Module-3: Cloud Testing Hands-on

Hands-on Assignments : (any 3 mandatory)

1. Create a VM and install docker and test the images inside the container with the commands
2. Install ansible and connect the nodes to master and execute the adhoc commands on ansible masternode vm and test the packages installed or not
3. Launch minikube cluster and execute the commands to test the pod, container with the kubectl commands
4. Create the poc on open shift architecture and its components and commands used on cluster

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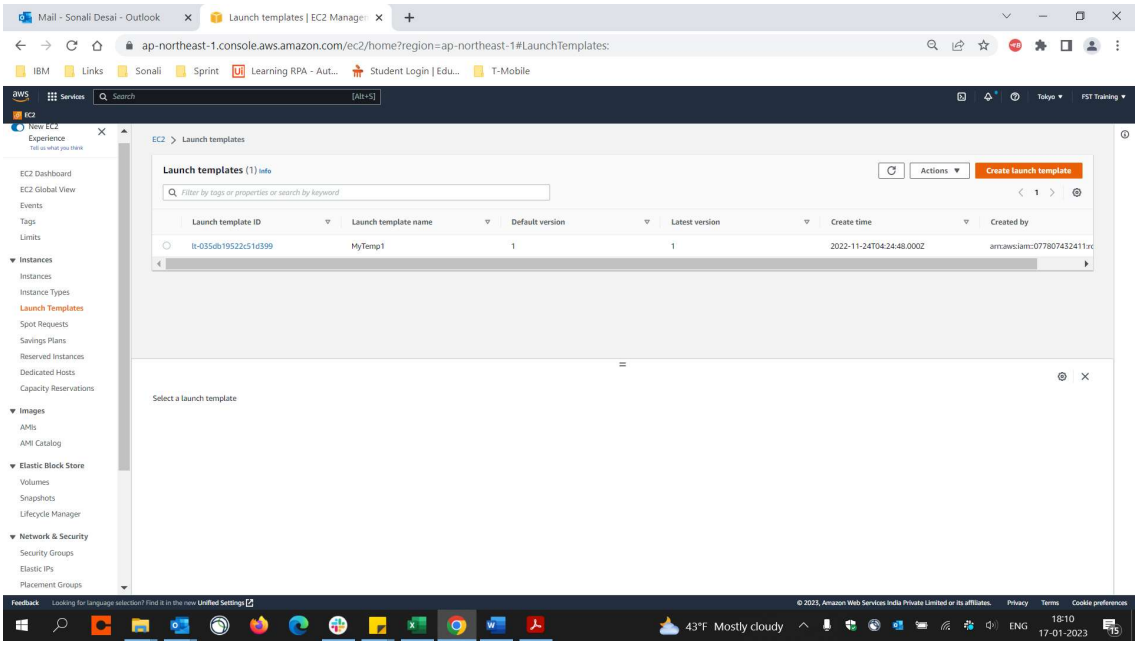
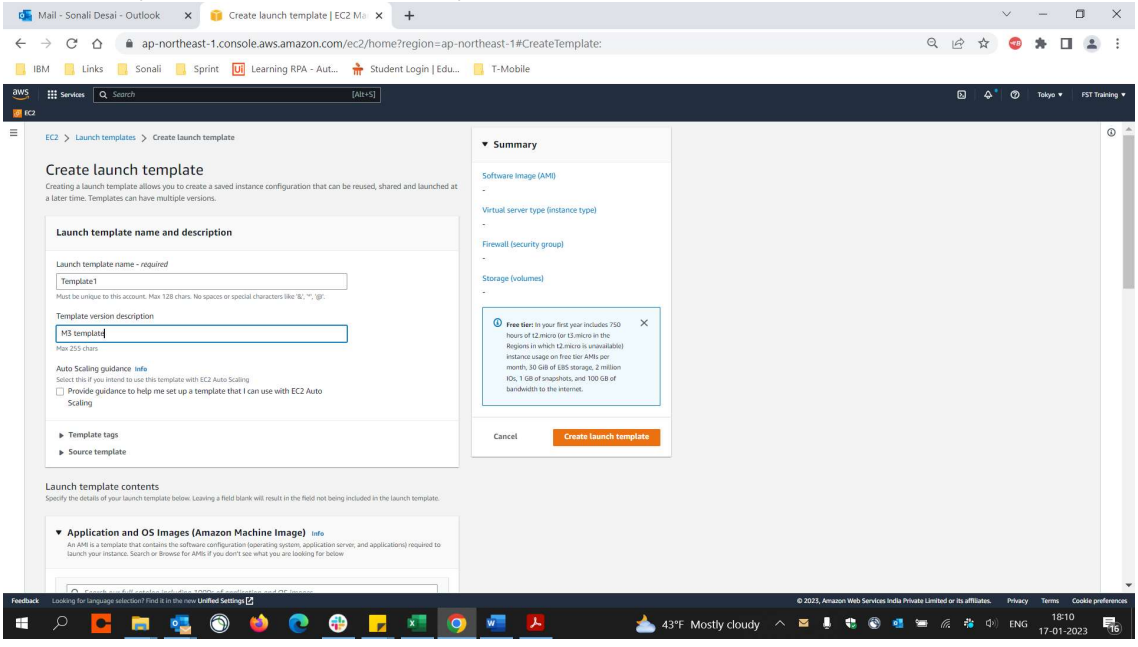
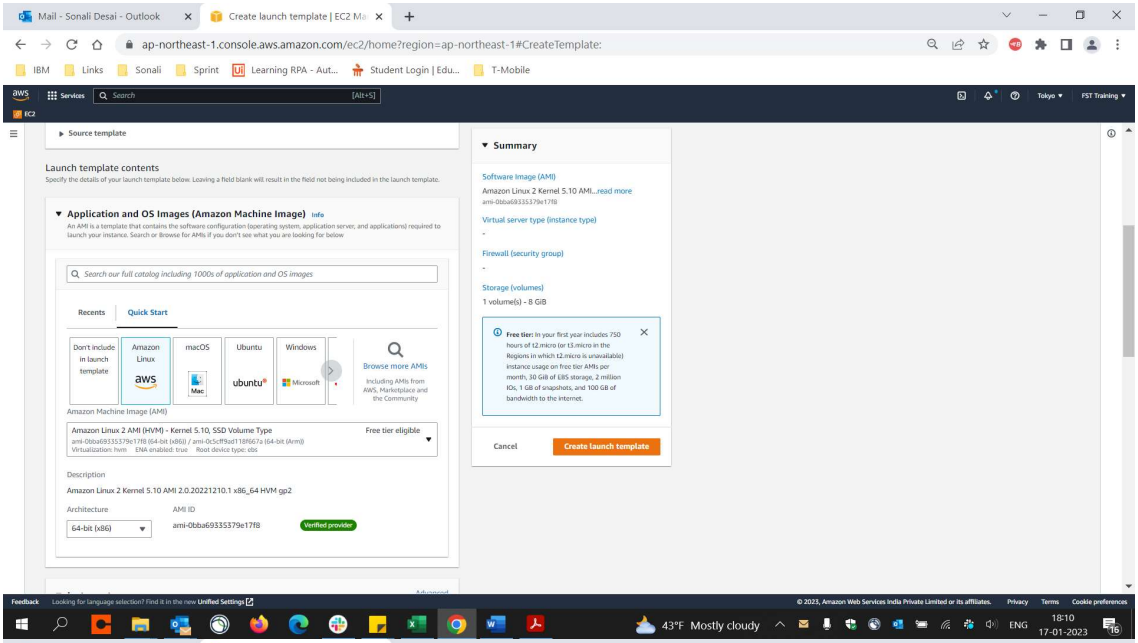
SOLUTION:

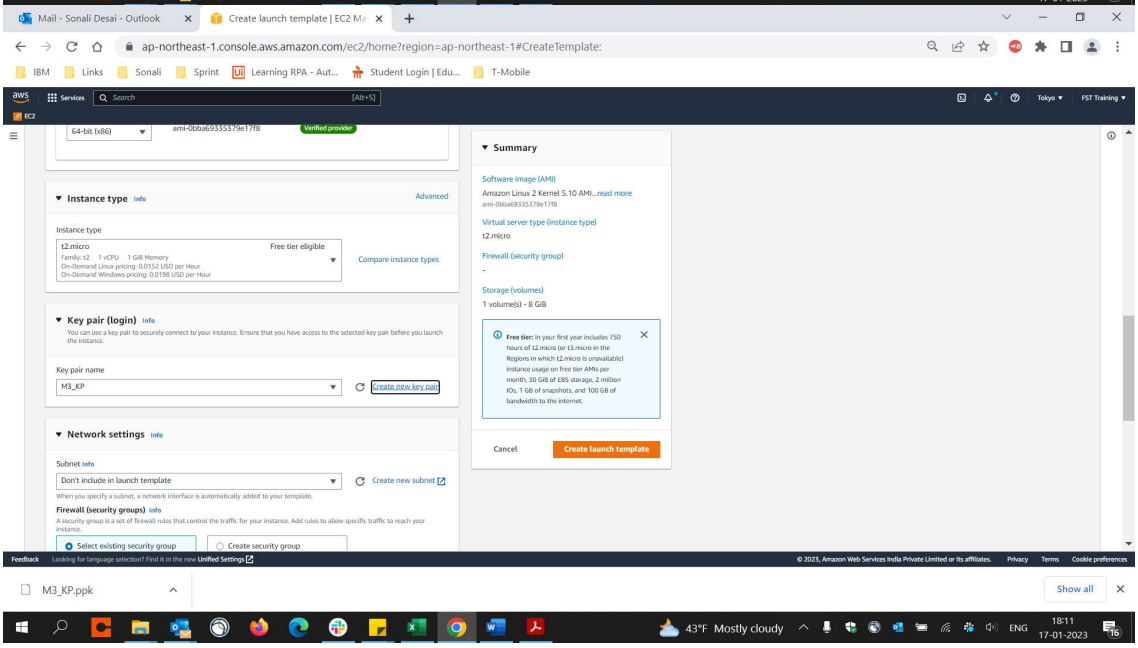
1. Create a VM and install docker and test the images inside the container with the commands

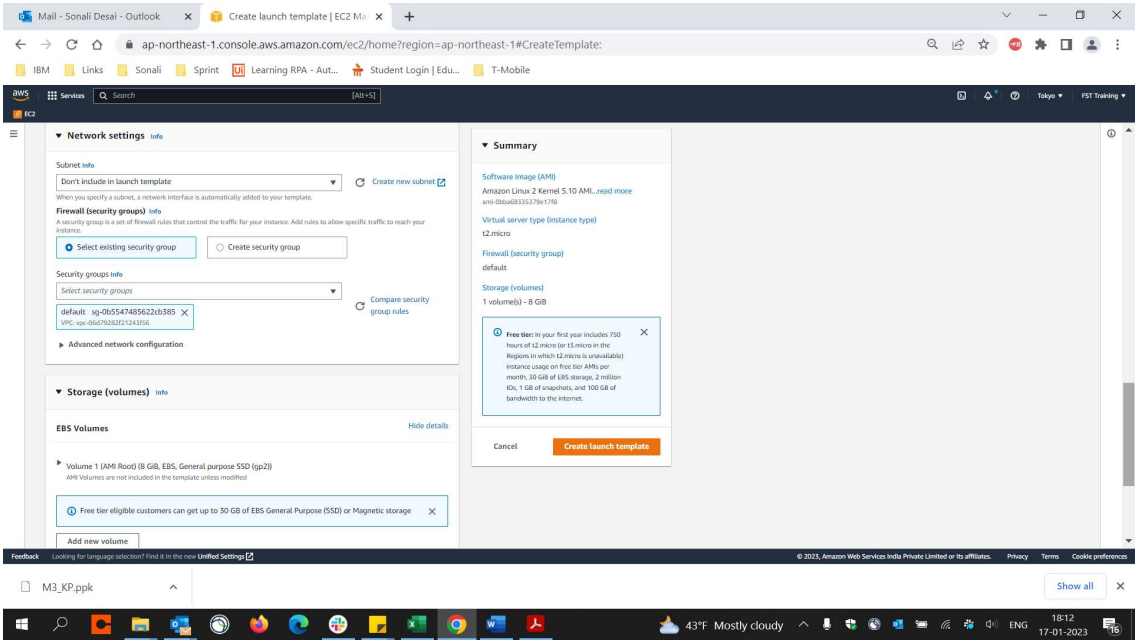


Launch Templates -> Create Launch Template

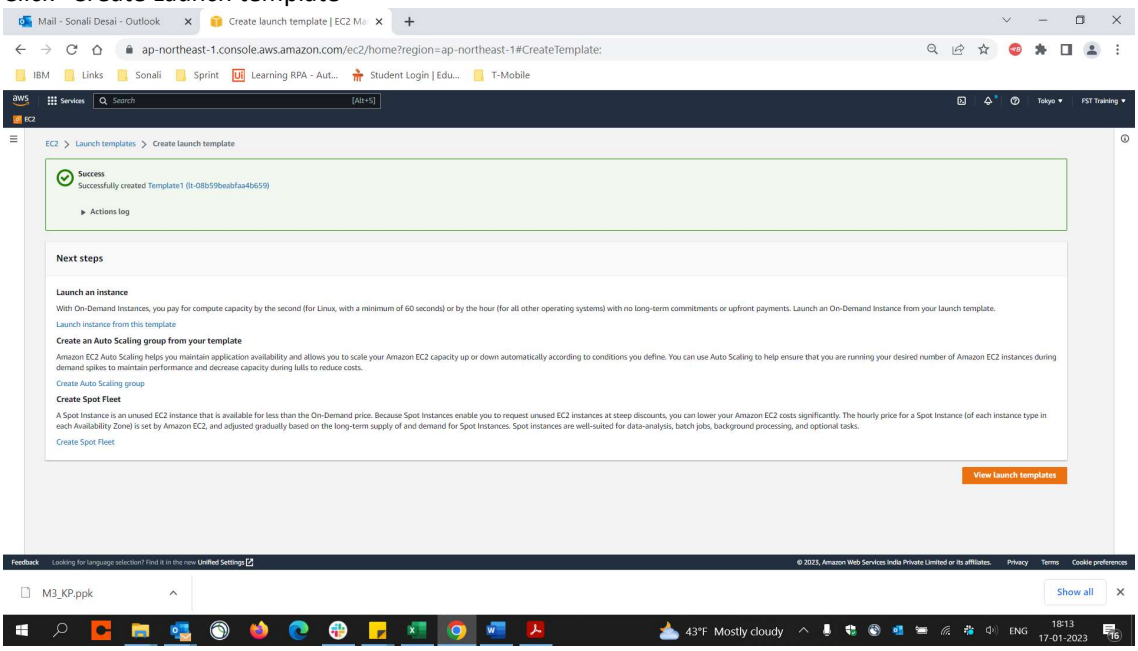


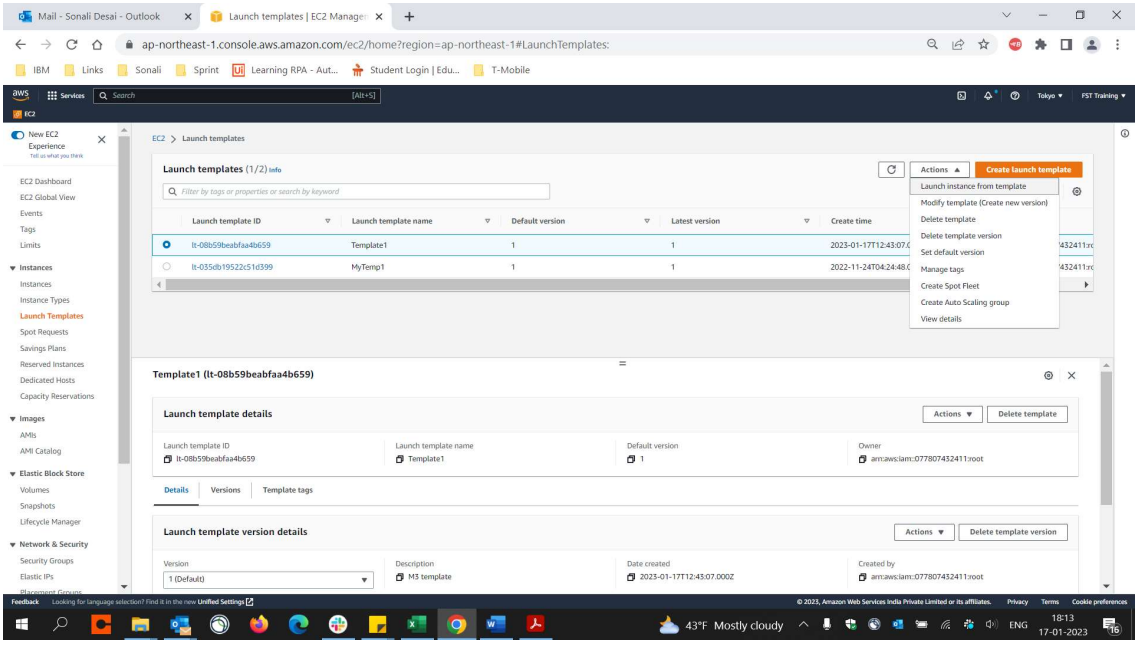

Mail - Sonali Desai - Outlook
Create launch template | EC2 Ma
ap-northeast-1.console.aws.amazon.com/ec2/home?region=ap-northeast-1#CreateTemplate:
IBM
Links
Sonali
Sprint
Learning RPA - Aut...
Student Login | Edu...
T-Mobile
Source template
Launch template contents
Specify the details of your launch template below. Leaving a field blank will result in the field not being included in the launch template.
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Don't include in launch template
Amazon Linux
macOS
Ubuntu
Windows
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type
Free tier eligible
Description
Amazon Linux 2 Kernel 5.10 AMI 2.0.20221210.1 x86_64 HVM gp2
Architecture
64-bit (x86)
AMI ID
ami-0bba69335379e17f8
Verified provider
Summary
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
Virtual server type (instance type)
Firewall (security group)
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Create launch template
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences
43°F Mostly cloudy
ENG
18:10
17-01-2023


Mail - Sonali Desai - Outlook
Create launch template | EC2 Ma
ap-northeast-1.console.aws.amazon.com/ec2/home?region=ap-northeast-1#CreateTemplate:
IBM
Links
Sonali
Sprint
Learning RPA - Aut...
Student Login | Edu...
T-Mobile
64-bit (x86)
ami-0bba69335379e17f8
Verified provider
Instance type Info
Advanced
Instance type
t2.micro
Free tier eligible
Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0152 USD per Hour
On-Demand Windows pricing: 0.0198 USD per Hour
Compare instance types
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name
M3_KP
Create new key pair
Network settings Info
Subnet Info
Don't include in launch template
Create new subnet
When you specify a subnet, a network interface is automatically added to your template.
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Select existing security group
Create security group
Summary
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
Virtual server type (instance type)
t2.micro
Firewall (security group)
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Create launch template
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences
M3_KP.ppk
Show all
43°F Mostly cloudy
ENG
18:11
17-01-2023

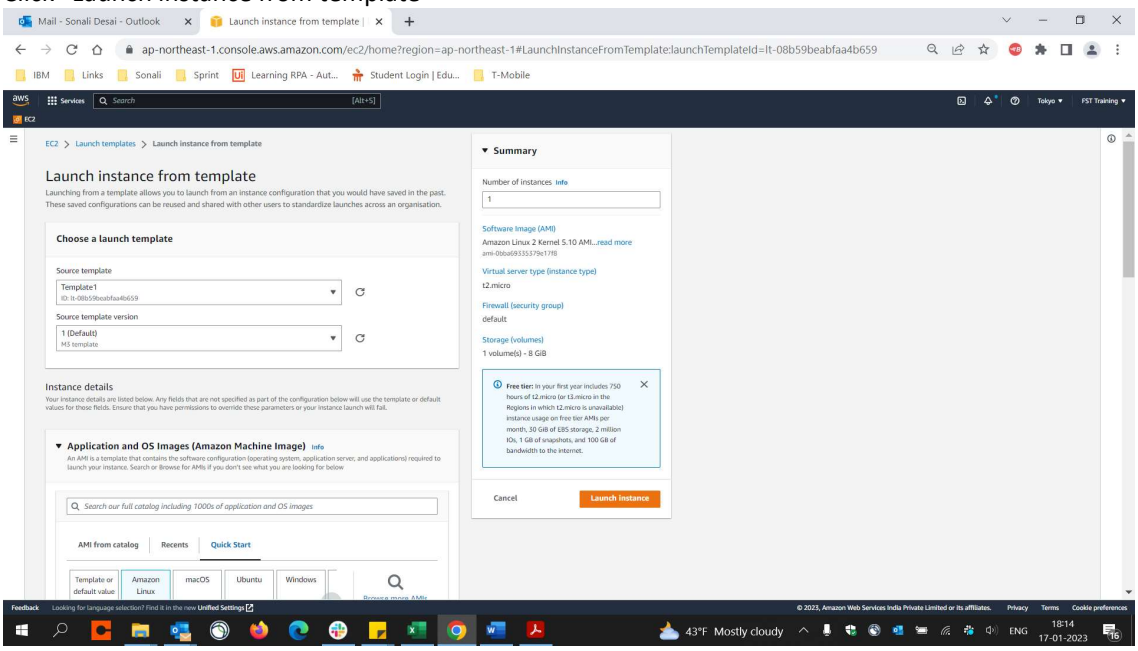


Click “Create Launch template”

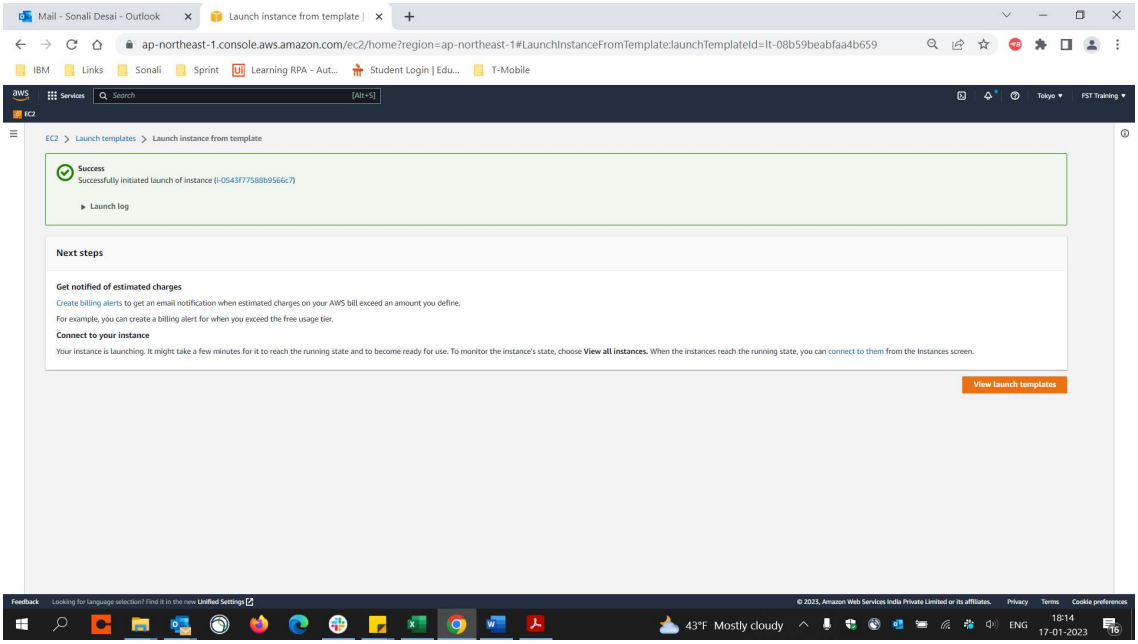




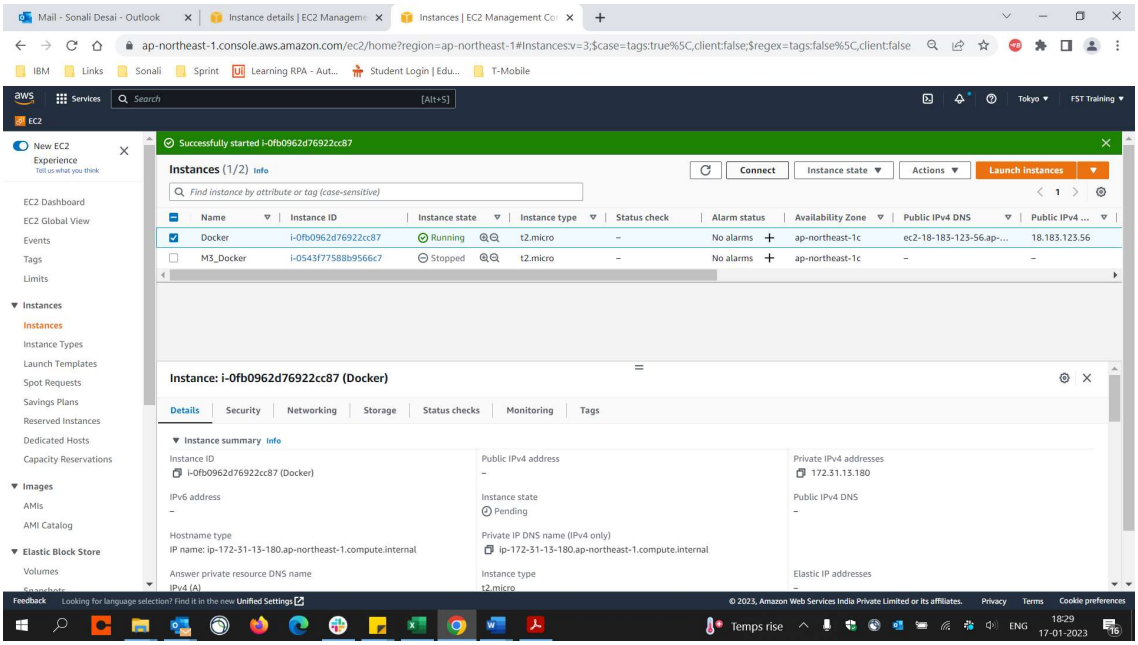
Click “Launch instance from template”

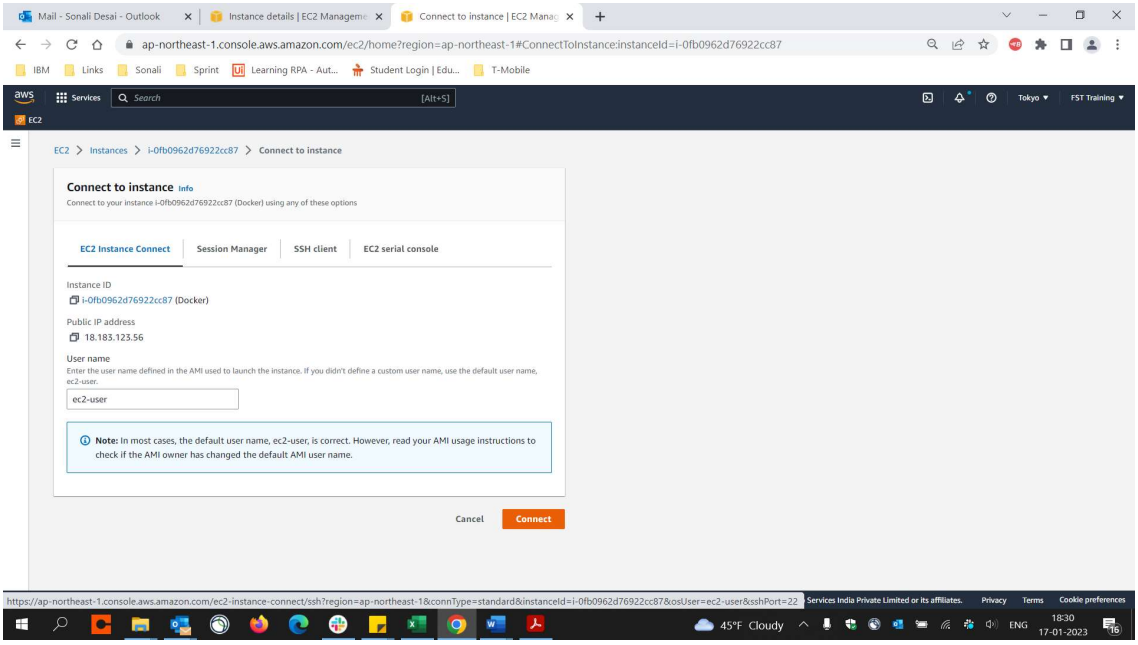


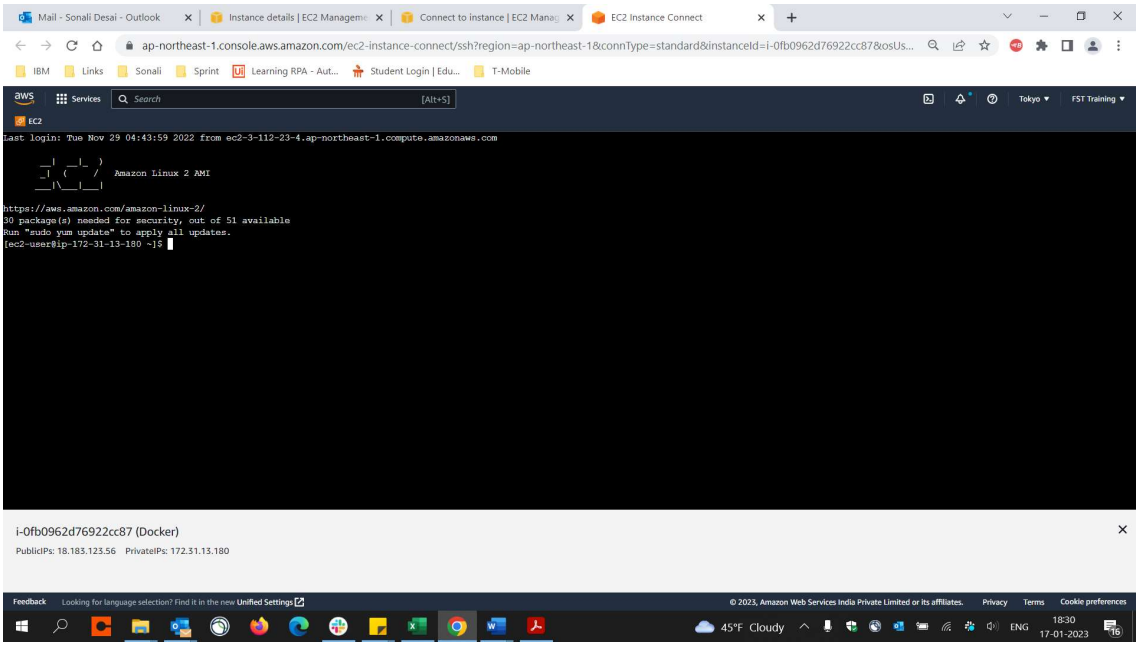
“Launch instance”



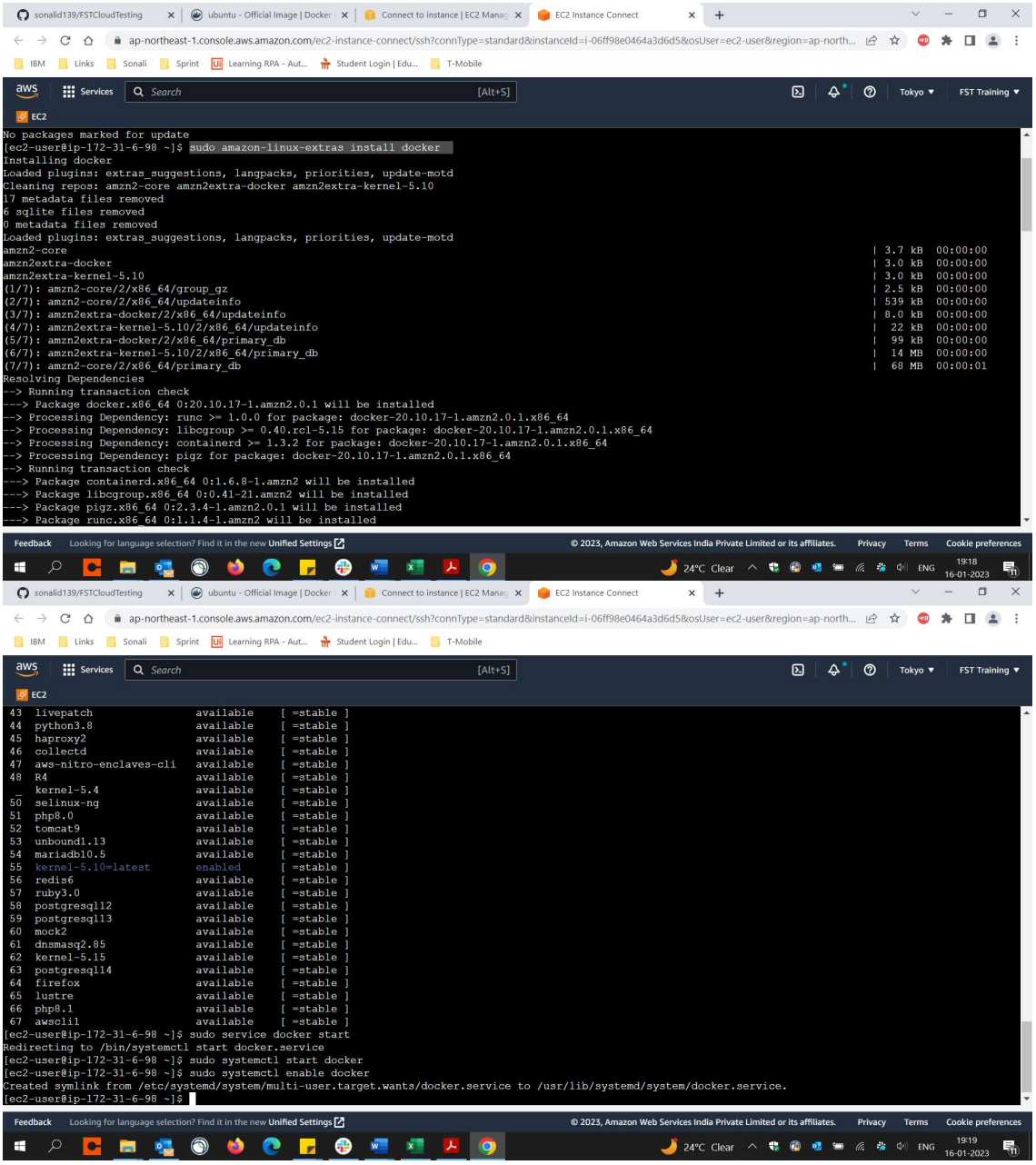
Select instance -> Instance state -> Start instance -> when status shows ‘Running’, select instance -> click ‘Connect’







sudo amazon-linux-extras install docker



Check version by command - docker version

```
[ec2-user@ip-172-31-13-180 ~]$ docker version
Client:
 Version:           20.10.17
 API version:       1.41
 Go version:        go1.18.6
 Git commit:        100c701
 Built:             Wed Sep 28 23:10:17 2022
 OS/Arch:           linux/amd64
 Context:           default
 Experimental:      true
```

Goto docker hub -> Select image to download -> check/copy the command

On docker instance – run the command and Download image from docker hub on VM docker e.g. docker pull nginx

```
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PO
[ec2-user@ip-172-31-13-180 ~]$ docker pull nginx
Using default tag: latest
Got permission denied while trying to connect to the Dock
/create?fromImage=nginx&tag=latest": dial unix /var/run/d
[ec2-user@ip-172-31-13-180 ~]$ sudo docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
a603fa5e3b41: Pull complete
c39e1cda007e: Pull complete
90cfefba34d7: Pull complete
a38226fb7aba: Pull complete
62583498bae6: Pull complete
```

Check images installed by command– docker images

```
[ec2-user@ip-172-31-13-180 ~]$ sudo su
[root@ip-172-31-13-180 ec2-user]# docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
nginx        latest    88736fe82739   12 days ago   142MB
[root@ip-172-31-13-180 ec2-user]#
```

Installed ubuntu – docker pull ubuntu

```
[root@ip-172-31-13-180 ec2-user]# docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
e96e057aae67: Pull complete
Digest: sha256:4b1d0c4a2d2aaf63b37111f34eb9fa89fa1bf53dd6e4ca954
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
[root@ip-172-31-13-180 ec2-user]# docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
nginx        latest    88736fe82739   12 days ago   142MB
ubuntu       latest    a8780b506fa4   3 weeks ago   77.8MB
[root@ip-172-31-13-180 ec2-user]#
```

Installed Mongo – docker pull mongo, check images

```
[root@ip-172-31-13-180 ec2-user]# docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
mongo        latest    2dd27bb6d3e6   11 days ago   695MB
nginx        latest    88736fe82739   12 days ago   142MB
ubuntu       latest    a8780b506fa4   3 weeks ago   77.8MB
[root@ip-172-31-13-180 ec2-user]#
```

Check containers installed by command – sudo docker ps

docker ps -a => Lists all container instances (running & exited)

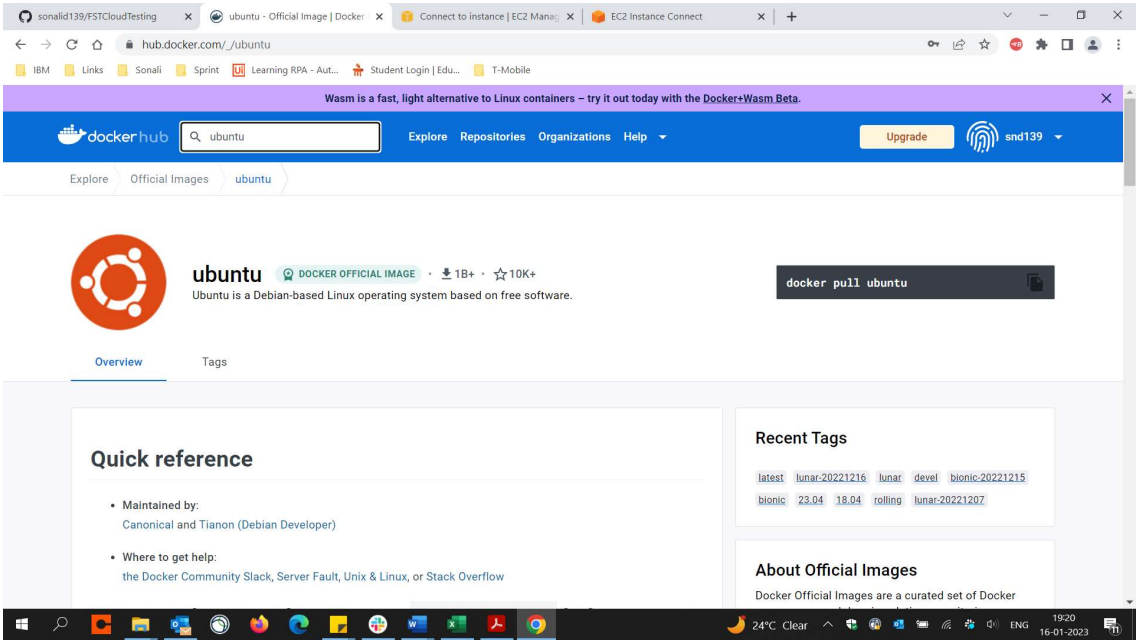
docker ps => Lists running containers only

```
[root@ip-172-31-13-180 ec2-user]# docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
[root@ip-172-31-13-180 ec2-user]#
```

Container creation

docker run -itd <image name> e.g. docker run -itd ubuntu (docker to run in detached mode, instance will not be terminated when Ctrl+C is pressed)

docker run -it <image name> (docker will not run in detached mode so terminates when Ctrl+C is pressed)

```
[root@ip-172-31-13-180 ec2-user]# docker run -itd ubuntu
f47470b61d5268e60c0c7433e0c1734bcad881e1718d99dc13ade927cc6b4768
[root@ip-172-31-13-180 ec2-user]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED         STATUS         PORTS     NAMES
f47470b61d52   ubuntu    "bash"    5 seconds ago   Up 4 seconds             lucid_chaum
[root@ip-172-31-13-180 ec2-user]# docker run -itd mongo
feb9e2c59a4ab8ecc11292a367dd0511f05c0fe3415c78c06d1781687ad0809e
[root@ip-172-31-13-180 ec2-user]# docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS       NAMES
feb9e2c59a4a   mongo     "docker-entrypoint.s…"   7 seconds ago    Up 5 seconds    27017/tcp   zen_mccarthy
f47470b61d52   ubuntu    "bash"                   29 seconds ago   Up 28 seconds               lucid_chaum
[root@ip-172-31-13-180 ec2-user]#
```

Container instance can be terminated by command – **docker stop <container_id>** or **docker stop <names>**