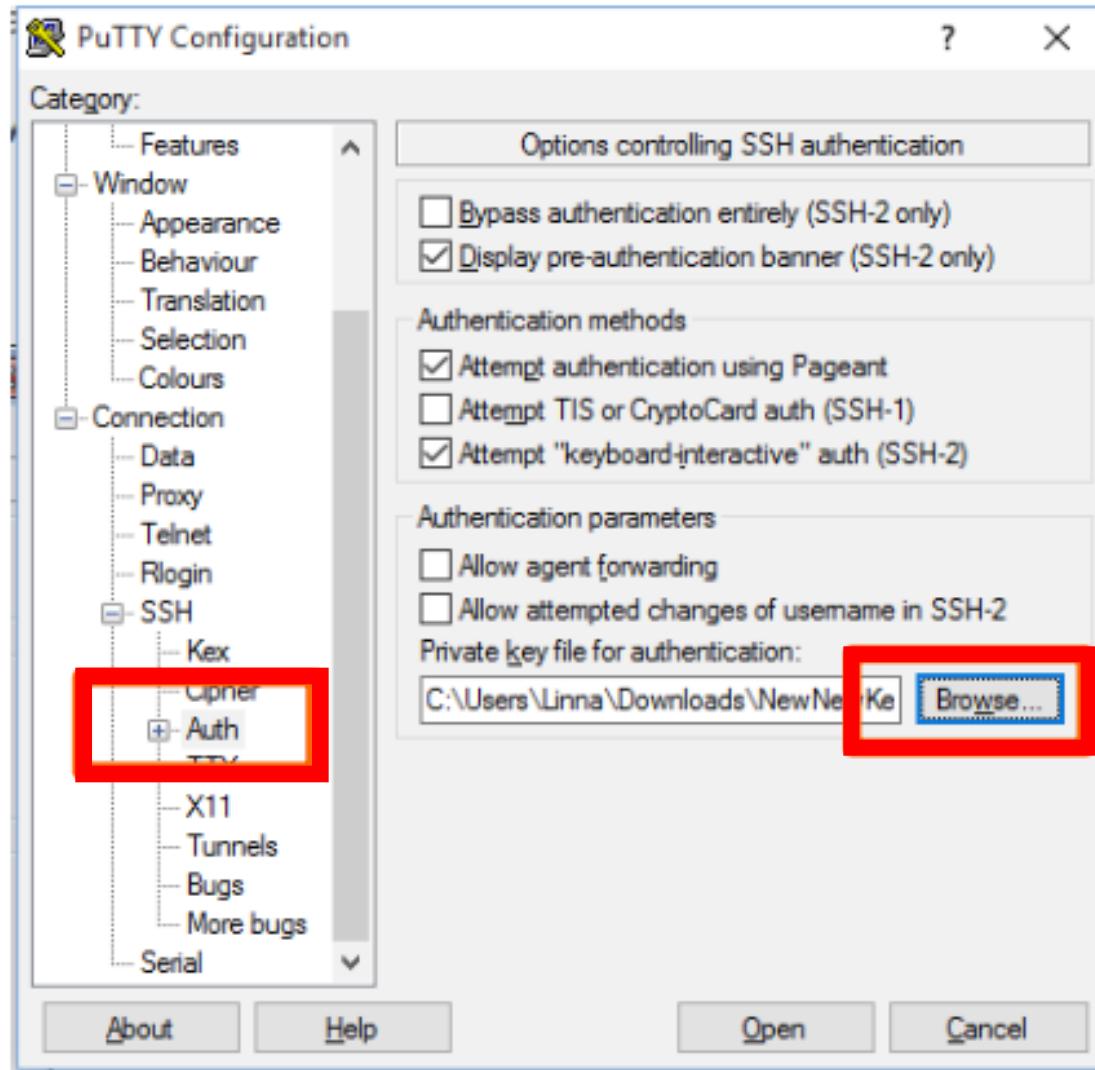


Open Putty and under hostname write:

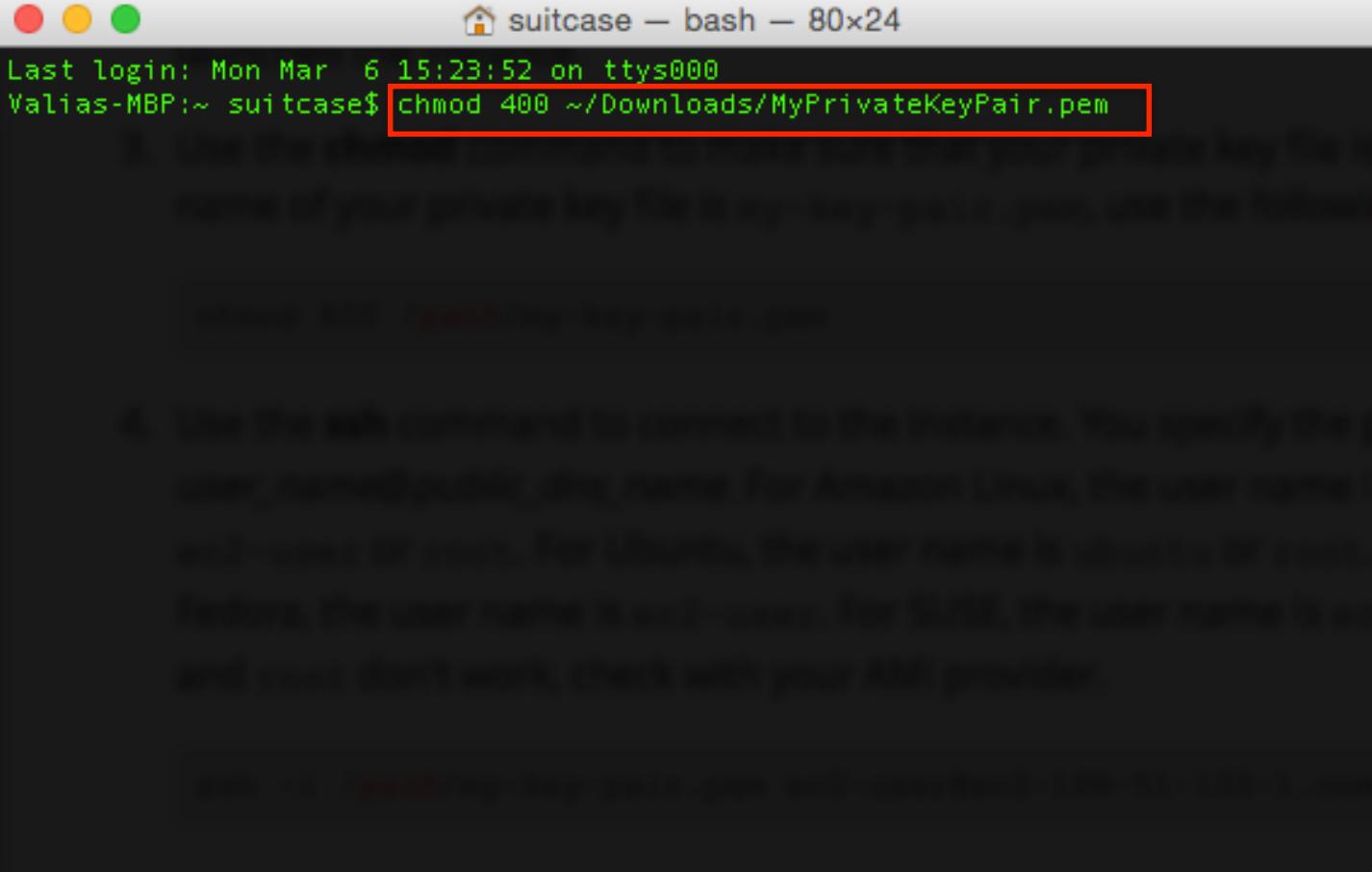
ec2-user@Public_DNS (e.g. ec2-user@ec2-52-206-88-120.compute-1.amazonaws.com) (5)



Under Auth load the private key you just saved (6)



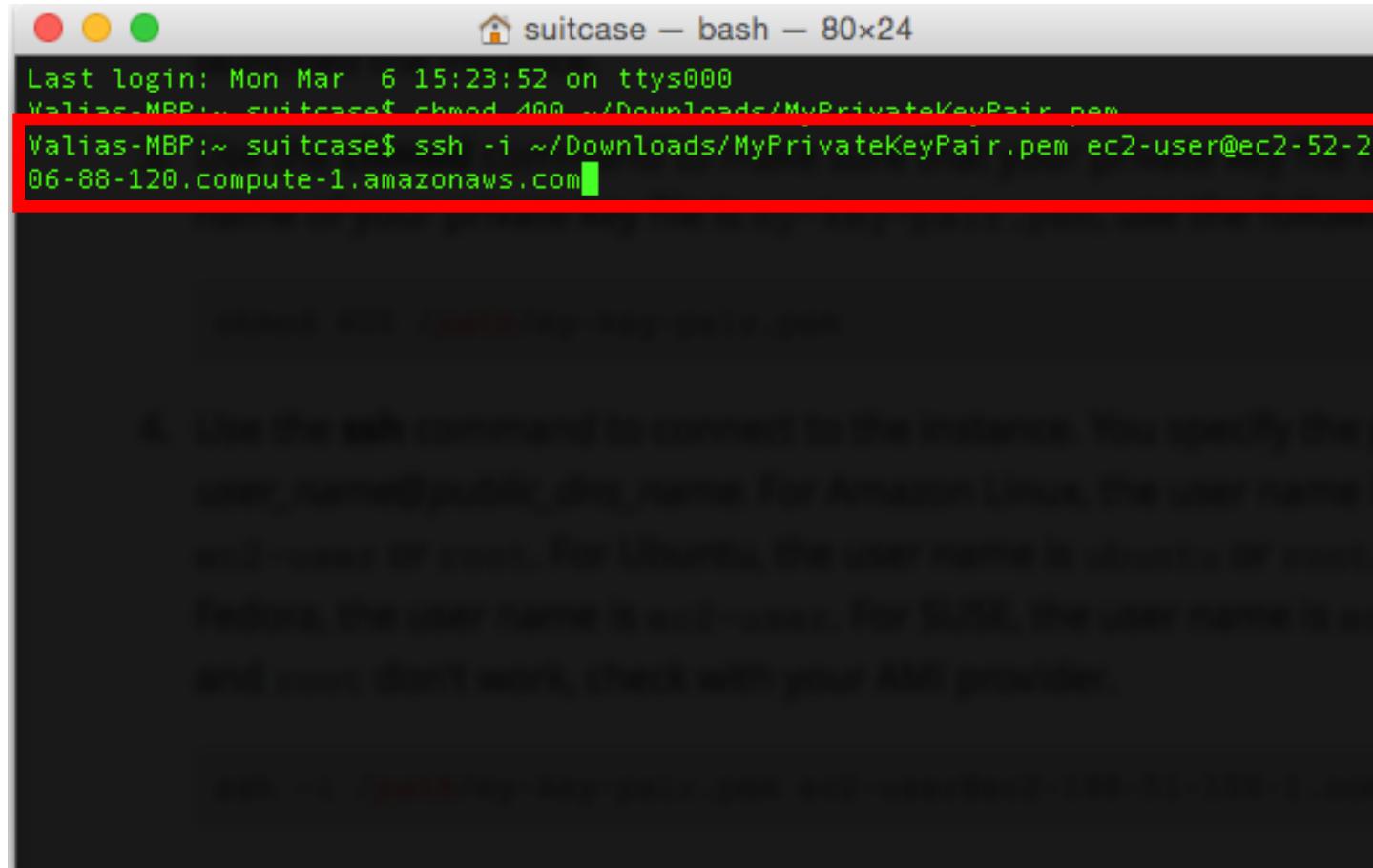
For Linux and Mac Users (1)



```
Last login: Mon Mar  6 15:23:52 on ttys000
Valias-MBP:~ suitcase$ chmod 400 ~/Downloads/MyPrivateKeyPair.pem
```

The screenshot shows a macOS terminal window titled "suitcase — bash — 80x24". The window has three colored window control buttons (red, yellow, green) at the top left. The terminal output is displayed in white text on a black background. The command "chmod 400 ~/Downloads/MyPrivateKeyPair.pem" is visible, with the entire command line highlighted by a red rectangular box. Above the command, the text "Last login: Mon Mar 6 15:23:52 on ttys000" is shown.

For Linux and Mac Users (2)

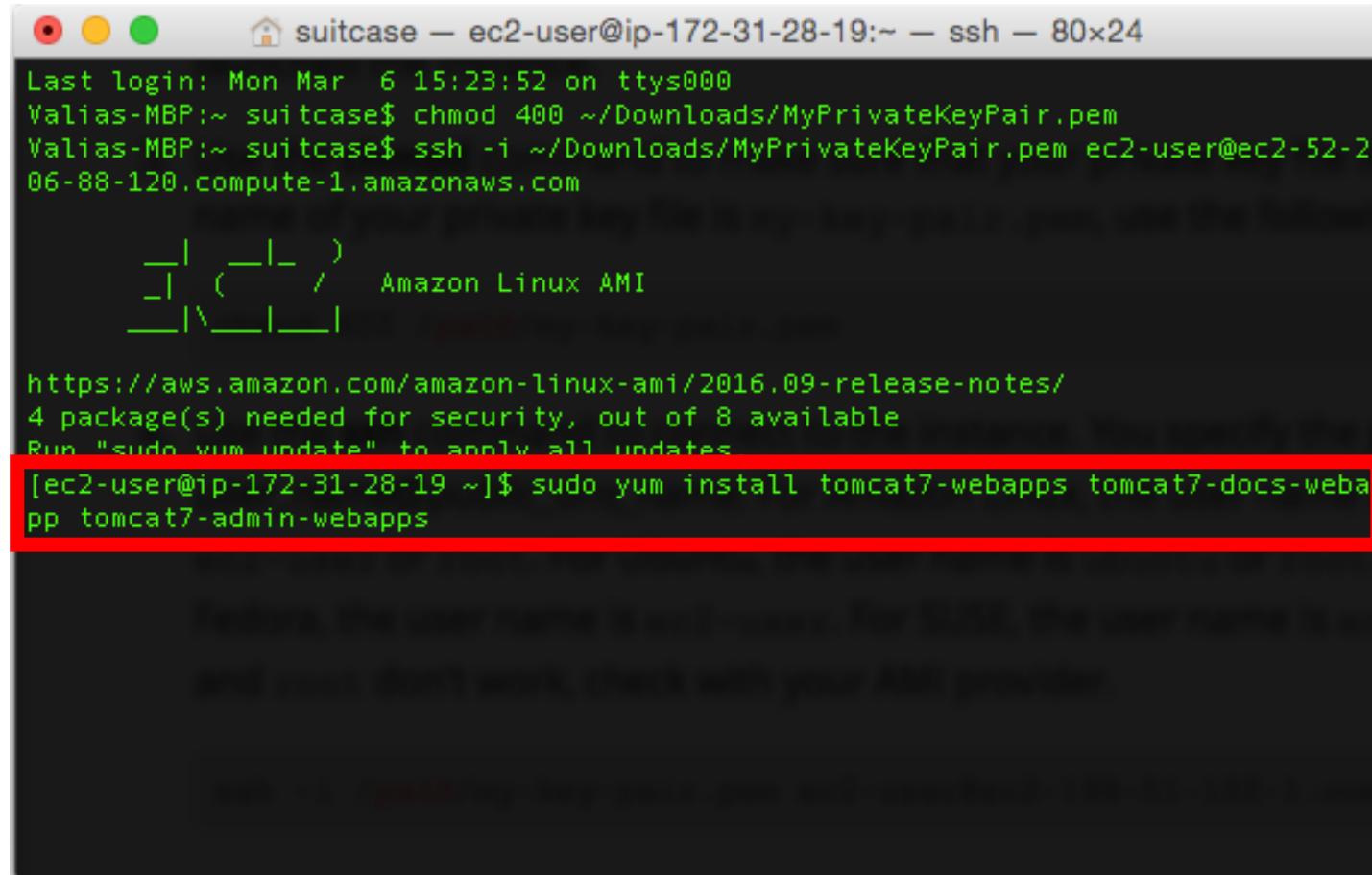


The screenshot shows a macOS terminal window titled "suitcase" with the command line interface "bash" running in a 80x24 terminal session. The window has the standard OS X title bar with red, yellow, and green buttons. The terminal output is as follows:

```
Last login: Mon Mar  6 15:23:52 on ttys000
Valias-MBP:~ suitcase$ chmod 400 ~/Downloads/MyPrivateKeyPair.pem
Valias-MBP:~ suitcase$ ssh -i ~/Downloads/MyPrivateKeyPair.pem ec2-user@ec2-52-2
06-88-120.compute-1.amazonaws.com
```

The last line of the command, "ssh -i ~/Downloads/MyPrivateKeyPair.pem ec2-user@ec2-52-206-88-120.compute-1.amazonaws.com", is highlighted with a thick red border.

For all the users (Linux, Mac, Windows)



The screenshot shows a terminal window titled "suitcase" running on an Amazon Linux AMI instance. The window title bar includes the name "suitcase", the user "ec2-user@ip-172-31-28-19", the command "ssh", and the dimensions "80x24". The terminal content displays the following steps:

```
Last login: Mon Mar  6 15:23:52 on ttys000
Valias-MBP:~ suitcase$ chmod 400 ~/Downloads/MyPrivateKeyPair.pem
Valias-MBP:~ suitcase$ ssh -i ~/Downloads/MyPrivateKeyPair.pem ec2-user@ec2-52-2
06-88-120.compute-1.amazonaws.com

[ec2-user@ip-172-31-28-19 ~]$ sudo yum install tomcat7-webapps tomcat7-docs-weba
pp tomcat7-admin-webapps
```

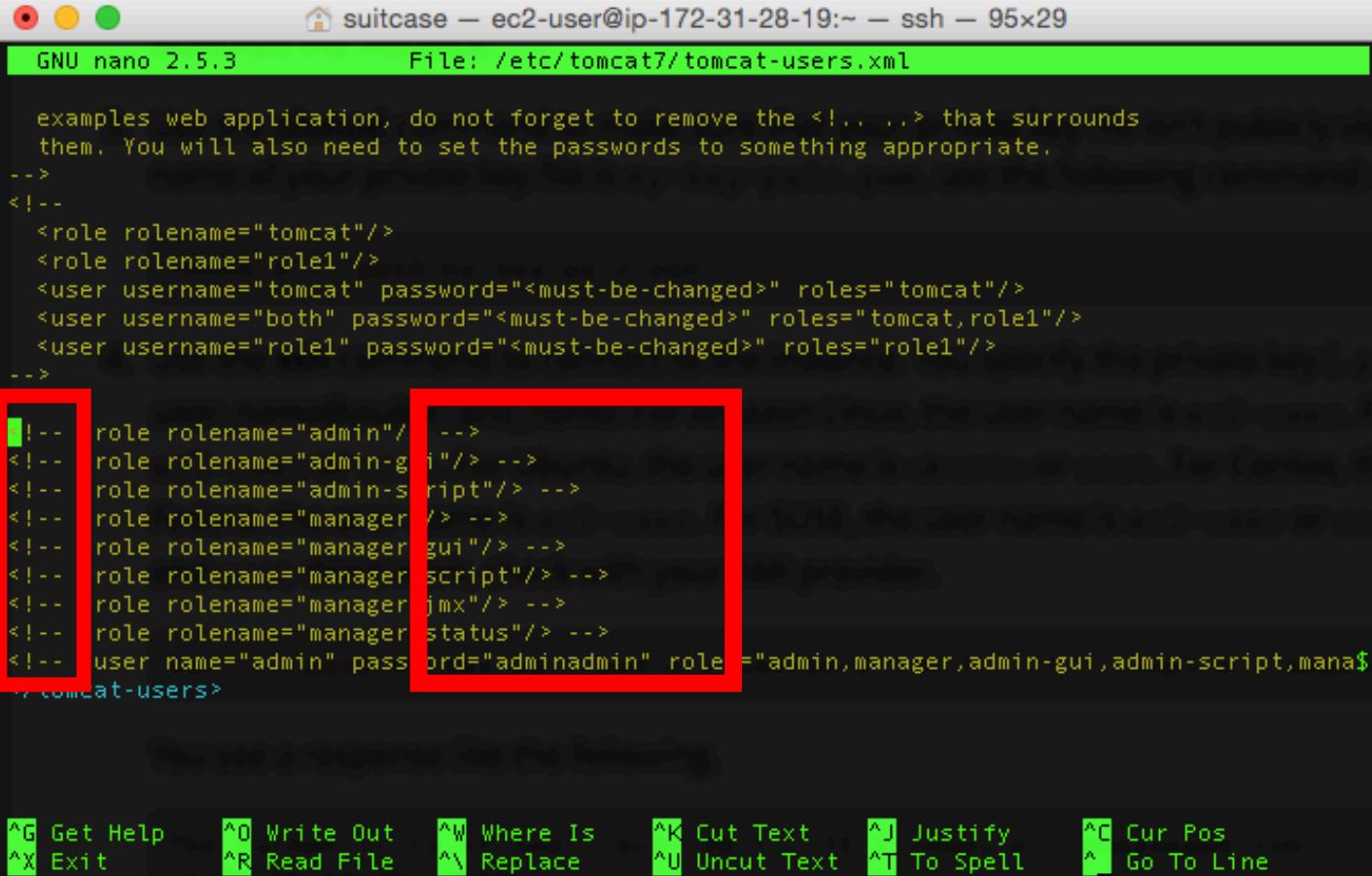
The last command, "sudo yum install tomcat7-webapps tomcat7-docs-webapp tomcat7-admin-webapps", is highlighted with a red box.

```
suitcase — ec2-user@ip-172-31-28-19:~ — ssh — 80x24
tomcat7-docs-webapp.noarch 0:7.0.75-1.25.amzn1
tomcat7-webapps.noarch 0:7.0.75-1.25.amzn1

Dependency Installed:
apache-commons-collections.noarch 0:3.2.2-3.10.amzn1
apache-commons-daemon.x86_64 0:1.0.7-1.6.amzn1
apache-commons-dbcp.noarch 0:1.4-7.7.amzn1
apache-commons-logging.noarch 0:1.1.1-16.8.amzn1
apache-commons-pool.noarch 0:1.5.6-1.7.amzn1
apache-tomcat-apis.noarch 0:0.1-1.6.amzn1
ecj.x86_64 1:4.2.1-4.15.amzn1
jakarta-taglibs-standard.noarch 0:1.1.1-11.7.9.amzn1
tomcat7.noarch 0:7.0.75-1.25.amzn1
tomcat7-el-2.2-api.noarch 0:7.0.75-1.25.amzn1
tomcat7-jsp-2.2-api.noarch 0:7.0.75-1.25.amzn1
tomcat7-lib.noarch 0:7.0.75-1.25.amzn1
tomcat7-servlet-3.0-api.noarch 0:7.0.75-1.25.amzn1
xalan-j2.noarch 0:2.7.0-9.9.10.amzn1
xerces-j2.noarch 0:2.7.1-12.7.19.amzn1
xml-commons-apis.noarch 0:1.3.04-3.6.9.amzn1
xml-commons-resolver.noarch 0:1.1-4.18.10.amzn1

Complete!
[ec2-user@ip-172-31-28-19 ~]$ sudo nano /etc/tomcat7/tomcat-users.xml
```

Scroll down at the end of the file and delete the comment tags both from the beginning and the end of each line.

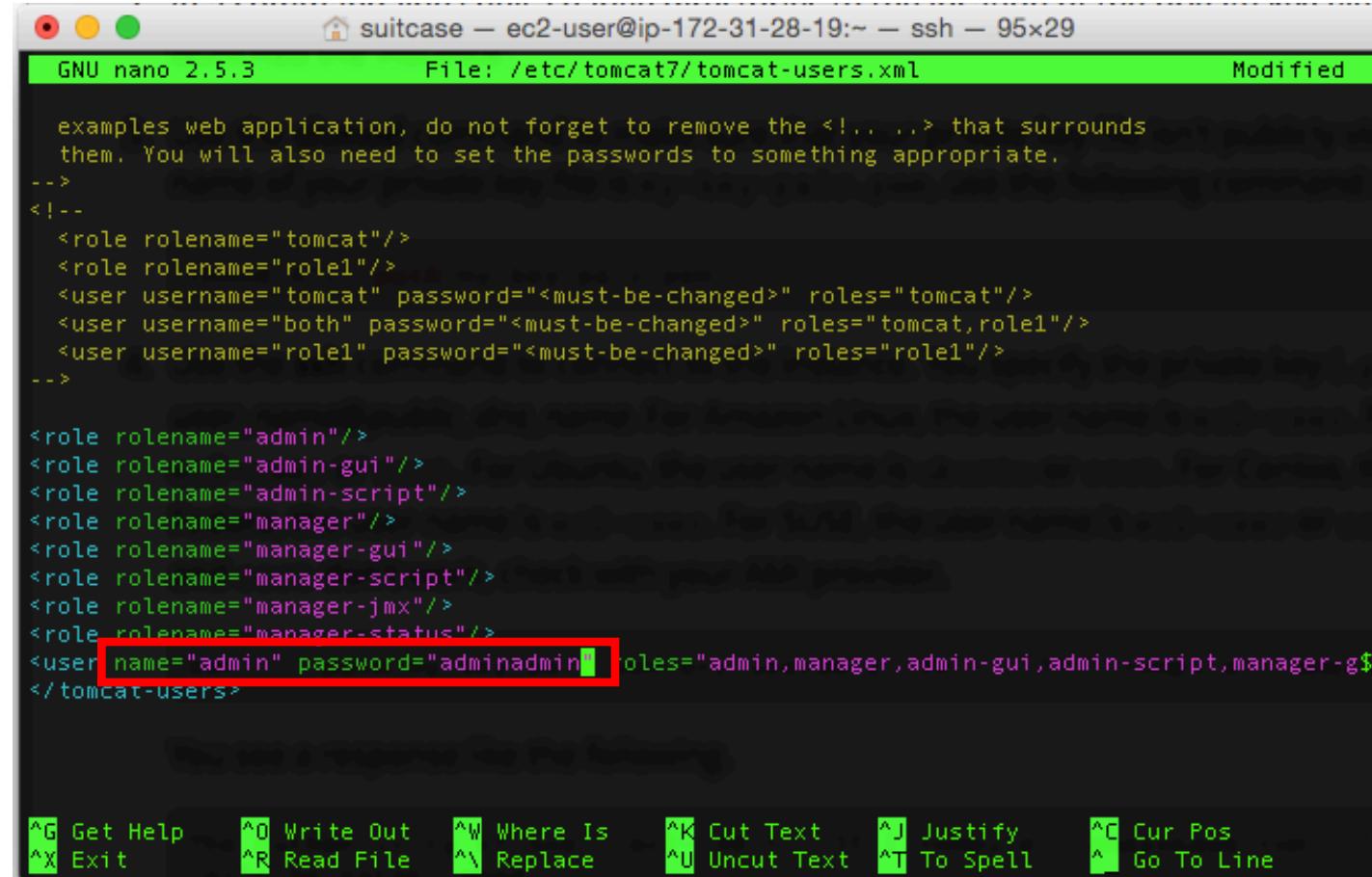


```
examples web application, do not forget to remove the <!...> that surrounds them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="" roles="tomcat"/>
<user username="both" password="" roles="tomcat,role1"/>
<user username="role1" password="" roles="role1"/>
-->
<!--
<role rolename="admin"/> -->
<!--
<role rolename="admin-gui"/> -->
<!--
<role rolename="admin-script"/> -->
<!--
<role rolename="manager"/> -->
<!--
<role rolename="manager-gui"/> -->
<!--
<role rolename="manager-script"/> -->
<!--
<role rolename="manager-jmx"/> -->
<!--
<role rolename="manager-status"/> -->
<!--
<user name="admin" password="adminadmin" role ="admin,manager,admin-gui,admin-script,manager,jmx,manager-status"/>
-->
-->
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^V Replace ^U Uncut Text ^T To Spell ^L Go To Line

Note: Be careful to uncomment the end of the last line.

You can change the username and password of your Tomcat administrator. Then press Ctrl+o for saving and then Ctrl+x for exiting the nano editor.



The screenshot shows a terminal window titled "suitcase" with the command "ec2-user@ip-172-31-28-19:~ ssh 95x29". The file being edited is "/etc/tomcat7/tomcat-users.xml". The nano editor interface includes a green header bar with "GNU nano 2.5.3", "File: /etc/tomcat7/tomcat-users.xml", and "Modified". The main text area contains XML configuration for Tomcat users and roles. A specific line for the "admin" user is highlighted with a red box:

```
examples web application, do not forget to remove the <!.. .> that surrounds
them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="" roles="tomcat"/>
<user username="both" password="" roles="tomcat,role1"/>
<user username="role1" password="" roles="role1"/>
-->

<role rolename="admin"/>
<role rolename="admin-gui"/>
<role rolename="admin-script"/>
<role rolename="manager"/>
<role rolename="manager-gui"/>
<role rolename="manager-script"/>
<role rolename="manager-jmx"/>
<role rolename="manager-status"/>
<user name="admin" password="adminadmin" roles="admin,manager,admin-gui,admin-script,manager-g$>
</tomcat-users>
```

The bottom of the terminal shows the nano editor's command-line interface with various keyboard shortcuts.

```
suitcase — ec2-user@ip-172-31-28-19:~ — ssh — 95x29
Verifying : xml-commons-resolver-1.1-4.18.10.amzn1.noarch          20/20

Installed:
  tomcat7-admin-webapps.noarch 0:7.0.75-1.25.amzn1
  tomcat7-docs-webapp.noarch 0:7.0.75-1.25.amzn1
  tomcat7-webapps.noarch 0:7.0.75-1.25.amzn1

Dependency Installed:
  apache-commons-collections.noarch 0:3.2.2-3.10.amzn1
  apache-commons-daemon.x86_64 0:1.0.7-1.6.amzn1
  apache-commons-dbcpc.noarch 0:1.4-7.7.amzn1
  apache-commons-logging.noarch 0:1.1.1-16.8.amzn1
  apache-commons-pool.noarch 0:1.5.6-1.7.amzn1
  apache-tomcat-apis.noarch 0:0.1-1.6.amzn1
  ejc.x86_64 1:4.2.1-4.15.amzn1
  jakarta-taglibs-standard.noarch 0:1.1.1-11.7.9.amzn1
  tomcat7.noarch 0:7.0.75-1.25.amzn1
  tomcat7-el-2.2-api.noarch 0:7.0.75-1.25.amzn1
  tomcat7-jsp-2.2-api.noarch 0:7.0.75-1.25.amzn1
  tomcat7-lib.noarch 0:7.0.75-1.25.amzn1
  tomcat7-servlet-3.0-api.noarch 0:7.0.75-1.25.amzn1
  xalan-j2.noarch 0:2.7.0-9.9.10.amzn1
  xerces-j2.noarch 0:2.7.1-12.7.19.amzn1
  xml-commons-apis.noarch 0:1.3.04-3.6.9.amzn1
  xml-commons-resolver.noarch 0:1.1-4.18.10.amzn1

Complete!
[ec2-user@ip-172-31-28-19 ~]$ sudo nano /etc/tomcat7/tomcat-users.xml
[ec2-user@ip-172-31-28-19 ~]$ sudo service tomcat7 start
```

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1 to 1 of 1

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
	i-0b730aa669c524fd5	t2.micro	us-east-2b	running	Initializing	None	ec2-3-17-58-253.us-ea...	3.17.58.253	-	myKeyPair

Instance: i-0b730aa669c524fd5 Public DNS: ec2-3-17-58-253.us-east-2.compute.amazonaws.com

[Description](#) [Status Checks](#) [Monitoring](#) [Tags](#)

Instance ID	i-0b730aa669c524fd5	Public DNS (IPv4)	ec2-3-17-58-253.us-east-2.compute.amazonaws.com
Instance state	running	IPv4 Public IP	3.17.58.253
Instance type	t2.micro	IPv6 IPs	-
Finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more	Elastic IPs	
Private DNS	ip-172-31-29-30.us-east-2.compute.internal	Availability zone	us-east-2b
Private IPs	172.31.29.30	Security groups	launch-wizard-1, view inbound rules , view outbound rules
Secondary private IPs		Scheduled events	No scheduled events
VPC ID	vpc-2c69a747	AMI ID	amzn-ami-hvm-2018.03.0.2020206.0-x86_64-gp2 (ami-0998bf58313ab53da)
Subnet ID	subnet-5b507f21	Platform	-
Network interfaces	eth0	IAM role	-
Source/dest. check	True	Key pair name	myKeyPair
T2/T3 Unlimited	Disabled	Owner	574160230017
EBS-optimized	False	Launch time	March 3, 2020 at 10:55:30 PM UTC-5 (less than one hour)
Root device type	ebs	Termination protection	False
Root device	/dev/xvda	Lifecycle	normal

Services ▾ | Resource Groups ▾ | ★

EC2 Dashboard Events Tags Reports Limits

INSTANCES Instances Spot Requests Reserved Instances Scheduled Instances Dedicated Hosts

IMAGES AMIs Bundle Tasks

ELASTIC BLOCK STORE Volumes Snapshots

NETWORK & SECURITY Security Groups Elastic IPs Placement Groups Key Pairs

Create Security Group Actions ▾

Group ID : sg-4f996c30 Add filter ? K < 1 to 1 of 1 > >

Name	Group ID	Group Name	VPC ID	Description
sg-4f996c30	launch-wizard-2	vpc-f2366995	launch-wizard-2 created 2017-03-06T15:1...	

Security Group: sg-4f996c30

Description Inbound Outbound Tags

Edit

Type	Protocol	Port Range	Source
SSH	TCP	22	0.0.0.0/0



Services

Resource Groups



vkalokyri

Ohio

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▼ NETWORK & SECURITY

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Create Security Group

Actions

Group ID : sg-05e9a57e8132c13e8



1 to 1 of 1



Name

Group ID

Group Name

VPC ID

Description

sg-05e9a57e8132c13e8

launch-wizard-1

vpc-2c69a747

launch-wizard-1 created 2020-03-03T22:54:12.861-05:00

Edit inbound rules

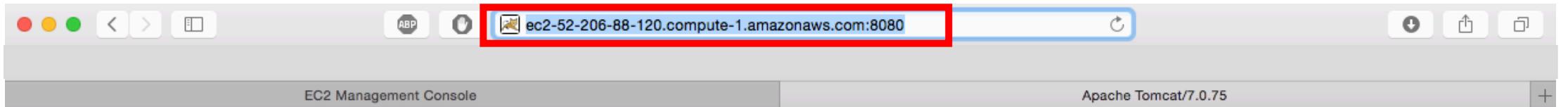
Type	Protocol	Port Range	Source	Description	X
SSH	TCP	22	Custom	0.0.0.0/0	e.g. SSH for Admin Desktop
HTTPS	TCP	443	Custom	0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop
HTTP	TCP	80	Custom	0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop
Custom TCP Ru	TCP	8080	Custom	0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop

Add Rule

NOTE: Any edits made on existing rules will result in the edited rule being deleted and a new rule created with the new details. This will cause traffic that depends on that rule to be dropped for a very brief period of time until the new rule can be created.

Cancel

Save



Apache Tomcat/7.0.75



If you're seeing this, you've successfully installed Tomcat. Congratulations!



Recommended Reading:

[Security Considerations HOW-TO](#)

[Manager Application HOW-TO](#)

[Clustering/Session Replication HOW-TO](#)

[Server Status](#)

[Manager App](#)

[Host Manager](#)

Developer Quick Start

[Tomcat Setup](#)

[First Web Application](#)

[Realms & AAA](#)

[JDBC DataSources](#)

[Examples](#)

[Servlet Specifications](#)

[Tomcat Versions](#)

Managing Tomcat

For security, access to the [manager webapp](#) is restricted. Users are defined in:

`$CATALINA_HOME/conf/tomcat-users.xml`

In Tomcat 7.0 access to the manager application is split between different users.
[Read more...](#)

[Release Notes](#)

[Changelog](#)

[Migration Guide](#)

[Community](#)

Documentation

[Tomcat 7.0 Documentation](#)

[Tomcat 7.0 Configuration](#)

[Tomcat Wiki](#)

Find additional important configuration information in:

`$CATALINA_HOME RUNNING.txt`

Developers may be interested in:

[Tomcat 7.0 Bug Database](#)

[Tomcat 7.0 JavaDocs](#)

[Tomcat 7.0 Gantt Chart](#)

Getting Help

[FAQ and Mailing Lists](#)

The following mailing lists are available:

[tomcat-announce](#)

Important announcements, releases, security vulnerability notifications. (Low volume).

[tomcat-users](#)

User support and discussion

[taglibs-user](#)

User support and discussion for [Apache Taglibs](#)

[tomcat-dev](#)

Development mailing list, including commit messages

[Home](#) [Documentation](#) [Configuration](#)

Apache Tomcat/7.0.75

If you're seeing this page, it means you're trying to access a manager application.



[Recommended Security Configuration](#)
[Manager Applications](#)

[Clustering/Session Replication HOW-TO](#)



To view this page, you must log in to
ec2-52-206-88-120.compute-1.amazonaws.com:
8080.

Your password will be sent unencrypted.

Name: **This is the username and password you entered in page 25.**
 Password:
 Remember this password in my keychain

[Cancel](#)

[Log In](#)

[Find Help](#)



Congratulations!

[Server Status](#)

[Manager App](#)

[Host Manager](#)

Developer Quick Start

[Tomcat Setup](#)

[First Web Application](#)

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[JDBC DataSources](#)

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[Security Notices](#)

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[Tomcat 7.0 Documentation](#)

[Tomcat 7.0 Configuration](#)

[Tomcat Wiki](#)

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[Tomcat 7.0 JavaDocs](#)

[Tomcat 7.0 SVN Repository](#)

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User support and discussion for [Apache Taglibs](#)

[tomcat-dev](#)

Development mailing list, including commit messages



Tomcat Web Application Manager

Message: OK

Manager

List Applications	HTML Manager Help	Manager Help	Server Status
-----------------------------------	-----------------------------------	------------------------------	-------------------------------

Applications

Path	Version	Display Name	Running	Sessions	Commands
/	<i>None specified</i>	Welcome to Tomcat	true	0	Start Stop Reload Undeploy
					Expire sessions with idle ≥ <input type="text" value="30"/> minutes
/docs	<i>None specified</i>	Tomcat Documentation	true	0	Start Stop Reload Undeploy
					Expire sessions with idle ≥ <input type="text" value="30"/> minutes
/examples	<i>None specified</i>	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy
					Expire sessions with idle ≥ <input type="text" value="30"/> minutes
/host-manager	<i>None specified</i>	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy
					Expire sessions with idle ≥ <input type="text" value="30"/> minutes
/manager	<i>None specified</i>	Tomcat Manager Application	true	1	Start Stop Reload Undeploy
					Expire sessions with idle ≥ <input type="text" value="30"/> minutes
					Start Stop Reload Undeploy

EC2 Management Console			/manager		
/host-manager	None specified	Tomcat Host Manager Application	true	0	Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/sample	None specified	Hello, World Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Deploy

Deploy directory or WAR file located on server

Context Path (required):

XML Configuration file URL:

WAR or Directory URL:

WAR file to deploy From here you will deploy every time your web application

Select WAR file to upload cs336Final.war

Diagnostics

Check to see if a web application has caused a memory leak on stop, reload or undeploy

This diagnostic check will trigger a full garbage collection. Use it with extreme caution on production systems.

Server Information								
Tomcat Version	JVM Version	JVM Vendor	OS Name	OS Version	OS Architecture	Hostname	IP Address	
Apache Tomcat/7.0.75	1.7.0_131-mockbuild_2017_02_15_02_03-b00	Oracle Corporation	Linux	4.4.41-36.55.amzn1.x86_64	amd64	ip-172-31-28-19	172.31.28.19	



Tomcat Web Application Manager

Message:	OK
-----------------	----

Manager					
List Applications		HTML Manager Help		Manager Help	
Server Status					

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/cs336Final	None specified	HelloWorld	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
					Start Stop Reload Undeploy

The url of your application is something like:

- **http://<ec2_publicDNS>:8080/<project_name>/**
 - E.g. http://ec2-52-206-88-120.compute-1.amazonaws.com:8080/cs336Final/