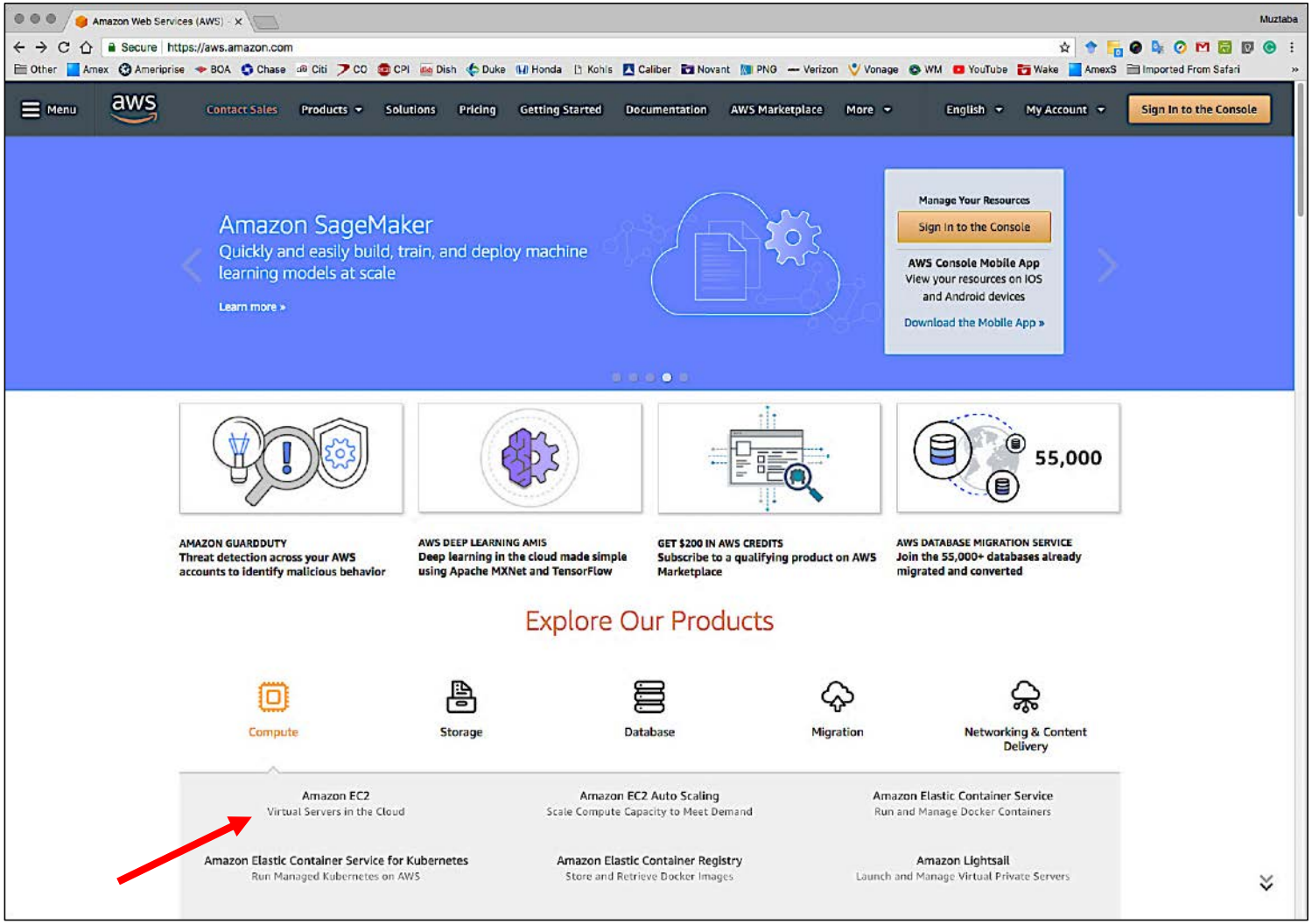
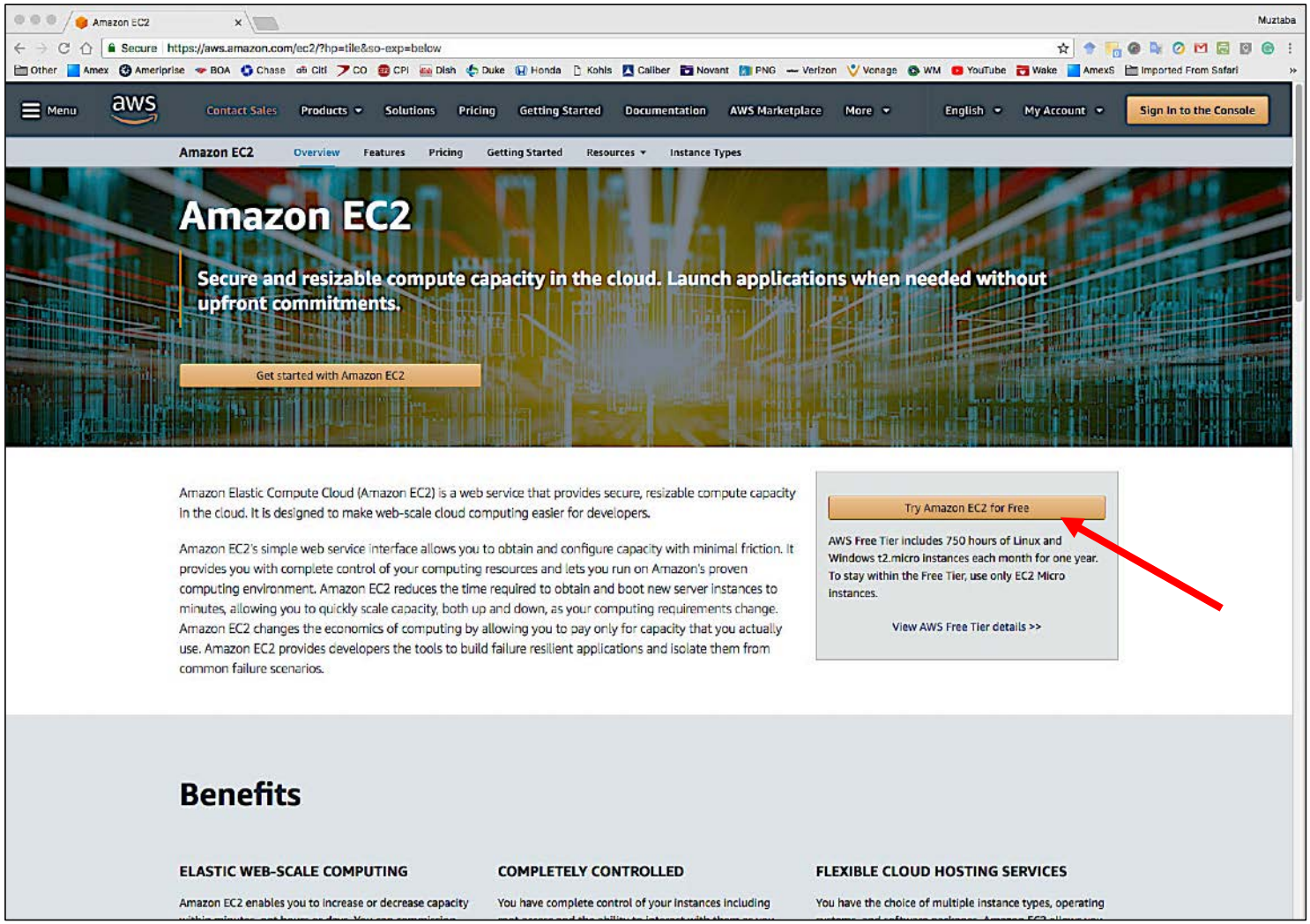
Amazon Web Services

Tutorial

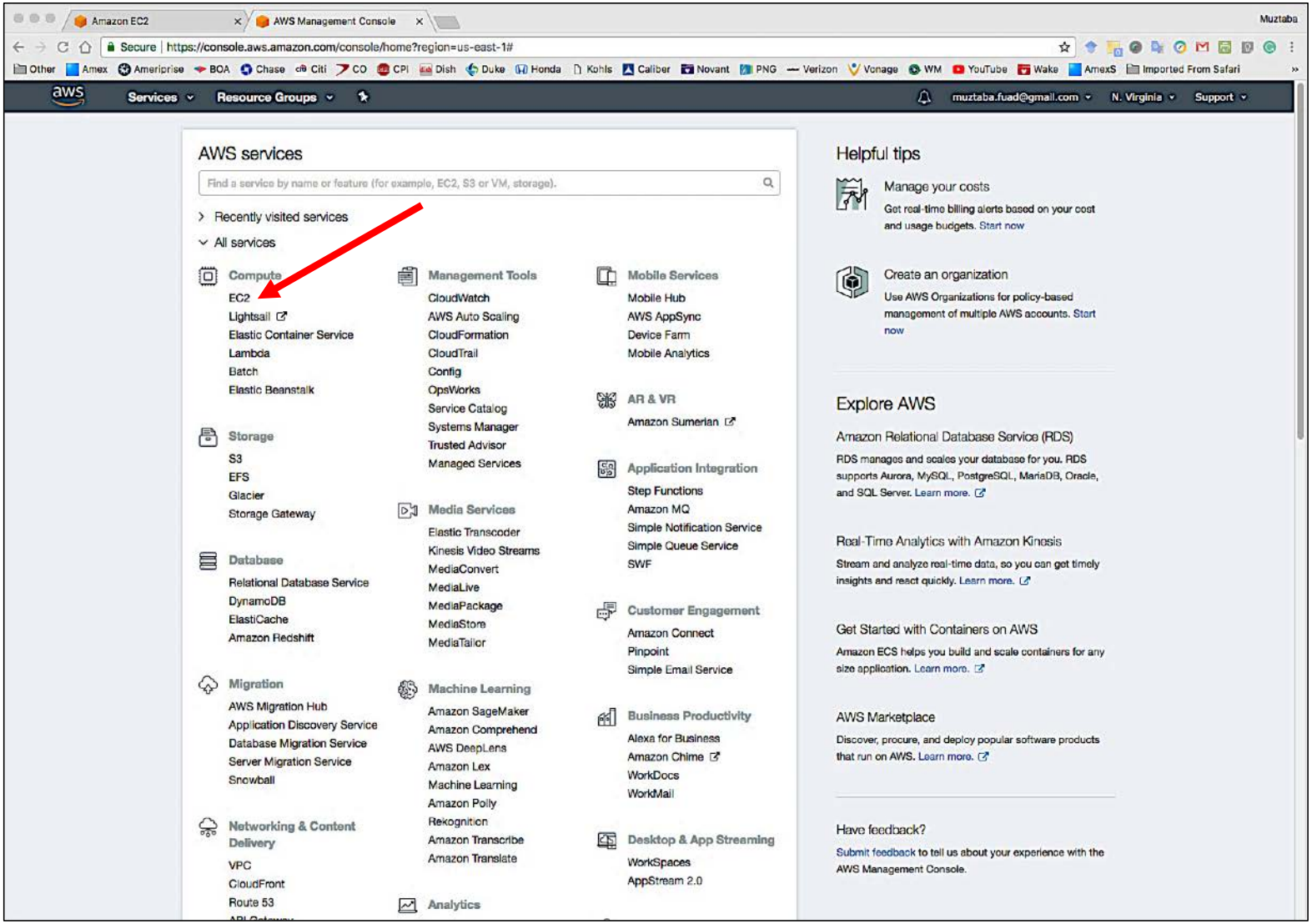


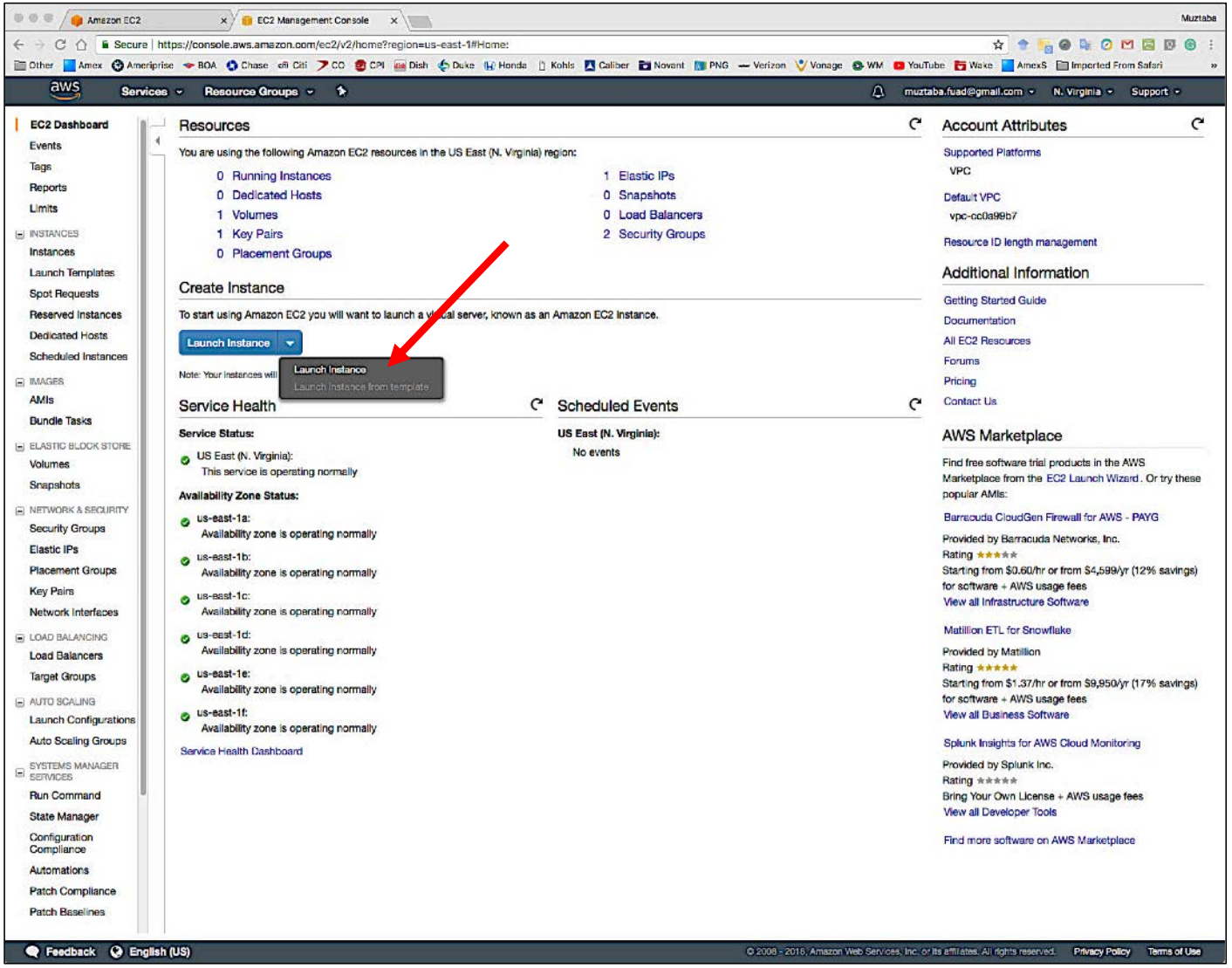
Visit https://aws.amazon.com

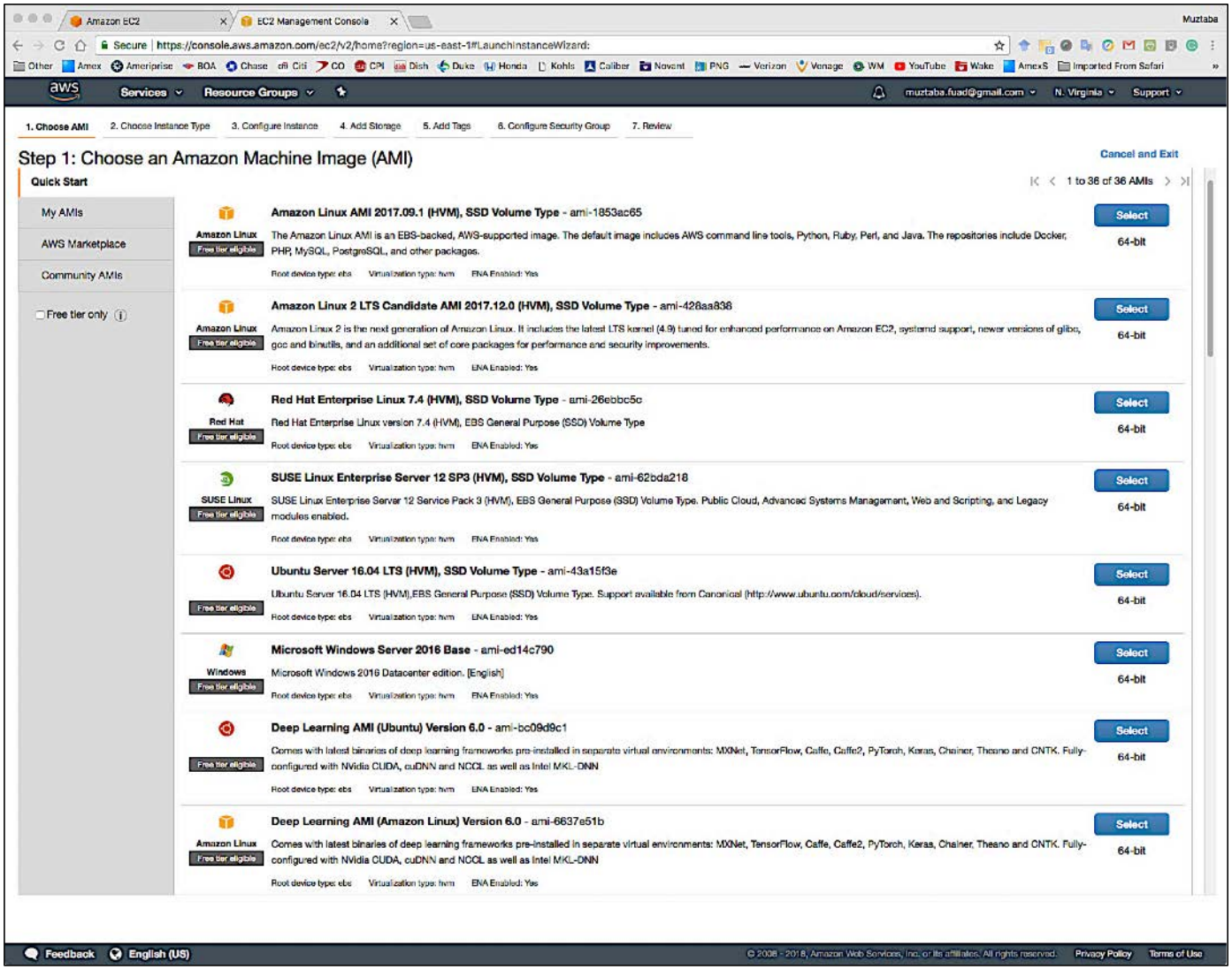


You need to create a new amazon account or can use your existing

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

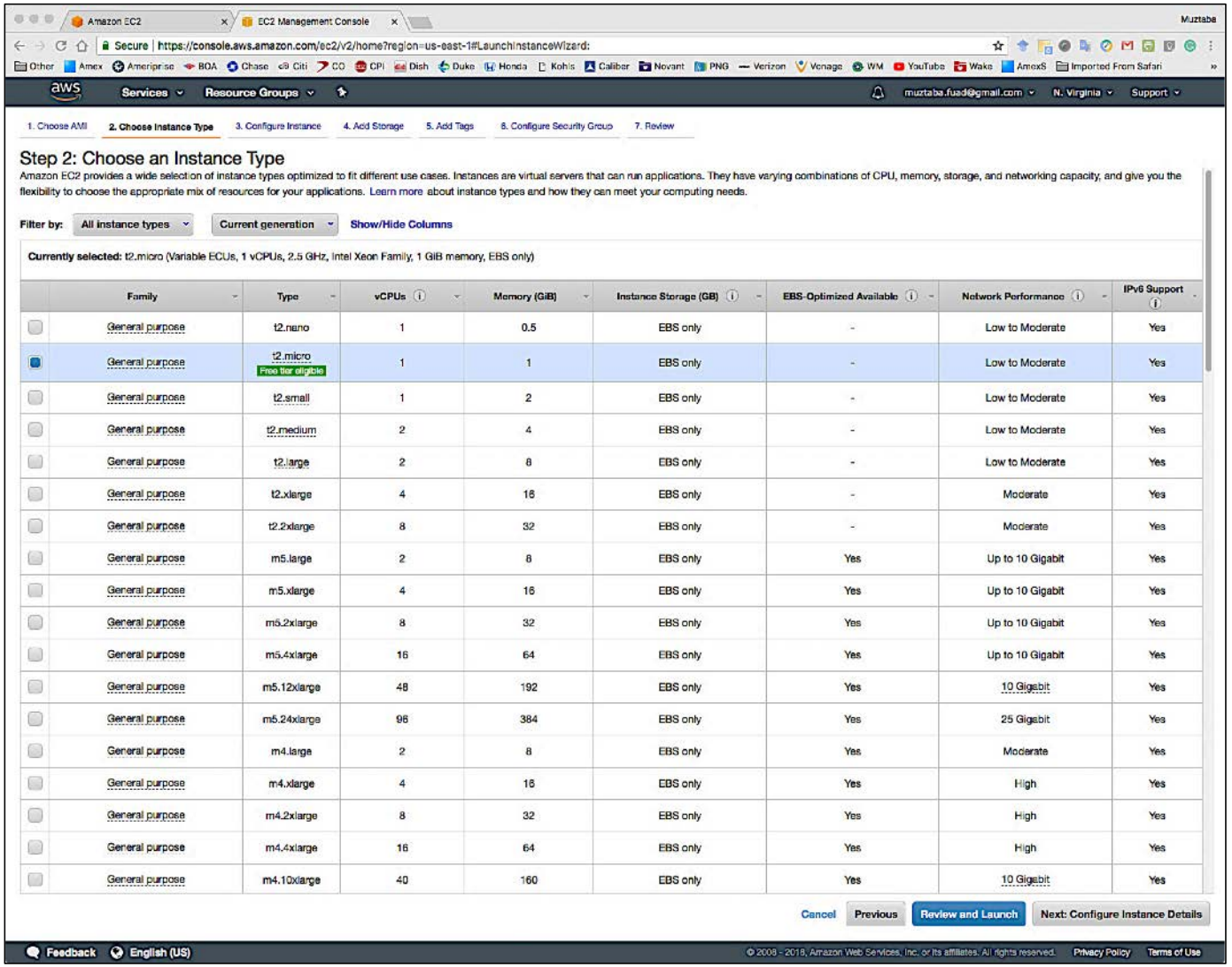

Amazon EC2
AWS Management Console
Muztaba
Secure | https://console.aws.amazon.com/console/home?region=us-east-1#
Other Amex Ameriprise BOA Chase Citi CO CPI Dish Duke Honda Kohls Caliber Novant PNG Verizon Vonage WM YouTube Wake AmexS Imported From Safari
aws
Services
Resource Groups
muztaba.fuad@gmail.com
N. Virginia
Support
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
Storage
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
Route 53
Management Tools
CloudWatch
AWS Auto Scaling
CloudFormation
CloudTrail
Config
OpsWorks
Service Catalog
Systems Manager
Trusted Advisor
Managed Services
Media Services
Elastic Transcoder
Kinesis Video Streams
MediaConvert
MediaLive
MediaPackage
MediaStore
MediaTailor
Machine Learning
Amazon SageMaker
Amazon Comprehend
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.

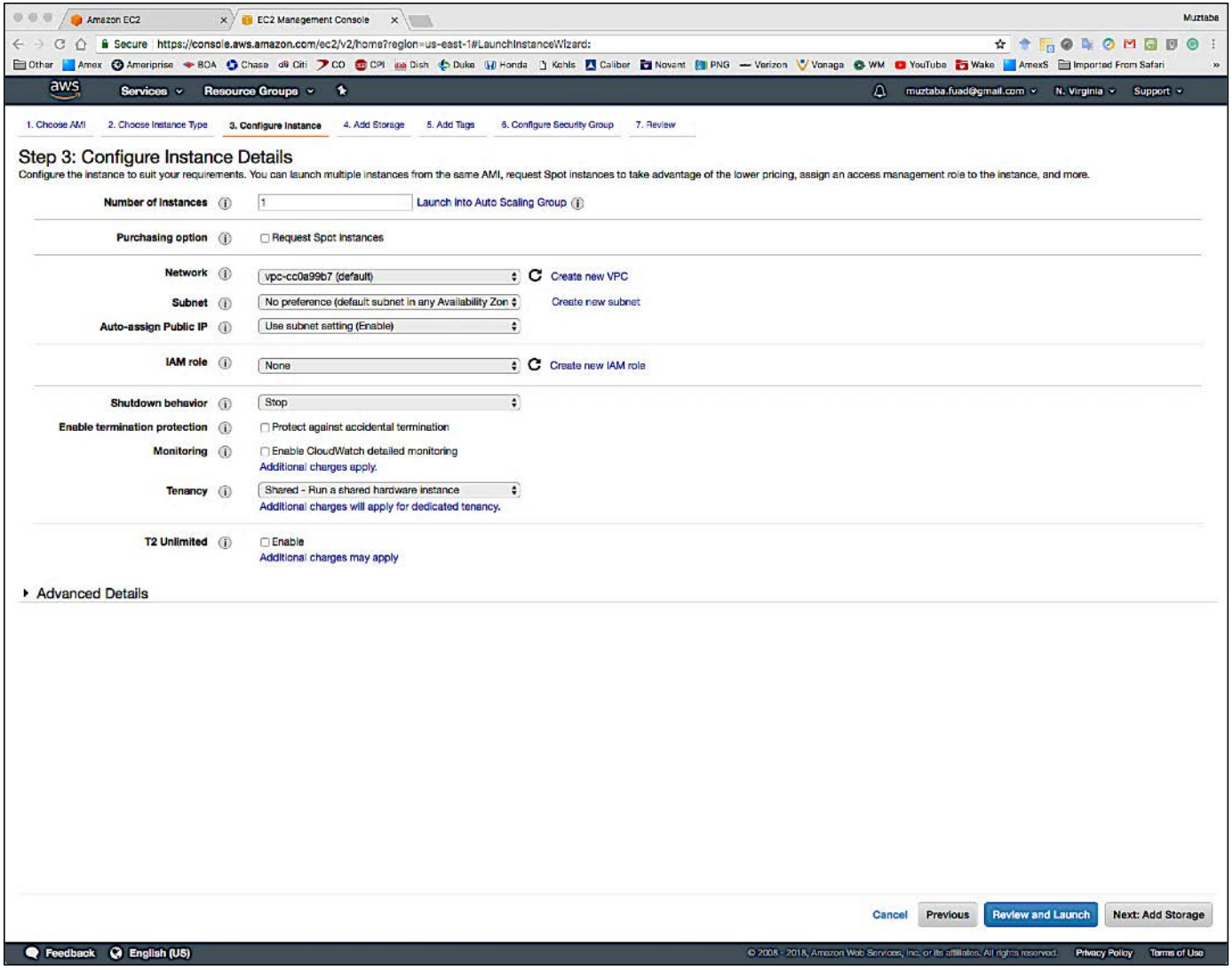

Amazon EC2
EC2 Management Console
Muztaba
Secure | https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Home:
Other Amex Ameriprise BOA Chase Citi CO CPI Dish Duke Honda Kohls Caliber Novant PNG Verizon Vonage WM YouTube Wake AmexS Imported From Safari
aws
Services
Resource Groups
muztaba.fuad@gmail.com
N. Virginia
Support
EC2 Dashboard
Events
Tags
Reports
Limits
INSTANCES
Instances
Launch Templates
Spot Requests
Reserved Instances
Dedicated Hosts
Scheduled Instances
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Load Balancers
Target Groups
AUTO SCALING
Launch Configurations
Auto Scaling Groups
SYSTEMS MANAGER SERVICES
Run Command
State Manager
Configuration 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
Launch Instance
Launch instance from template
Note: Your instances will
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:
Barracuda 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
Feedback
English (US)
© 2008 - 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use



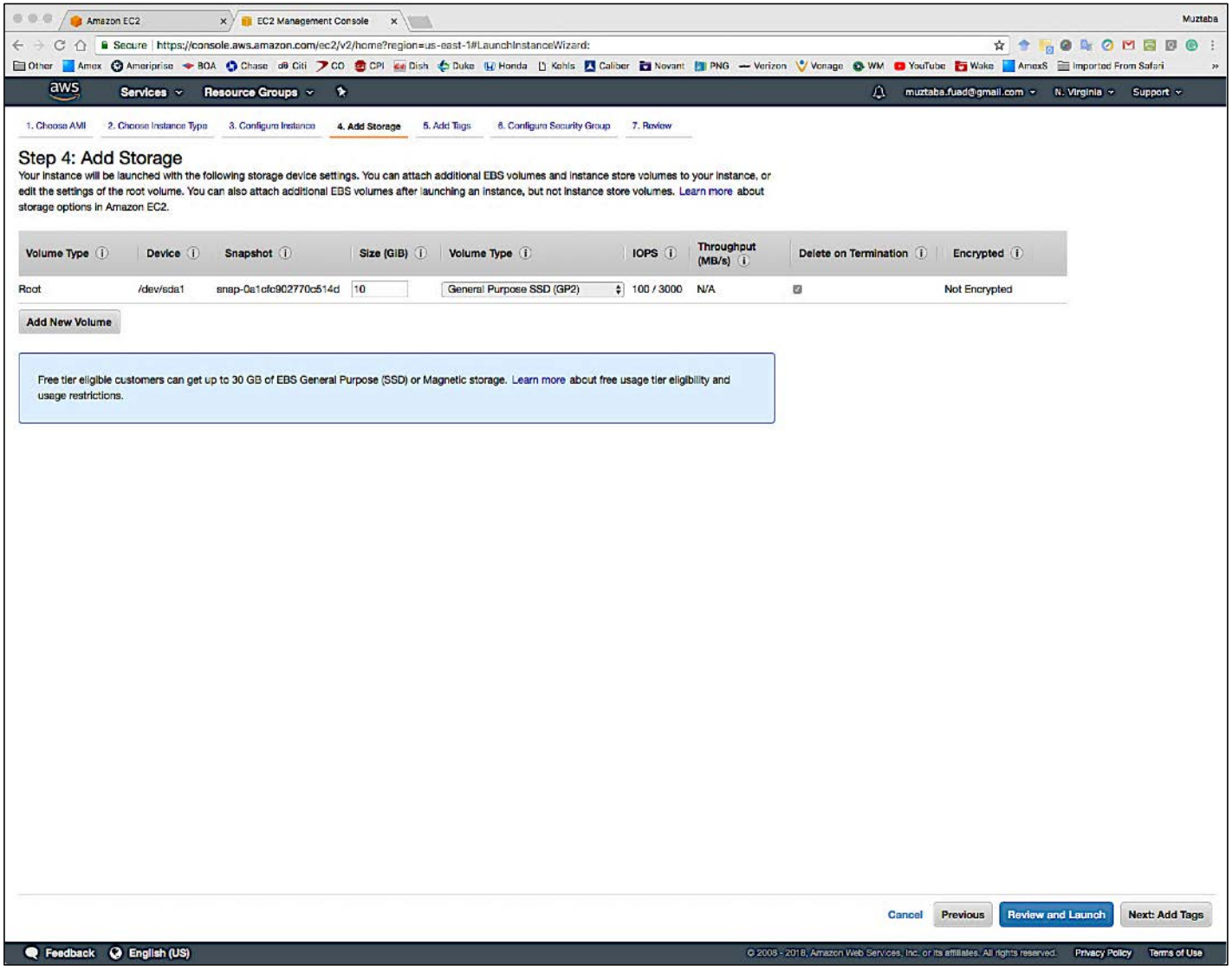
Select a free Linux machine

Select a free tier eligible type

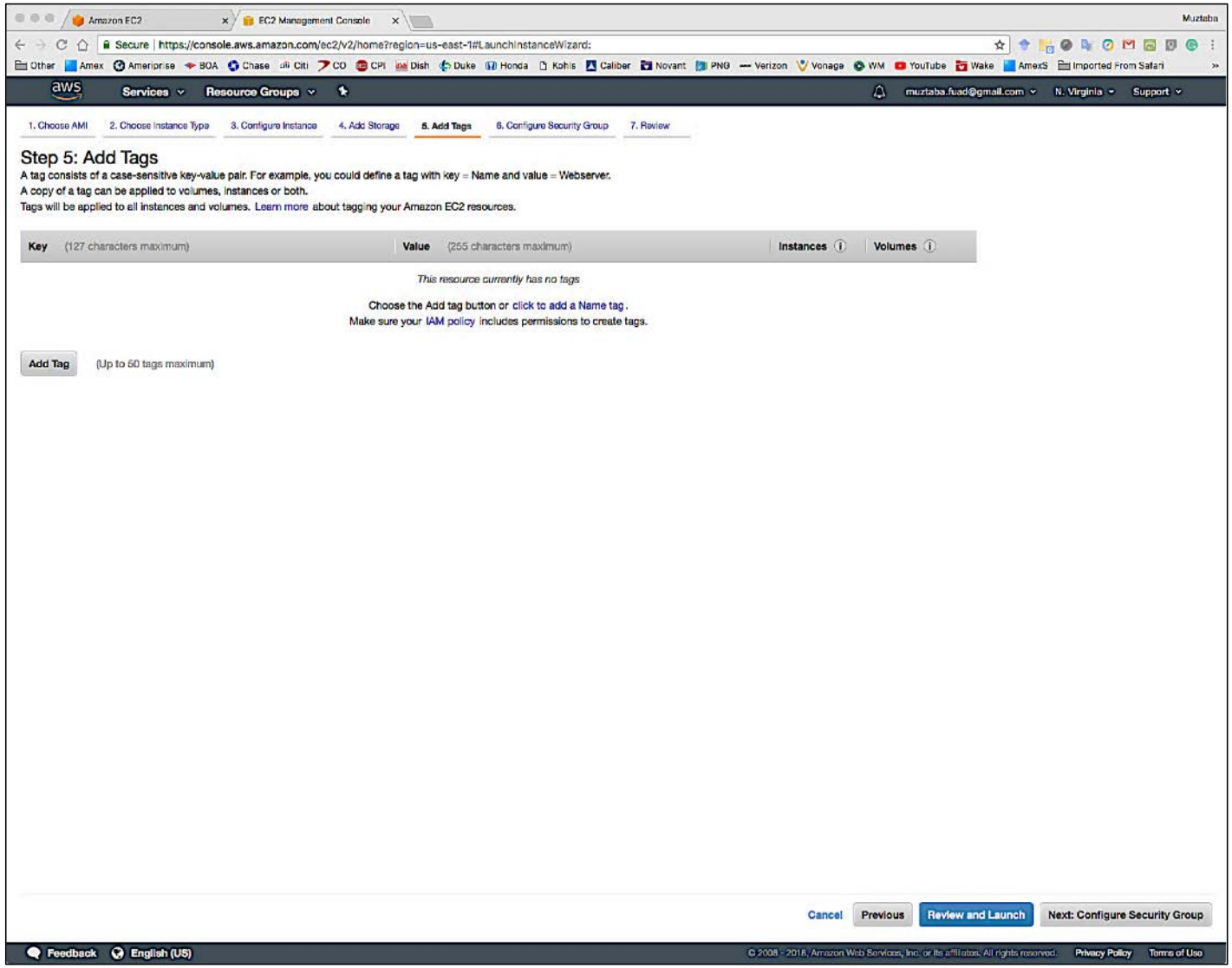



Amazon EC2
EC2 Management Console
Muztaba
Secure https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
aws
Services
Resource Groups
muztaba.fuad@gmail.com
N. Virginia
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 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 Zon
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
Feedback
English (US)
Privacy Policy
Terms of Use

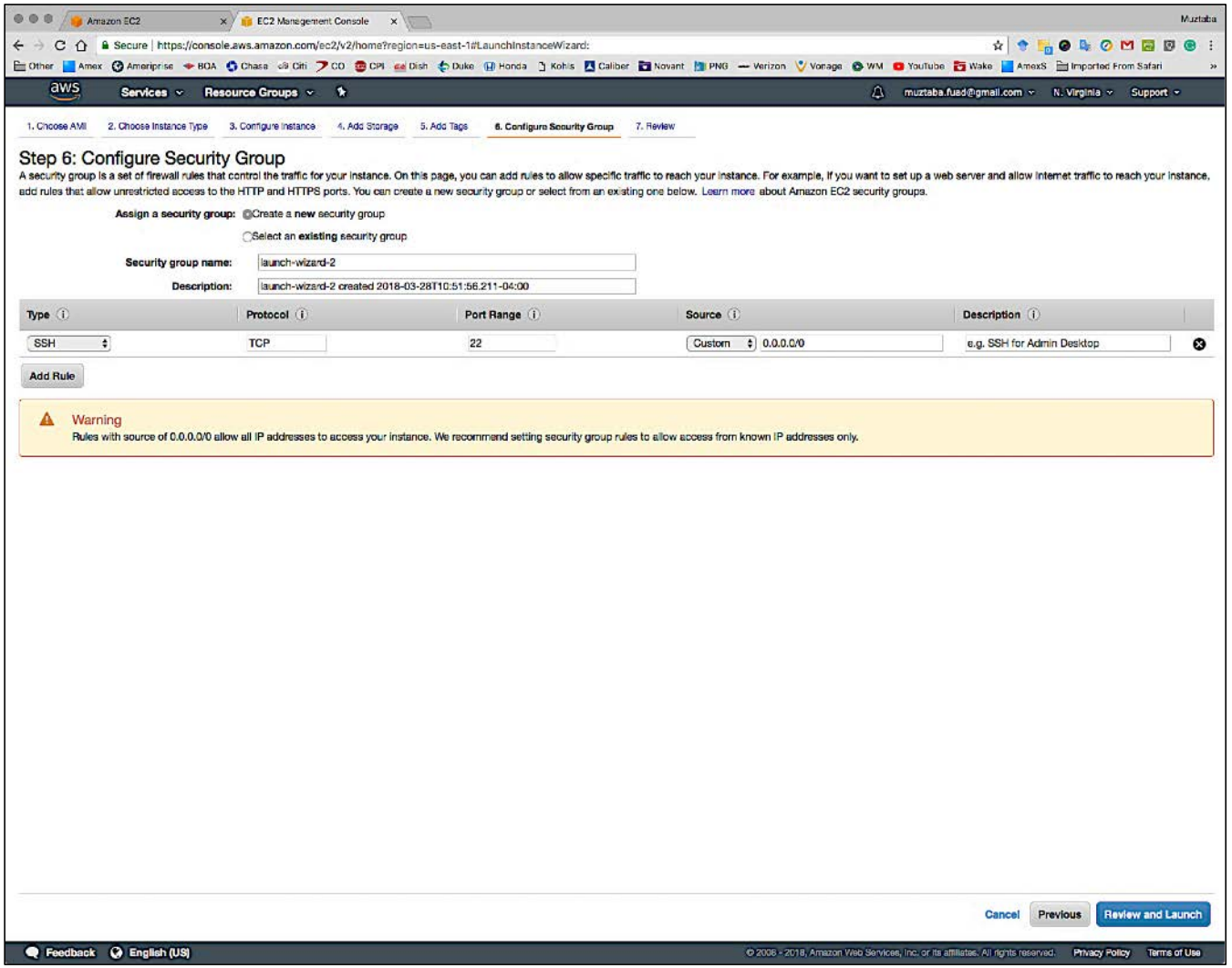
Press Next

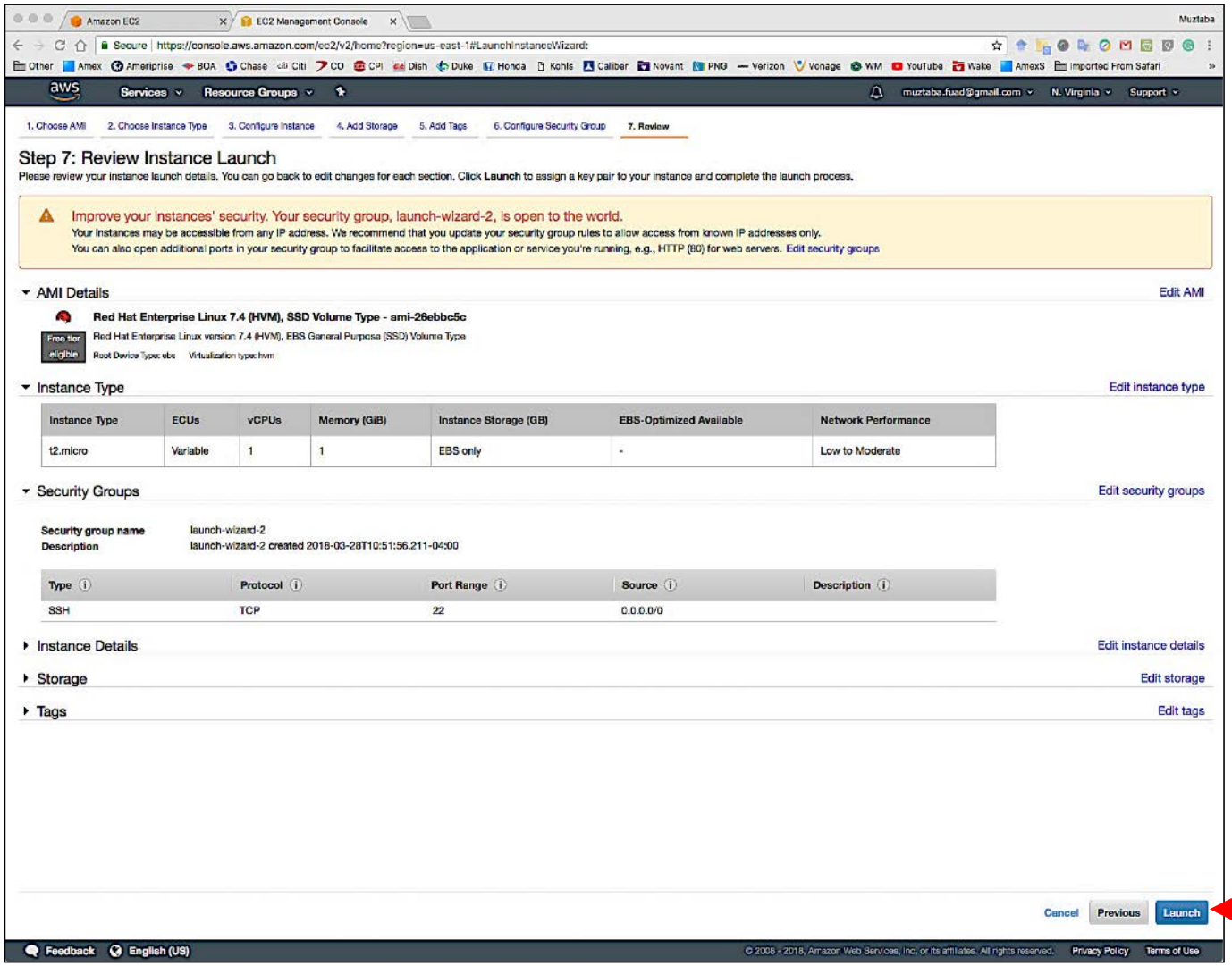

Amazon EC2
EC2 Management Console
Muztaba
Secure | https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Other Amex Ameriprise BOA Chase Citi CO CPI Dish Duke Honda Kohls Caliber Novant PNG Verizon Vonage WM YouTube Wake AmexS Imported From Safari
aws
Services
Resource Groups
muztaba.fuad@gmail.com
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 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-0a1cfc902770c514d
10
General Purpose SSD (GP2)
100 / 3000
N/A
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
Feedback
English (US)
© 2008 - 2016, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use

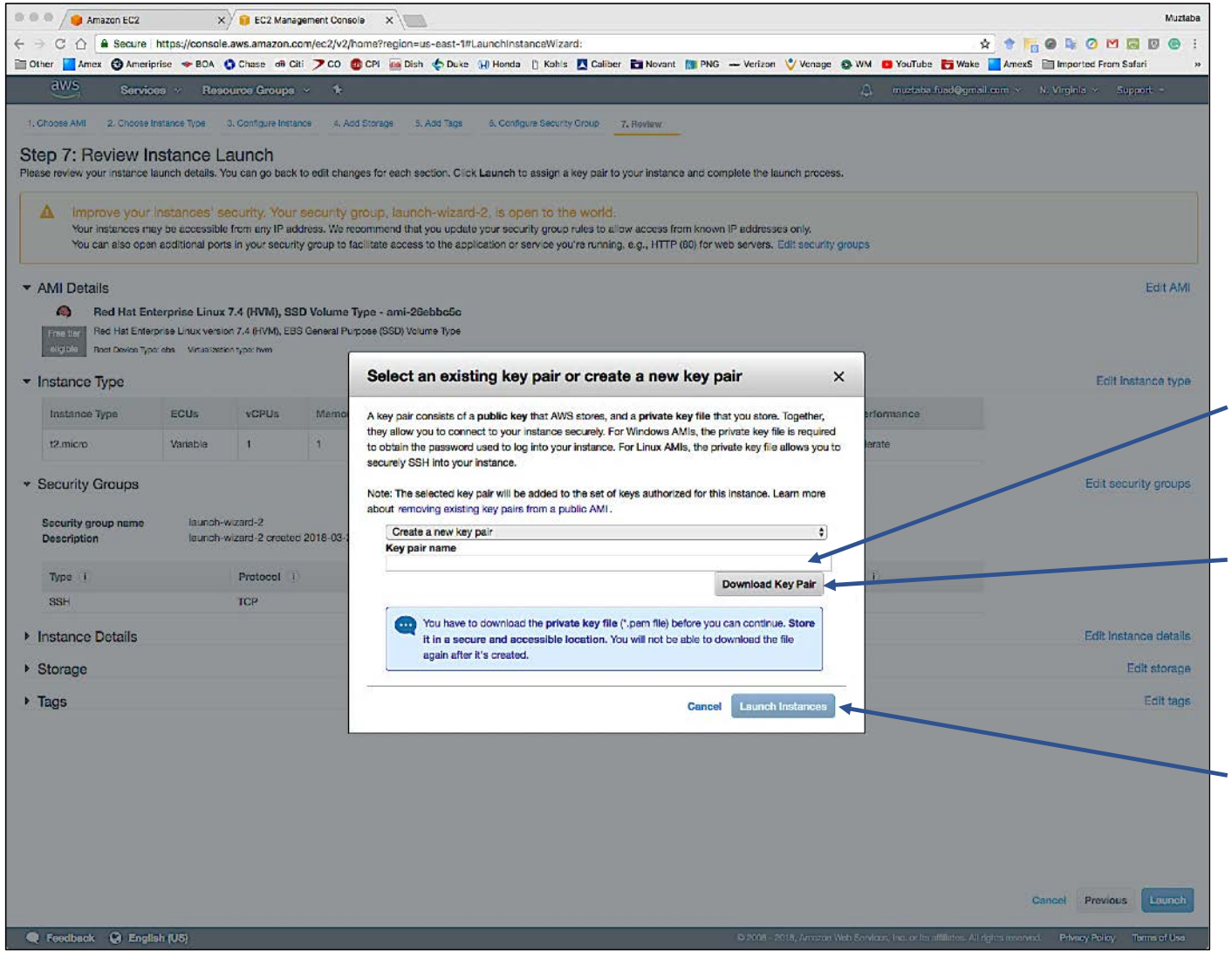
Press Next


Amazon EC2
EC2 Management Console
Muztaba
Secure | https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Other Amex Ameriprise BOA Chase Citi CO CPI Dish Duke Honda Kohls Caliber Novant PNG Verizon Vonage WM YouTube Wake AmexS Imported From Safari
aws
Services
Resource Groups
muztaba.fuad@gmail.com
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 5: Add Tags
A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. Learn more about tagging your Amazon EC2 resources.
Key (127 characters maximum)
Value (255 characters maximum)
Instances
Volumes
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.
Add Tag
(Up to 50 tags maximum)
Cancel
Previous
Review and Launch
Next: Configure Security Group
Feedback
English (US)
© 2008 - 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use

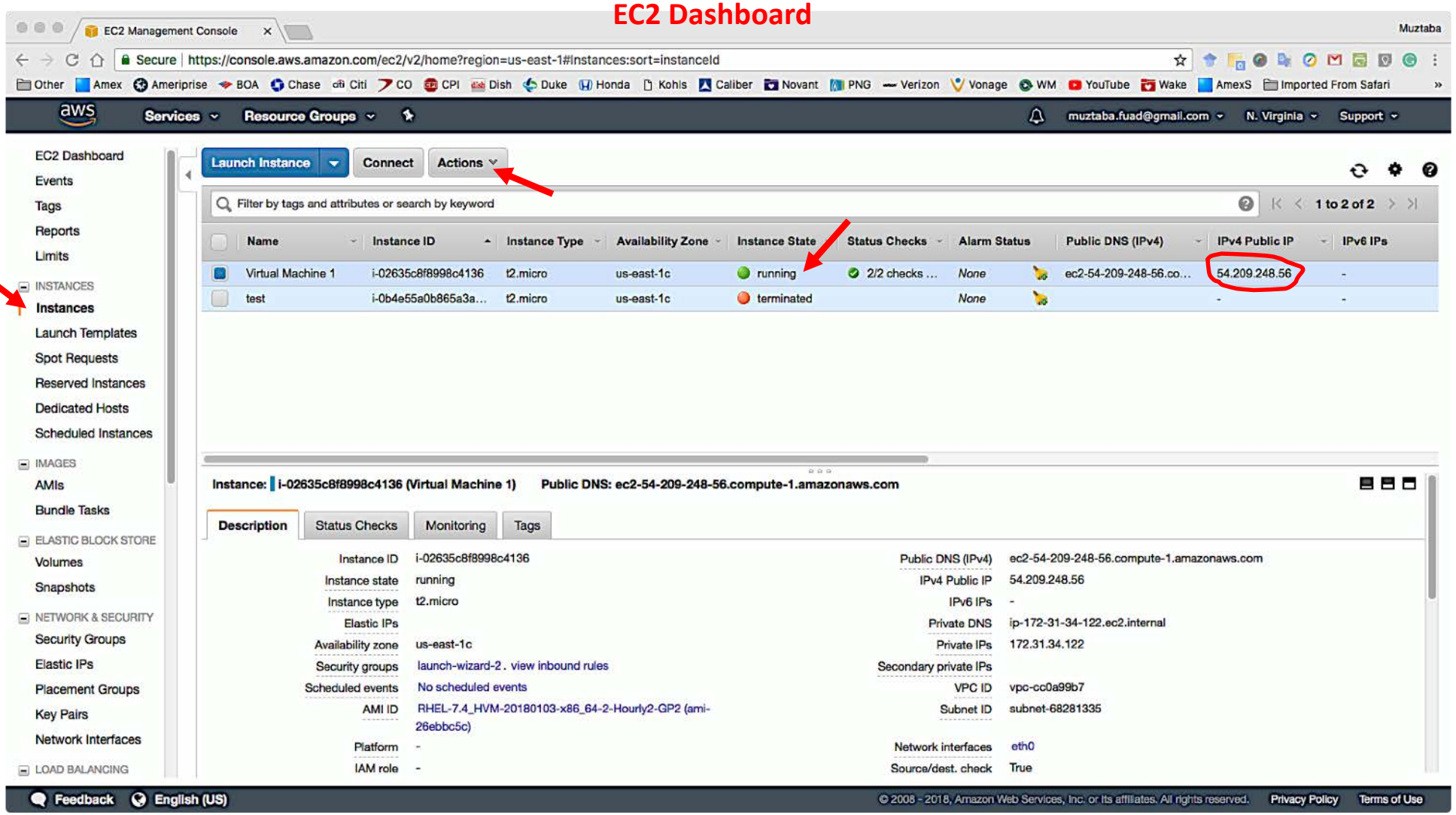
Press Next


Amazon EC2
EC2 Management Console
Muztaba
Secure | https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Other Amex Ameriprise BOA Chase Citi CO CPI Dish Duke Honda Kohls Caliber Novant PNG Verizon Vonage WM YouTube Wake AmexS Imported From Safari
aws
Services
Resource Groups
muztaba.fuad@gmail.com
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 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:
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
Custom
0.0.0.0/0
e.g. SSH for Admin Desktop
Add Rule
Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.
Cancel
Previous
Review and Launch
Feedback
English (US)
© 2008 - 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use


Amazon EC2
EC2 Management Console
Muztaba
Secure | https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
aws
Services
Resource Groups
muztaba.fuad@gmail.com
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. 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
Edit AMI
Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-26ebbc5c
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
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-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
Instance Details
Edit instance details
Storage
Edit storage
Tags
Edit tags
Cancel
Previous
Launch
Feedback
English (US)
© 2008 - 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use


Amazon EC2
EC2 Management Console
Muztaba
Secure https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Services
Resource Groups
muztaba.fuad@gmail.com
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. 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
Edit AMI
Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-2defbc5c
Instance Type
Edit instance type
Security Groups
Edit security groups
Instance Details
Edit instance details
Storage
Edit storage
Tags
Edit tags
Cancel
Previous
Launch
Feedback
English (US)
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"

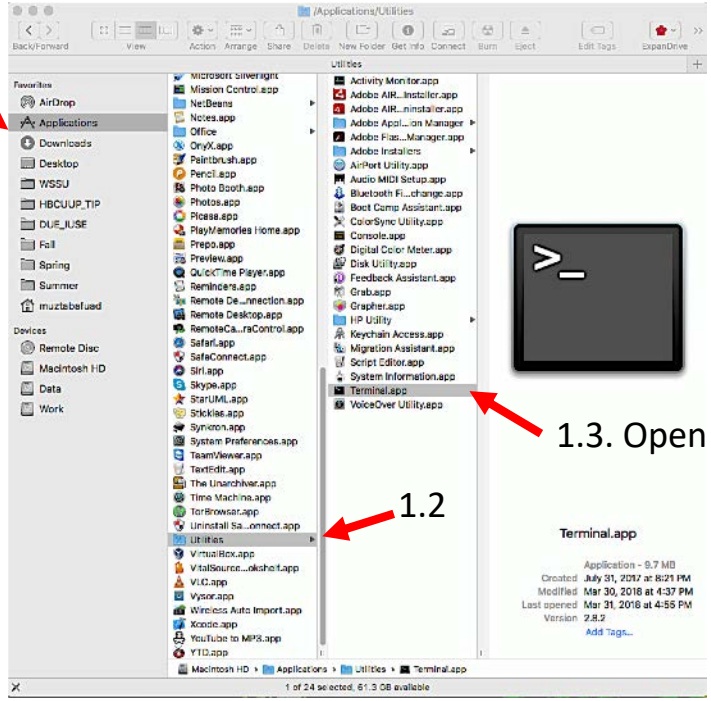
EC2 Dashboard



If you are using a Mac machine:

1. Open a finder window

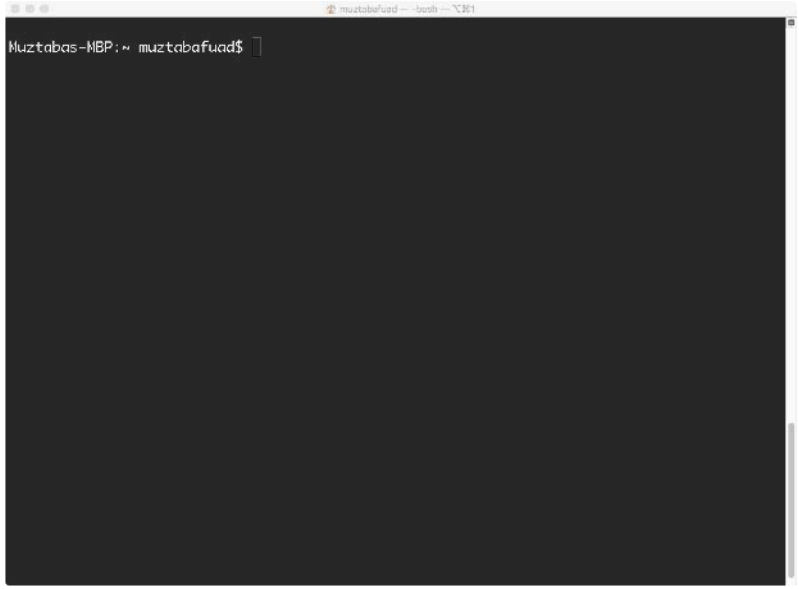
1.1



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

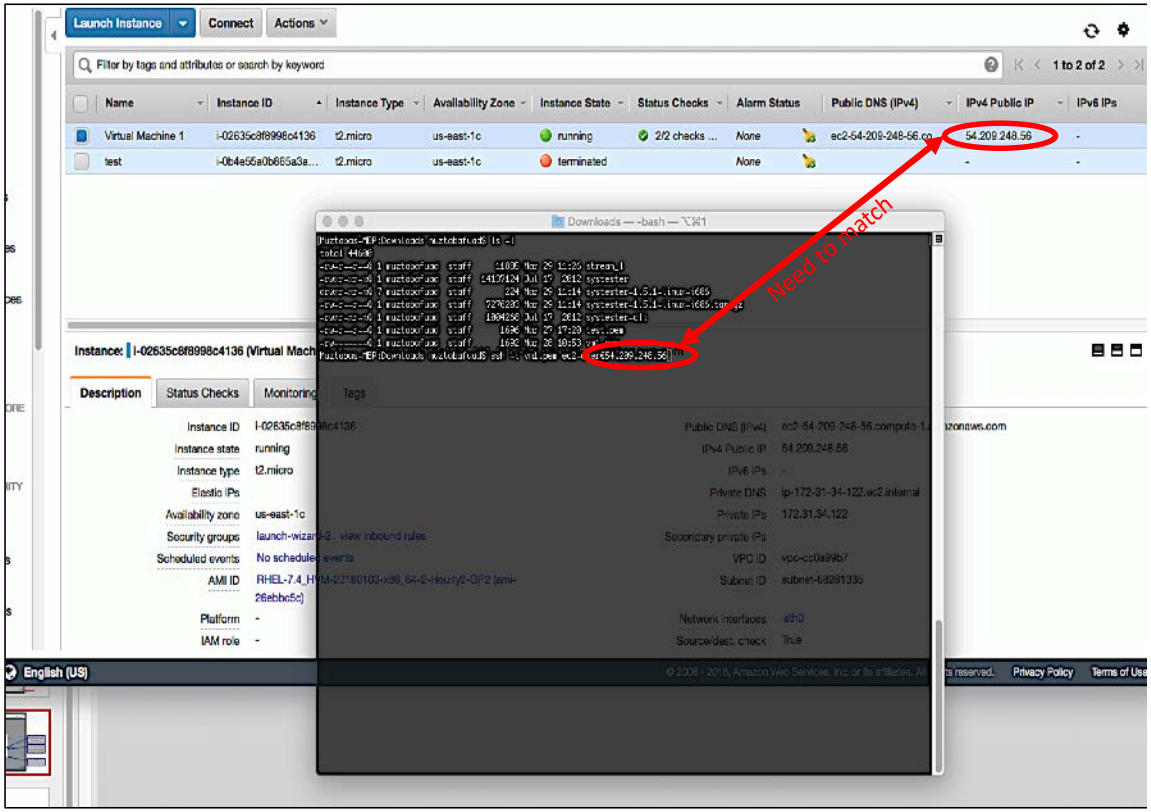
Type in your terminal window:

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 your 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**

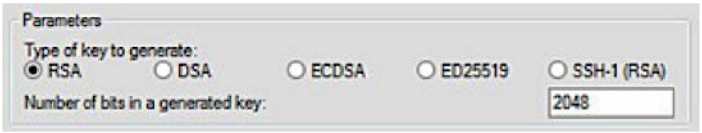
   9.4 **./phoronix-test-suite benchmark iozone**

   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**.

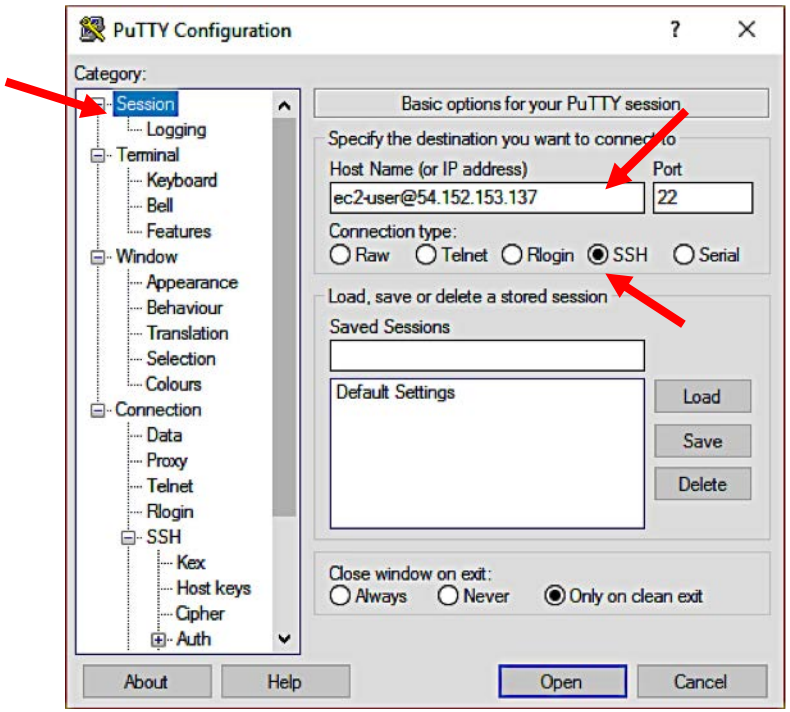
If you are using a Windows machine:

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

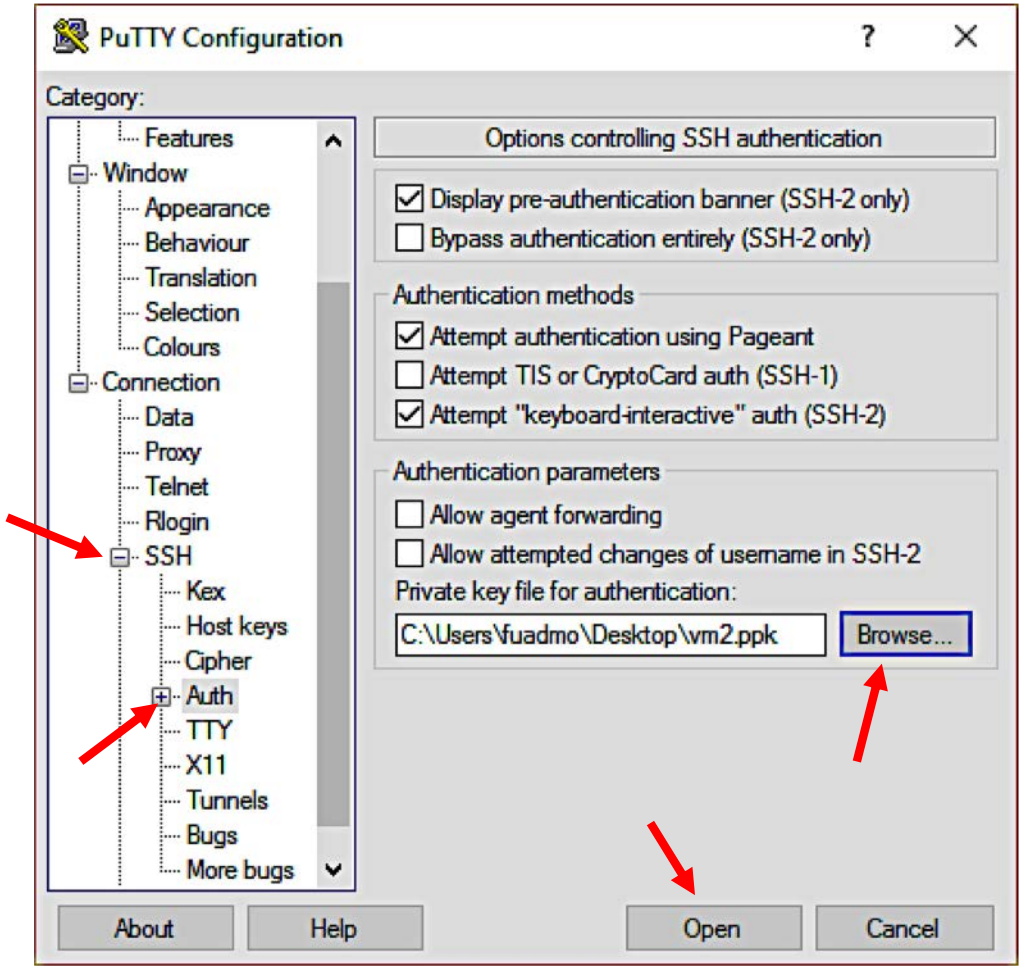


If you are using a Windows machine:

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

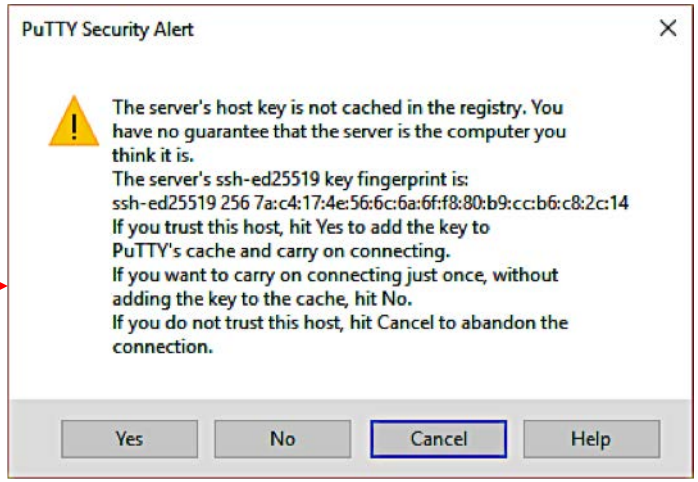
    6.1 Choose Browse and Select the .ppk file that you generated for your key pair, and then choose Open.

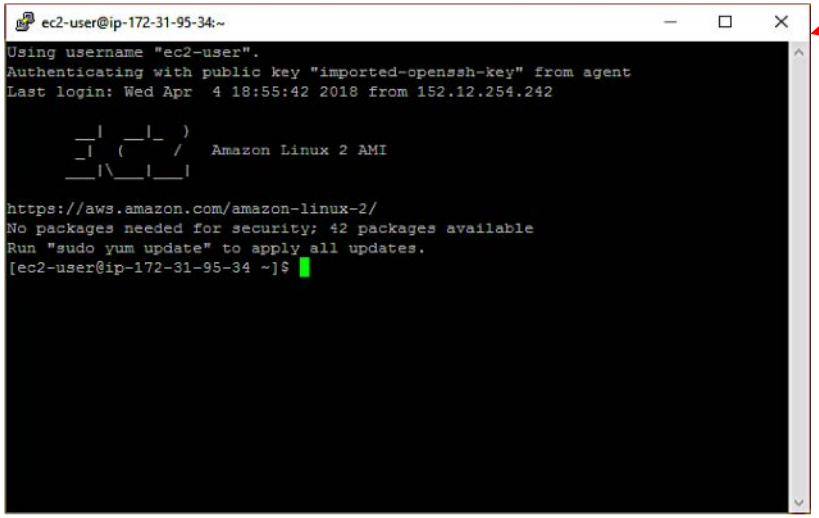
    6.2 Choose **Open** to start the PuTTY session.



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:

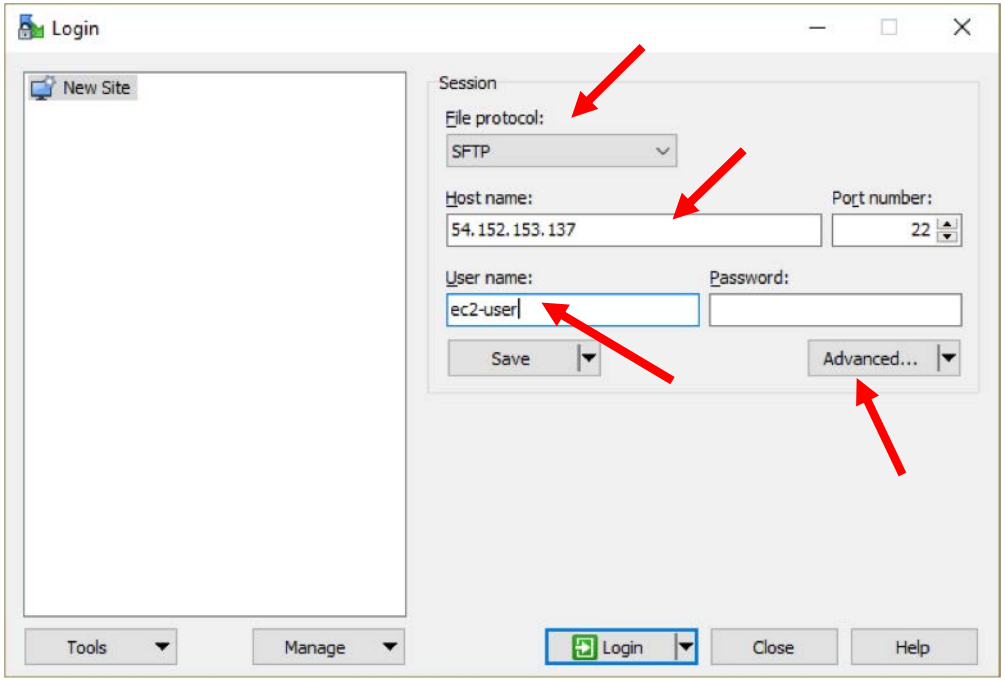
7. Download the 2 benchmarking software systester-cli and phoronix.tar.gz from Canvas.

8. Download and install WinSCP from http://winscp.net/eng/download.php. For most users, the default installation options are OK.

9. Start WinSCP.

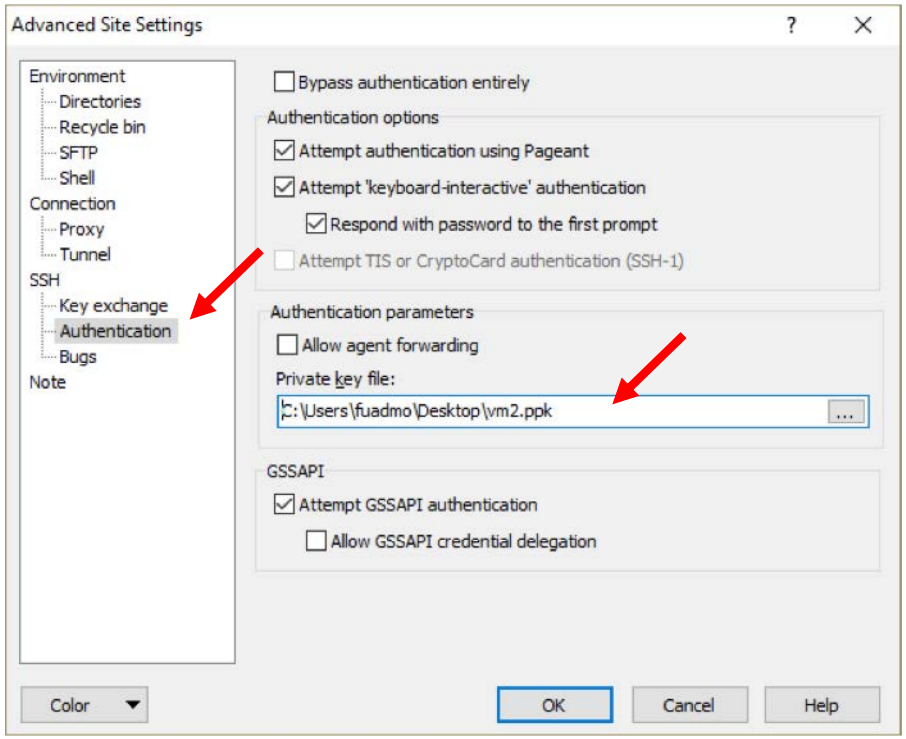
10. At the WinSCP login screen, for **Host name**, enter the IP address of your instance and for **User Name** enter *ec2-user.* **File Protocol** should be *SFTP.*

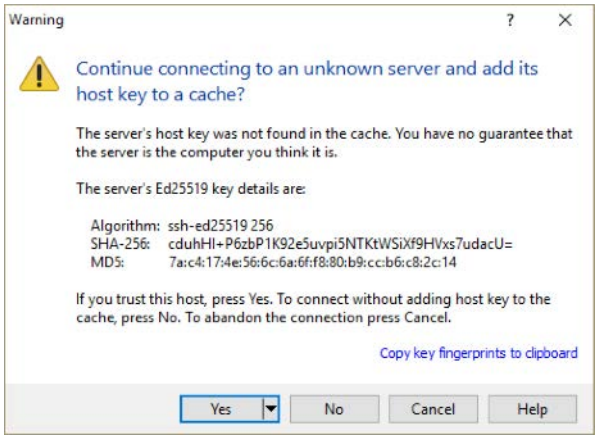
11. Now click **Advanced.**



If you are using a Windows machine:

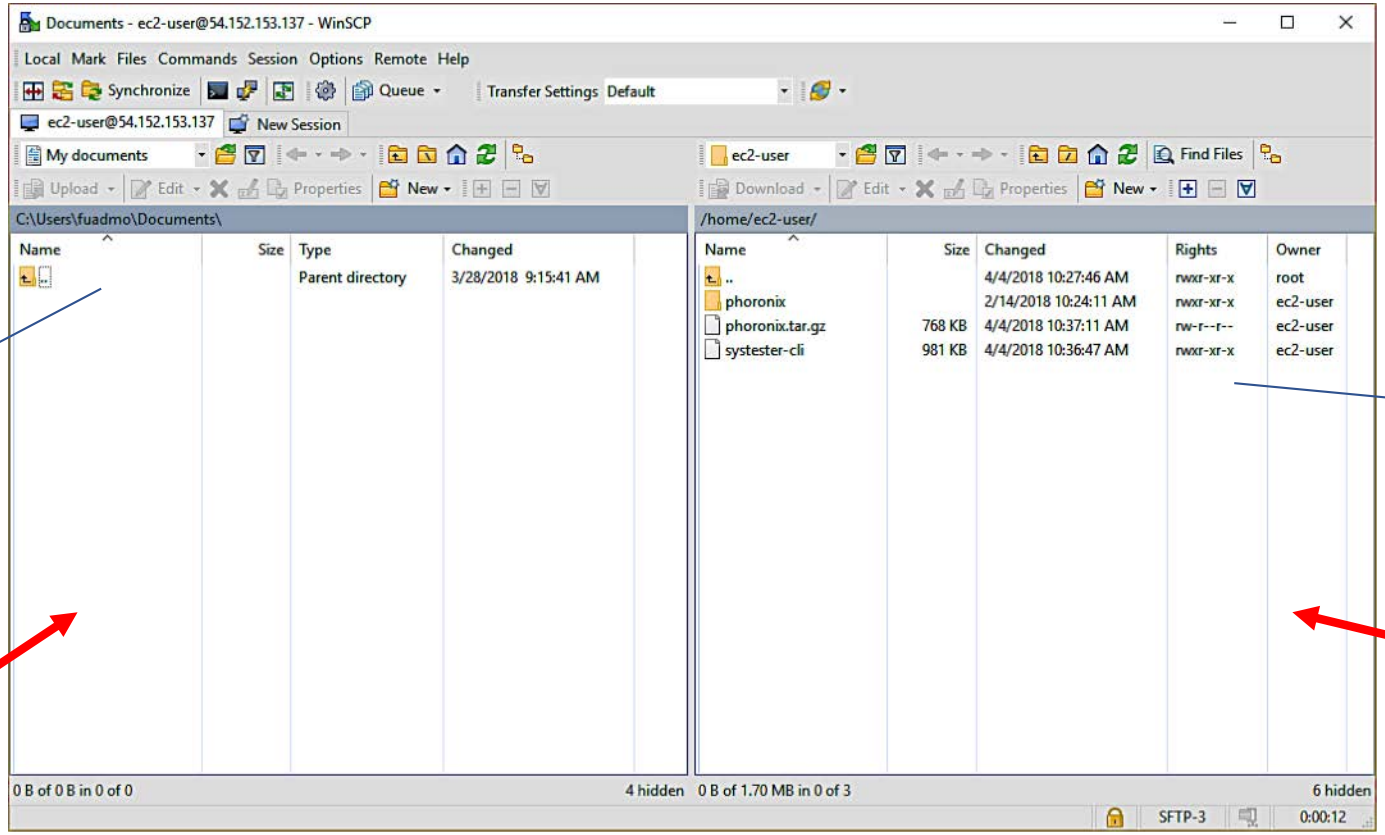
12. Click Authentication and under Private key file, browse for the converted **.ppk** file and select the file.
13. Now press **OK**.
14. WinSCP might show you a warning; just press **Yes**.





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.



Locate the two filessystester-cli and phoronix.tar.gz that you downloaded from Canvas

Files on your PC

And drag them to this side

Files on the AWS instance

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.