

CS 201P Project #1 — Installing a SEED 2.0 VM

Name: Shikhir Goel

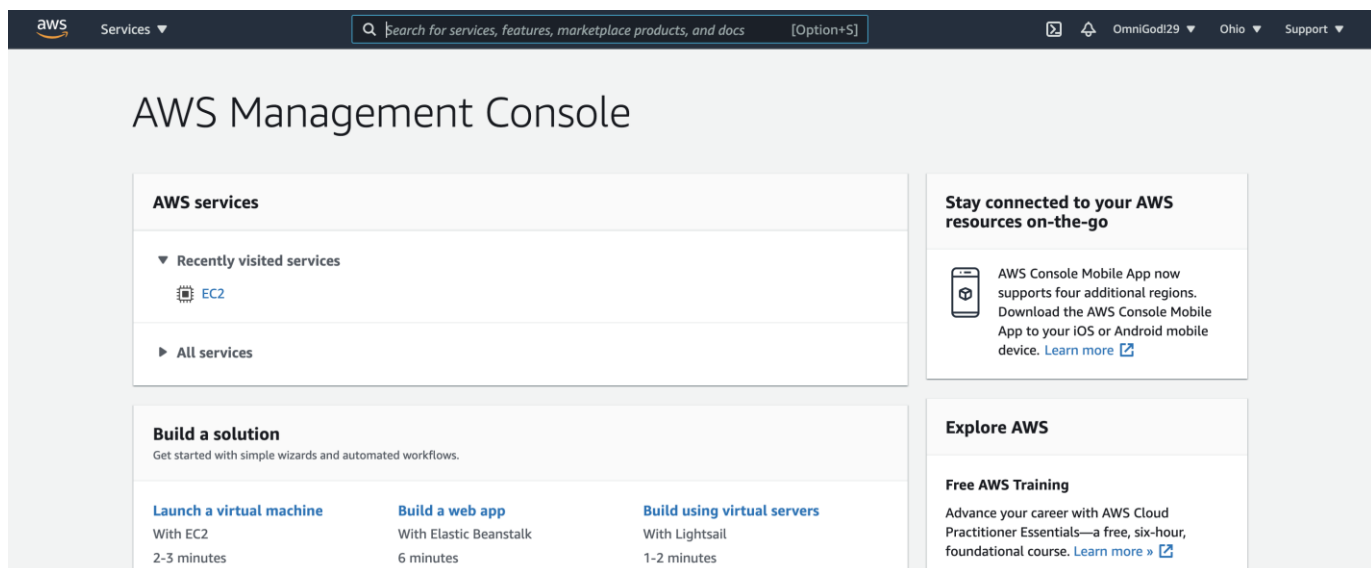
UCI ID: shikhirg@uci.edu

Computing/Cloud Platform Chosen: Amazon Web Services

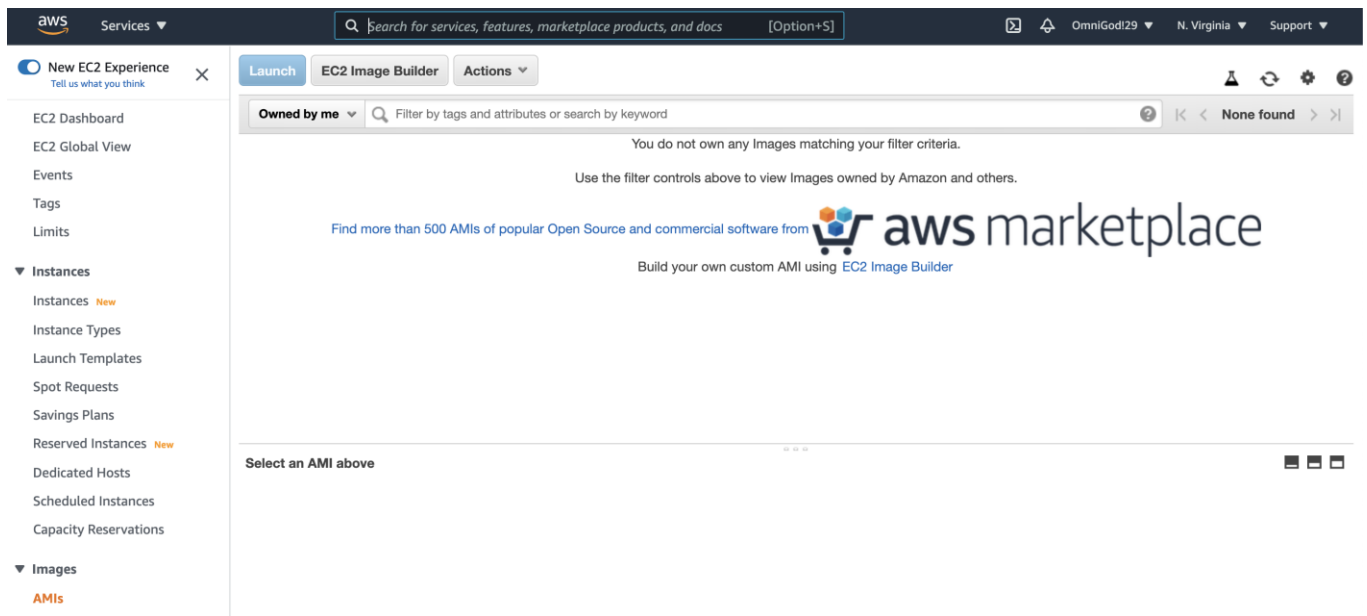
Goal: Creating a VM instance on the cloud and installing Ubuntu 20.04 LTS operating system on the VM.

Public IP address: 100.26.134.28

Following are the screenshots of the procedure followed while creating a seed VM on the cloud:



AWS console



Searching for Ubuntu Image

Launch Status

The following instance launches have been initiated: [i-0577a2c8b1de10e6aa](#) [View launch log](#)

Get notified of estimated charges
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

▼ Here are some helpful resources to get you started

- How to connect to your Linux instance
- Learn about AWS Free Usage Tier
- Amazon EC2: User Guide
- Amazon EC2: Discussion Forum

While your instances are launching you can also

- Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)
- Create and attach additional EBS volumes (Additional charges may apply)
- Manage security groups

[View Instances](#)

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Creating instance

aws

Services

Search for services, features, marketplace products, and docs

[Option+S]

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Support

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 families Current generation Show/Hide Columns

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

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<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
<input type="checkbox"/>	t2	t2.xlarge	4	16	EBS only	-	Moderate	Yes

Cancel

Previous

Review and Launch

Next: Configure Instance Details

Choosing an Instance Type (vCPU and Memory)

aws

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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-0c8d143684c6e2a36 (default)Create new VPC

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

Auto-assign Public IPUse subnet setting (Enable)

Placement group☐ Add instance to placement group

Capacity ReservationOpen

Domain join directoryNo directoryCreate new directory

IAM roleNoneCreate new IAM role

Shutdown behaviorStop

Cancel

Previous

Review and Launch

Next: Add Storage

Configuring Instance Details

aws

Services

Search for services, features, marketplace products, and docs

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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	SSH
Custom TCP Fw	TCP	5901-5910	Custom 0.0.0.0/0	VNC

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

Configuring Security Group (Adding port range)

Chrome

File Edit View History Bookmarks Profiles Tab Window Help

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console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:ami=ami-05ec6d55eb6222397

Apps Gmail YouTube Maps seed-labs/seedvm...

aws

Services

Search for services, features, marketplace products, and docs

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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

SEEDUbuntu20.04LTS - ami-05ec6d55eb6222397

Ubuntu 20.04 LTS image for SEED Labs: <https://seedsecuritylabs.org>

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	EBS only	-	Low to Moderate

Security Groups

Edit security groups

Cancel

Previous

Launch

Reviewing Instance before launch


```
Welcome to Ubuntu 20.04.1 LTS (GNU/Linux 5.4.0-1029-aws x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage

System information disabled due to load higher than 1.0

* Introducing self-healing high availability clusters in MicroK8s.
  Simple, hardened, Kubernetes for production, from RaspberryPi to DC.

  https://microk8s.io/high-availability

66 updates can be installed immediately.
33 of these updates are security updates.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Tue Dec 15 18:04:47 2020 from 18.206.107.25
ubuntu@ip-172-31-27-92:~$ sudo su seed
seed@ip-172-31-27-92:/home/ubuntu$ whoami
seed
seed@ip-172-31-27-92:/home/ubuntu$ ls
seed@ip-172-31-27-92:/home/ubuntu$ ld
ld: no input files
seed@ip-172-31-27-92:/home/ubuntu$
```

i-099d1b19747978ce3

Public IPs: 100.26.134.28 Private IPs: 172.31.27.92

Logging in

```
58.10 | (8) Pi | Your | COD | 5780 | Intern | (7) Pc | split | Conn | Java | Micro | code | 20 B | Proje | SEED | seed | + |
console.aws.amazon.com/ec2/v2/connect/ubuntu/i-099d1b19747978ce3
Apps | Gmail | YouTube | Maps | seed-labs/seedvm... | Reading List

Welcome to Ubuntu 20.04.1 LTS (GNU/Linux 5.4.0-1029-aws x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage

System information as of Wed Sep 29 07:58:47 UTC 2021

System load:  0.08      Processes:      155
Usage of /:   34.6% of 11.57GB Users logged in: 1
Memory usage: 43%      IPv4 address for docker0: 172.17.0.1
Swap usage:   0%        IPv4 address for eth0: 172.31.27.92

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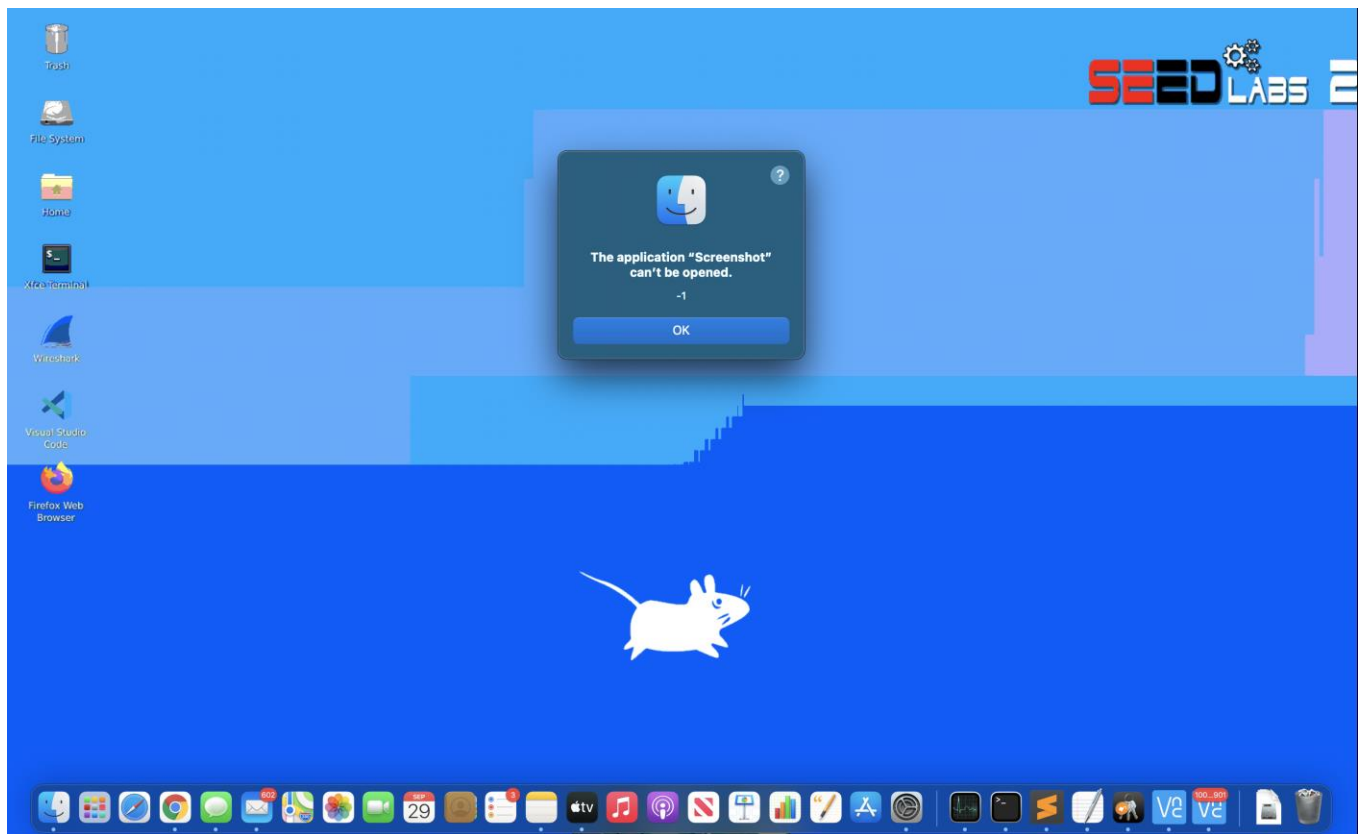
The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Wed Sep 29 07:39:05 2021 from 18.206.107.26
ubuntu@ip-172-31-27-92:~$ sudo su seed
seed@ip-172-31-27-92:/home/ubuntu$ vncserver -localhost no
```

i-099d1b19747978ce3

Public IPs: 100.26.134.28 Private IPs: 172.31.27.92

Launching VNC



SEED VM Successfully setup and launched