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Enroll No: 2002242

Cloud Computing

Practical Assignment No. 7 - Write a program for web feed.

Step 1: At the top right panel above the console, choose **Start Lab** to launch your lab.

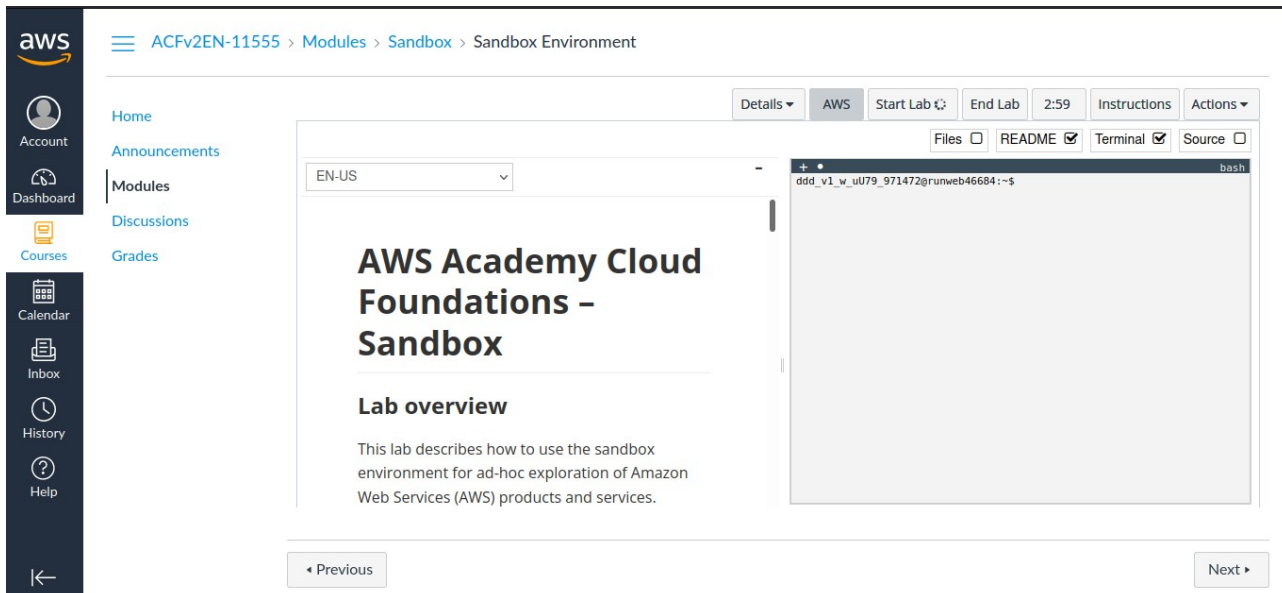
The screenshot shows the AWS Academy Cloud Foundations - Sandbox lab interface. The left sidebar contains navigation links: Home, Announcements, Modules, Discussions, Grades, Courses, Calendar, Inbox, History, and Help. The main content area displays the lab overview, which includes a title 'AWS Academy Cloud Foundations - Sandbox', a subtitle 'Lab overview', and a description: 'This lab describes how to use the sandbox environment for ad-hoc exploration of Amazon Web Services (AWS) products and services.' The top right panel shows the lab controls, including buttons for 'Details', 'AWS', 'Start Lab', 'End Lab', a timer '00:00:00', 'Instructions', and 'Actions'. The 'Start Lab' button is highlighted. Below the lab overview, there are 'Previous' and 'Next' navigation buttons.

Step 2: Wait until you see the message "**Lab status: ready**", then choose the **X** to close the Start Lab panel.

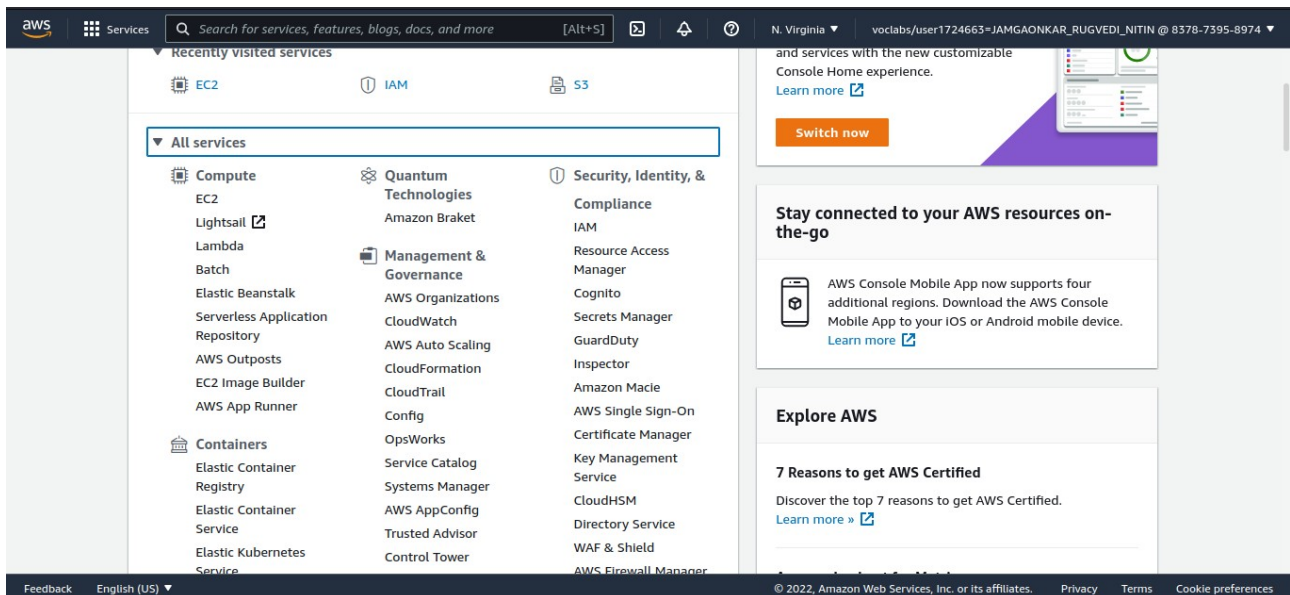
The screenshot shows the AWS Academy Cloud Foundations - Sandbox lab interface with the 'Start Lab' panel open. The panel displays the following information: Region: us-east-1, Lab ID: arn:aws:cloudformation:us-east-1:860488123145:stack/c45982a63249611428558t1w860488123145/a039e2d0-6885-11ec-812d-1264f938c47d, Creation Time: 2021-12-29T00:59:27-0800, Start session at: 2021-12-29T00:59:27-0800, Remaining session time: 03:00:00 (180 minutes), and Lab status: ready. The 'Lab status: ready' message is highlighted with a red box. The 'Start Lab' panel has a close button (X) in the top right corner. The background shows the same lab overview as in the previous screenshot.

Step 3: Now choose AWS

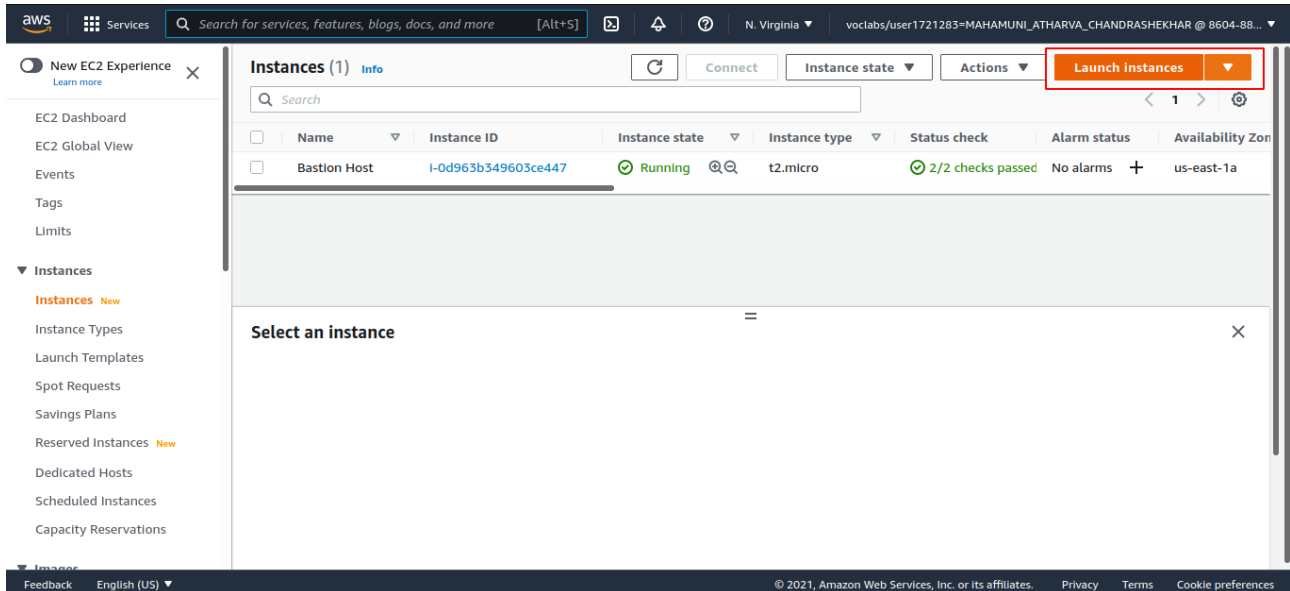
This will open the AWS Management Console in a new browser tab. The system will automatically log you in.



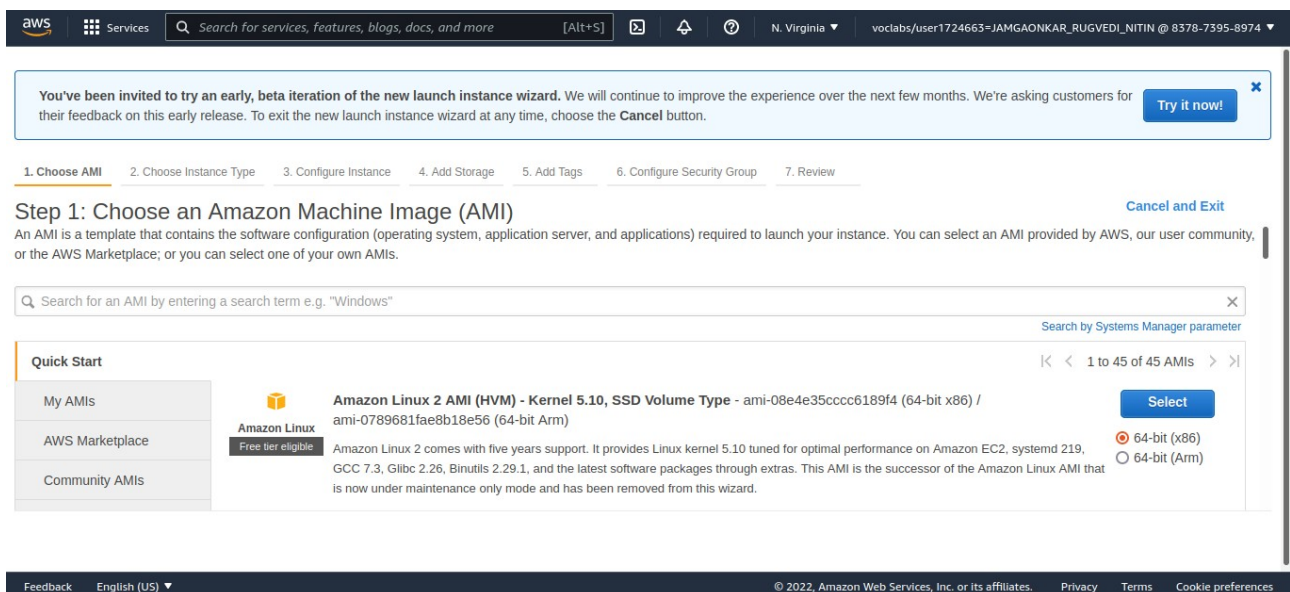
Step 4: In the AWS Management Console on the Services menu, choose EC2.



Step 5: Choose **Launch instance** , then select Launch Instance.



Step 6: Choose an Amazon Machine Image (AMI), select **Amazon Linux 2 AMI (HVM)**



Step 7: Choose an Instance Type, select t2.micro

1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. 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 familiesCurrent generationShow/Hide Columns

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

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

CancelPreviousReview and LaunchNext: Configure Instance Details

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Choose Next: Configure Instance Details

Step 8: Configure Instance Details

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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 instances1Launch into Auto Scaling Group

Purchasing option☐ Request Spot instances

Networkvpc-06b08fd96ae878c68 (default)Create new VPC

SubnetNo preference (default subnet in any Availability Zone)Create new subnet

Auto-assign Public IPUse subnet setting (Enable)

Hostname typeUse subnet setting (IP name)

DNS Hostname☒ Enable IP name IPv4 (A record) DNS requests☒ Enable resource-based IPv4 (A record) DNS requests☐ Enable resource-based IPv6 (AAAA record) DNS requests

CancelPreviousReview and LaunchNext: Add Storage

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Choose Next: Add Storage

Step 9: Select default Storage

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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	Encryption
Root	/dev/xvda	snap-0c03ce90cef384dca	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

[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.

[Shared file systems](#)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)

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Choose Next: Add Tags

Step 10: Choose Add Tag then configure (key: value):

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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 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances	Volumes	Network Interfaces
Name	LinuxServer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

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Choose Next: Configure Security Group

Step 11: Select a **security group**, either an existing one or create a new group.

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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 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.

Cancel

Previous

Review and Launch

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Choose **Review and Launch**

Step 12: Choose Launch

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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 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.

Warning

Improve your instances' security. Your security group, launch-wizard-1, 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

Free tier eligible

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-08e4e35cccc6189f4

Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is n...

Root Device Type: ebs Virtualization type: hvm

Instance Type

Edit instance type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	1	1	1	EBS only		Low to Moderate

Cancel

Previous

Launch

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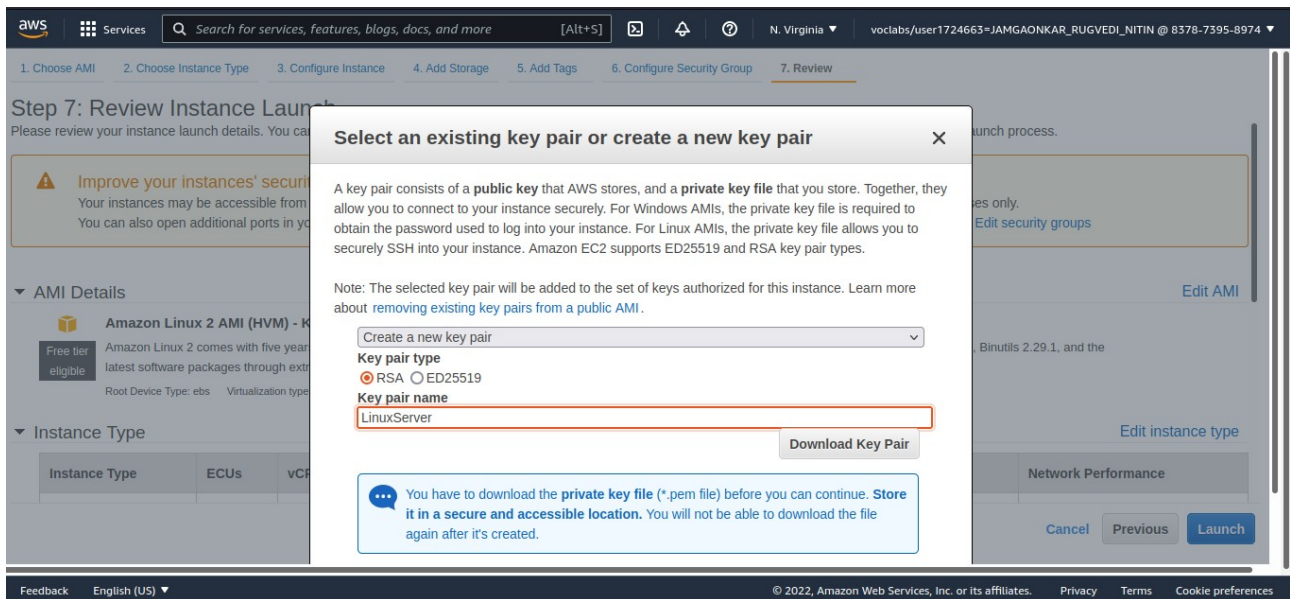
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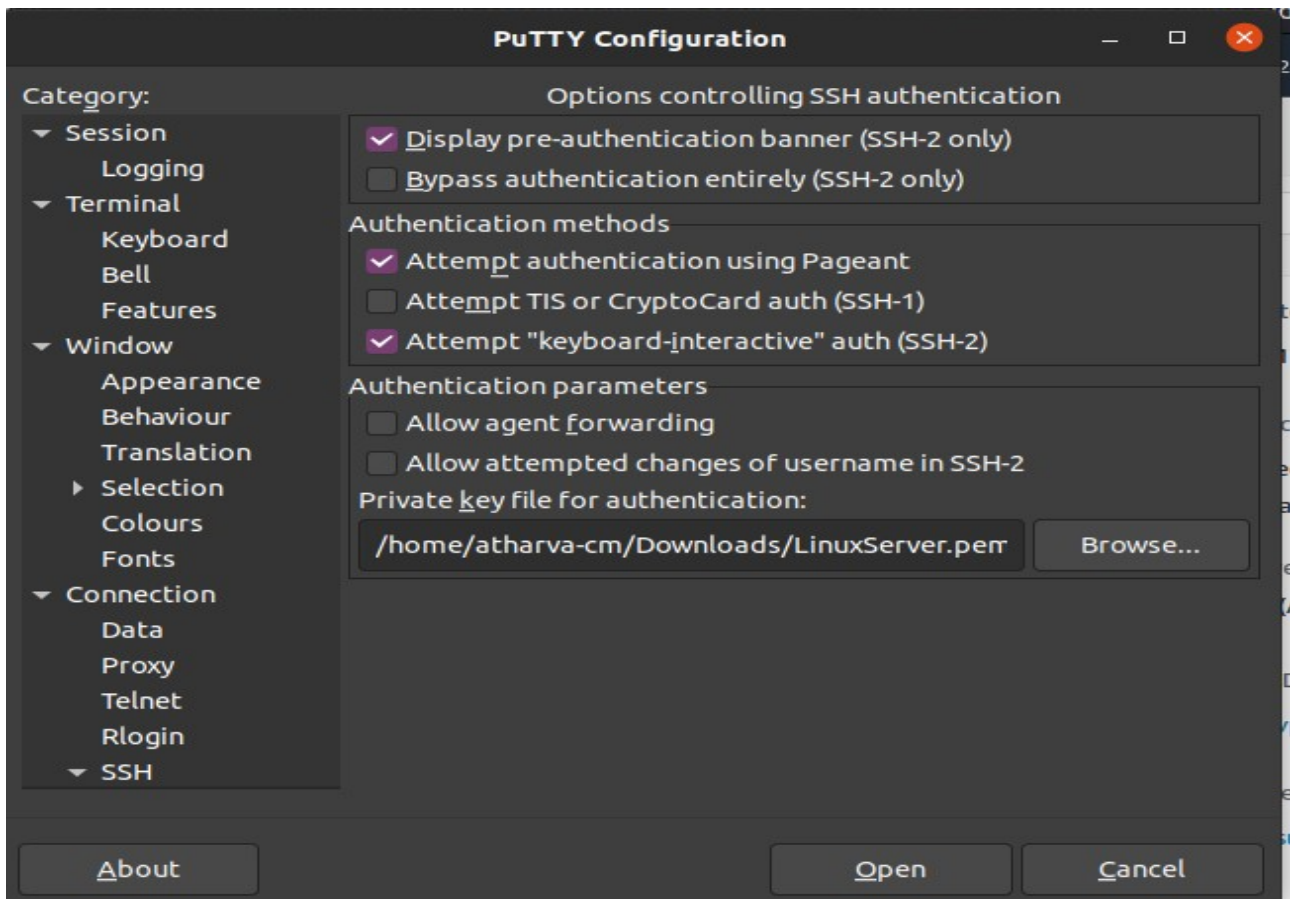
Cookie preferences

Step 13: A box will appear then select **Create a new key pair**.



Give it a name and select **Download Key Pair**
Select **Launch Instances**.

Step 14: Open putty and connect to your instance using SSH, use the key you downloaded earlier.



Step 15: login as ec2-user and install python3 and feedparser

```
root@ip-172-31-20-62:/home/ec2-user

[ec2-user@ip-172-31-20-62 ~]$ sudo su
[root@ip-172-31-20-62 ec2-user]# yum install python3 && yum install python3-pip
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core | 3.7 kB 00:00
Package python3-3.7.10-1.amzn2.0.1.x86_64 already installed and latest version
Nothing to do
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Package python3-pip-20.2.2-1.amzn2.0.3.noarch already installed and latest version
Nothing to do
[root@ip-172-31-20-62 ec2-user]# pip3 install feedparser
WARNING: Running pip install with root privileges is generally not a good idea.
Try `pip3 install --user` instead.
Collecting feedparser
  Downloading feedparser-6.0.8-py3-none-any.whl (81 kB)
    | 81 kB 12.7 MB/s
Collecting sgmlib3k
  Downloading sgmlib3k-1.0.0.tar.gz (5.8 kB)
Using legacy 'setup.py install' for sgmlib3k, since package 'wheel' is not installed.
Installing collected packages: sgmlib3k, feedparser
  Running setup.py install for sgmlib3k ... done
Successfully installed feedparser-6.0.8 sgmlib3k-1.0.0
[root@ip-172-31-20-62 ec2-user]#
```

Step 16: Write a feed parser program using nano or vi editor.

```
root@ip-172-31-81-64:/home/ec2-user
GNU nano 2.9.8 feedparser.py
import webbrowser

feed = feedparser.parse("https://finance.yahoo.com/rss/")

feed_title = feed['feed']['title']
feed_entries = feed.entries

for entry in feed.entries:
    article_title = entry.title
    article_link = entry.link
    article_published_at = entry.published
    article_published_at_parsed = entry.published_parsed
    article_author = entry.author
    content = entry.summary
    article_tags = entry.tags

    print("{}[{}]" .format(article_title, article_link))
    print("Published at {}".format(article_published_at))
    print("Content {}".format(content))
    print("category {}".format(article_tags))

Get Help  Write Out  Where Is  Cut Text  Justify  Cur Pos  Undo  Mark Text  To Bracket
Exit  Read File  Replace  Uncut Text  To Linter  Go To Line  Redo  Copy Text  WhereIs Next
```


Step 17: execute the program and you will see the rss feed as output.

```
root@ip-172-31-81-64:/home/ec2-user
[root@ip-172-31-81-64 ec2-user]# python3 feed_parse.py
/usr/local/lib/python3.7/site-packages/feedparser/entry.py:11: DeprecationWarning: 'urllib.urlretrieve' is deprecated and slated for removal in Python 3.12
  urllib.urlretrieve(url, None)
Cathie Wood is expecting a 'bloodbath' in this segment of the market: 'autos are one example of many disturbances out there in the world order'[https://www.marketwatch.com/story/cathie-wood-is-expecting-a-bloodbath-in-this-segment-of-the-market-autos-are-one-example-of-many-disturbances-out-there-in-the-world-order-11641932894?siteid=yhoof2&yptr=yahoo]
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Here are 4 of J.P. Morgan's top stock picks for 2022 - if you're a risk-averse investor but still want solid growth, these might be for you[https://finance.yahoo.com/news/4-j-p-morgans-top-stock-picks-for-2022-214600603.html]
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What It Takes to Be in the 1% By State[https://finance.yahoo.com/news/takes-1-state-120023919.html]
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How Much Your Social Security Benefits Will Be If Your Income Is This Much[https://www.investors.com/etfs-and-funds/retirement/social-security-predicting-benefits-based-on-your-age-income/?src=A00220&yptr=yahoo]
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A 27-year-old truck driver just became Robinhood's first big headache of 2022[https://www.marketwatch.com/story/a-27-year-old-truck-driver-just-became-robinhoods-first-big-headache-of-2022-11641856157?siteid=yhoof2&yptr=yahoo]
Published at 2022-01-10T23:09:00Z
As inflation hits 7%, here's a list of industries the Biden administration is targeting[https://finance.yahoo.com/news/inflation-biden-administration-134727117.html]
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Morgan Stanley has an 'overweight' rating on these 3 stocks, yielding up to 9.1% - nail them down in case inflation soars even higher[https://finance.yahoo.com/news/morgan-stanley-overweight-rating-3-174500496.html]
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You Need to Make This Much Money to Feel Financially Healthy[https://finance.yahoo.com/news/much-money-feel-financially-healthy-220515160.html]
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Expect more than 4 rate increases in 2022, and a lot of market volatility, says JPMorgan's Dimon: 'If we're lucky' the Fed can engineer a "soft landing." [https://www.marketwatch.com/story/expect-more-than-4-rate-increases-in-2022-and-a-lot-of-market-volatility-says-jpmorgans-dimon-if-were-lucky-the-fed-can-engineer-a-soft-landing-11641842069?siteid=yhoof2&yptr=yahoo]
Published at 2022-01-10T19:14:00Z
J.P. Morgan's 2 Stock Picks With Over 80% Upside Potential[https://finance.yahoo.com/news/j-p-morgan-2-stock-004028510.html]
Published at 2022-01-11T00:40:28Z
These are the types of companies Warren Buffett says you should invest in during times of inflation[https://www.marketwatch.com/picks/these-are-the-types-of-companies-warren-buffett-says-you-should-invest-in-during-times-of-inflation-01633548517?siteid=yhoof2&yptr=yahoo]
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