8/5/2022

Project-02

Migrating an On-premises server to AWS.

(On-premises server is taken to be a server in a different AWS region for this project.)

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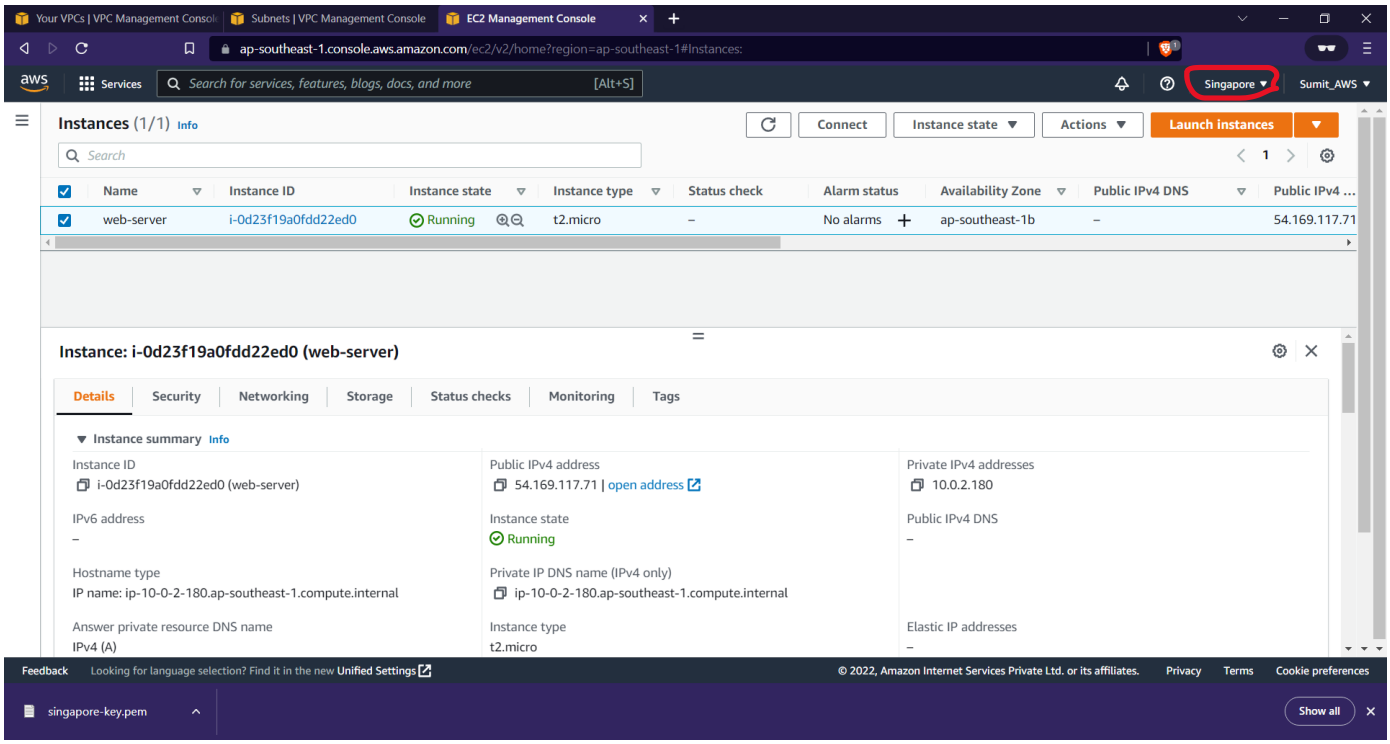
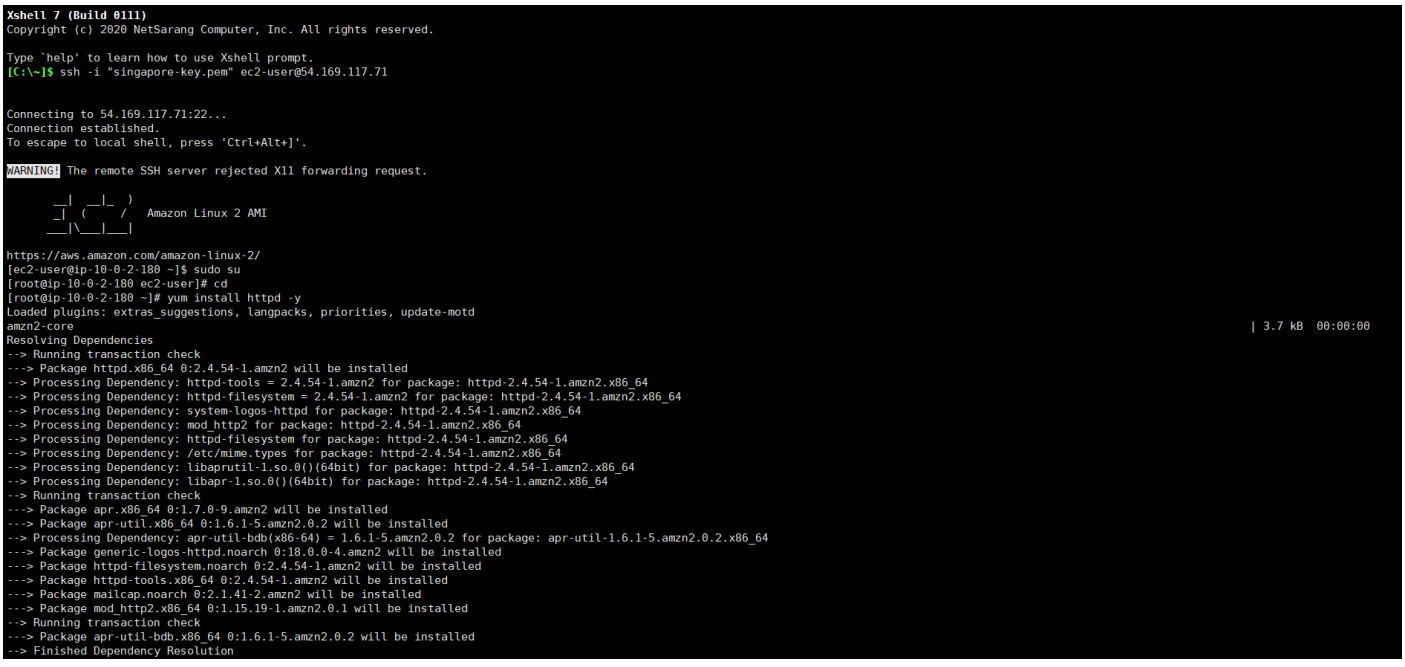
1. Creating an On-premises server in a different region.

a. Creating an EC2 instance inside a custom VPC with subnets, internet gateway enabled.



b. Connecting to the EC2 instance and downloading/installing Apache server in it.



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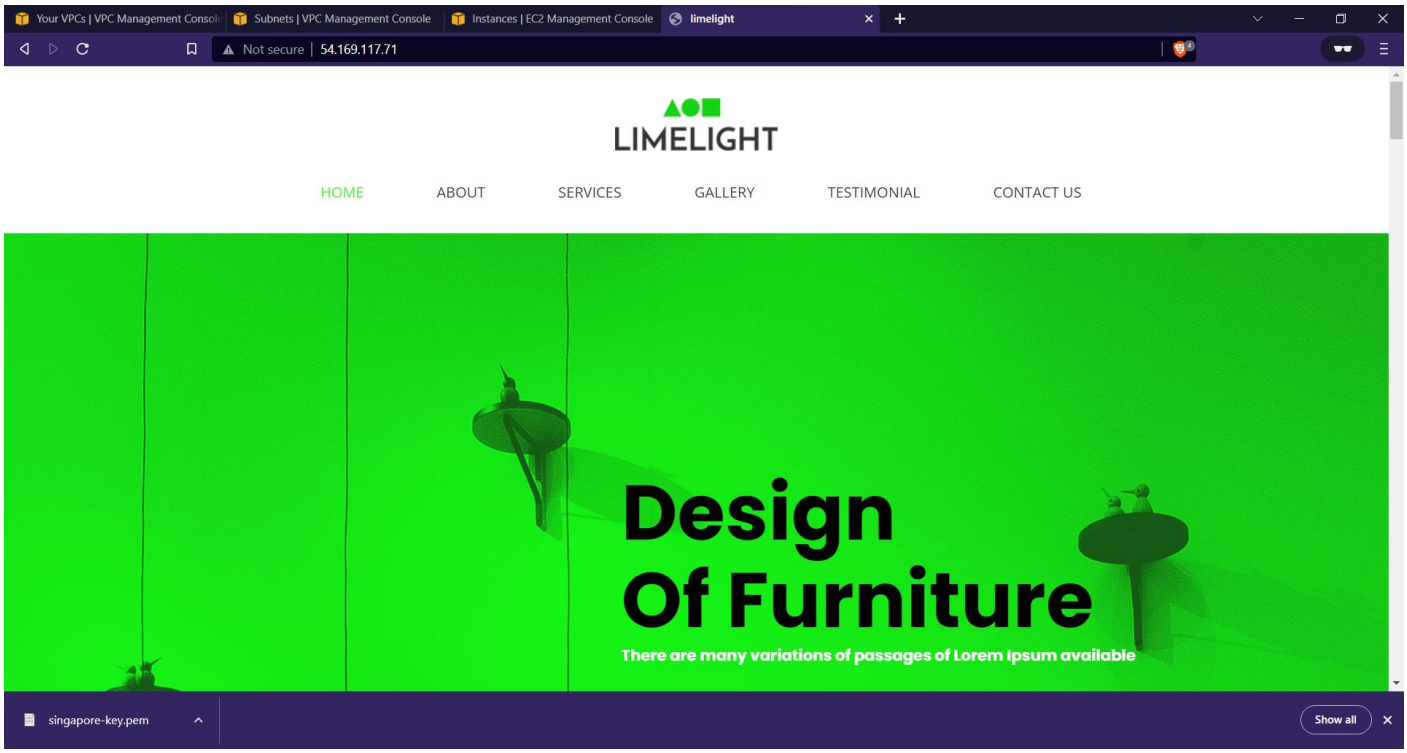
c. Putting some sample website to display.

```
[root@ip-10-0-2-180 ~]# wget https://www.free-css.com/assets/files/free-css-templates/download/page
281/limelight.zip
--2022-08-05 06:46:41--  https://www.free-css.com/assets/files/free-css-templates/download/page281/
limelight.zip
Resolving www.free-css.com (www.free-css.com)... 217.160.0.242, 2001:8d8:100f:f000::28f
Connecting to www.free-css.com (www.free-css.com)|217.160.0.242|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 6646619 (6.3M) [application/zip]
Saving to: ‘limelight.zip’

100%[======================================================>] 6,646,619   3.23MB/s   in 2.0s

2022-08-05 06:46:45 (3.23 MB/s) - ‘limelight.zip’ saved [6646619/6646619]

[root@ip-10-0-2-180 ~]# unzip limelight.zip
Archive:  limelight.zip
   creating: limelight-html/
  inflating: limelight-html/about.html
  inflating: limelight-html/contact.html
   creating: limelight-html/css/
  inflating: limelight-html/css/.DS_Store
```

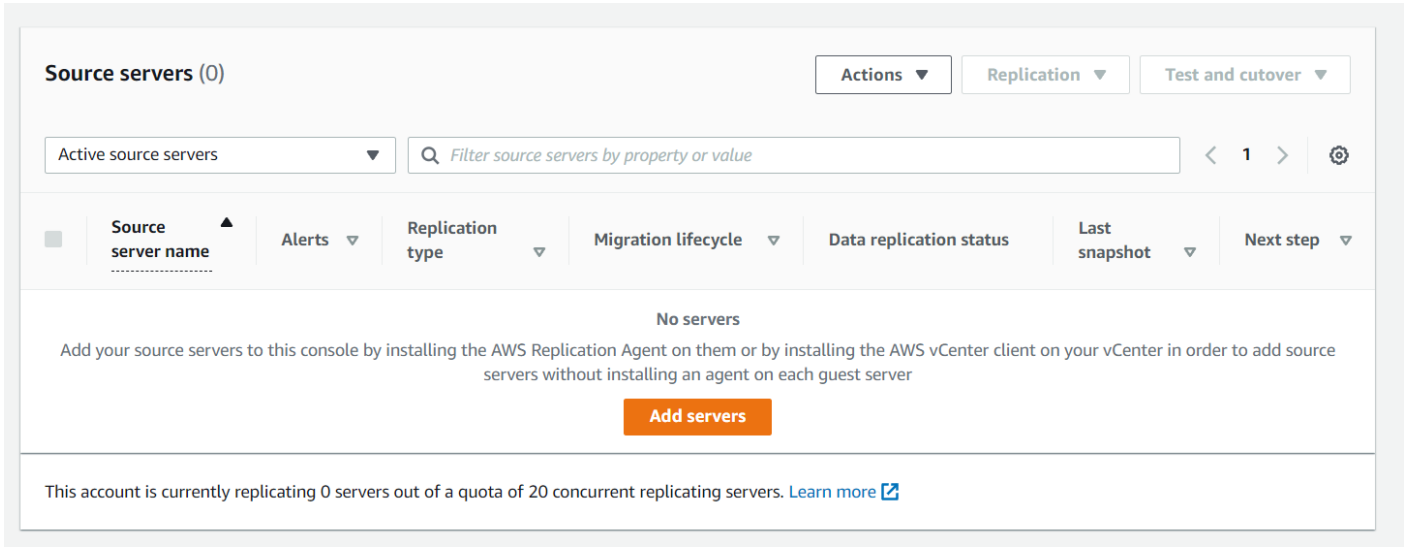
```
limelight-html  limelight.zip
[root@ip-10-0-2-180 ~]# ls limelight-html/
about.html    css    gallery.html  images      js            testimonial.html
contact.html  fonts  icon          index.html  service.html
[root@ip-10-0-2-180 ~]# cp -r limelight-html/* /var/www/html
[root@ip-10-0-2-180 ~]#
[root@ip-10-0-2-180 ~]#
```

```
[root@ip-10-0-2-180 ~]# systemctl start httpd.service
[root@ip-10-0-2-180 ~]# systemctl enable httpd.service
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/
system/httpd.service.
[root@ip-10-0-2-180 ~]#
```



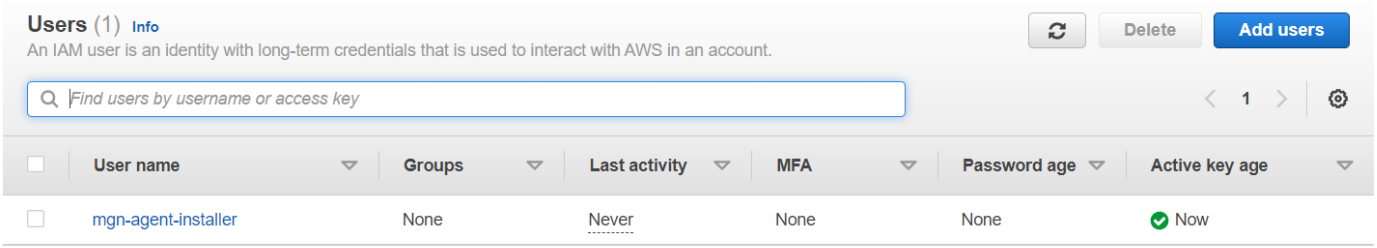
2. Migrating the server On-premises to AWS (i.e., from Singapore region to Mumbai region).

a. Set up application migration service and create template.



b. Adding server configuration for migration.

(1) Creating an IAM role for server migration.



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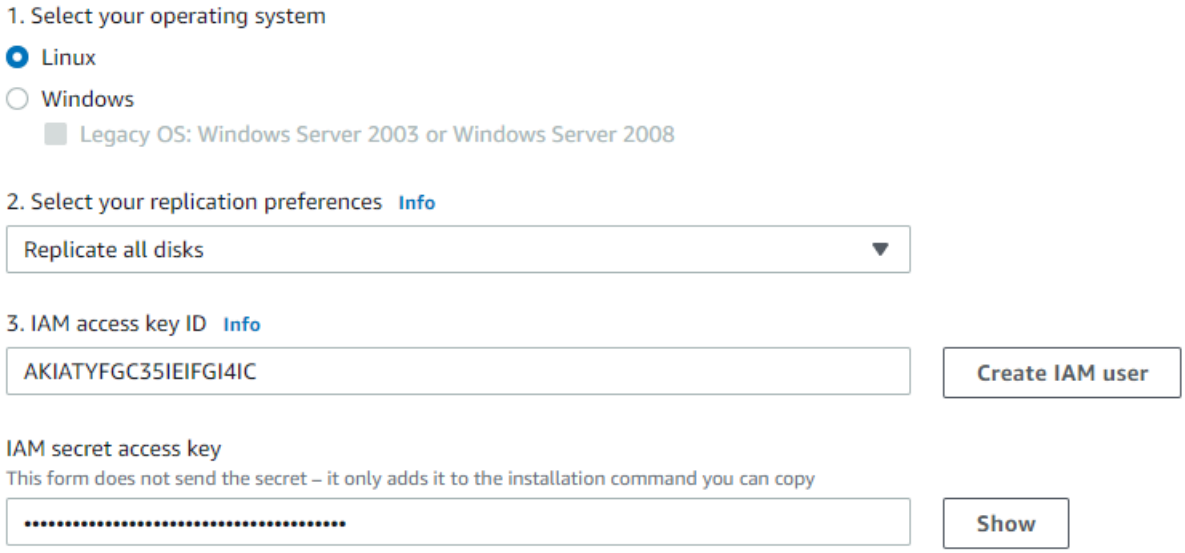
(2) Provide the details of the IAM user.



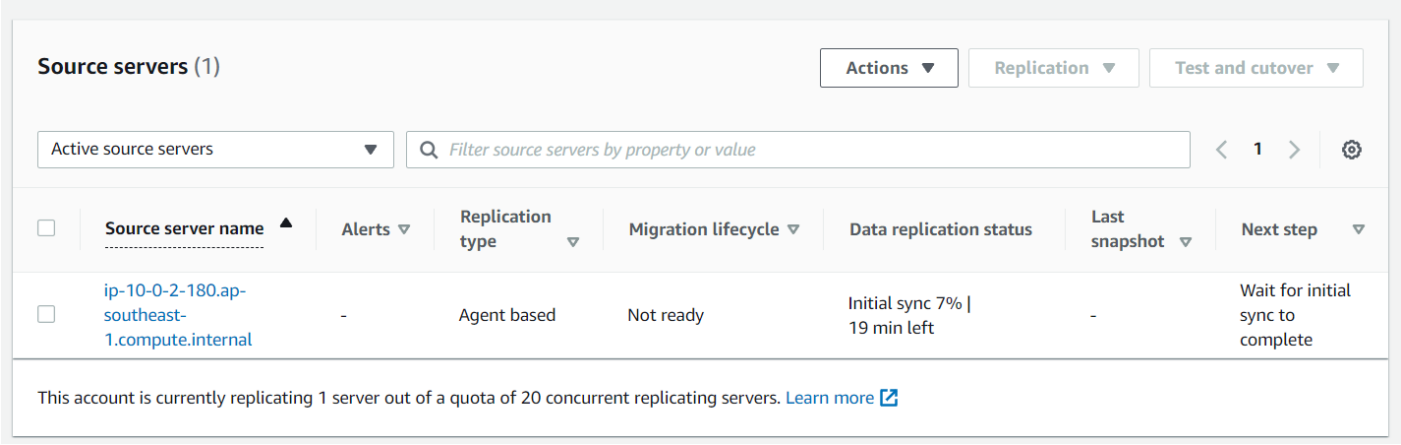
(3) Download the installer using the copied command.

```
[root@ip-10-0-2-180 ~]# wget -O ./aws-replication-installer-init.py https://aws-application-migrati
on-service-ap-south-1.s3.ap-south-1.amazonaws.com/latest/linux/aws-replication-installer-init.py
--2022-08-05 07:06:00--  https://aws-application-migration-service-ap-south-1.s3.ap-south-1.amazona
ws.com/latest/linux/aws-replication-installer-init.py
Resolving aws-application-migration-service-ap-south-1.s3.ap-south-1.amazonaws.com (aws-application
-migration-service-ap-south-1.s3.ap-south-1.amazonaws.com)... 52.219.64.119
Connecting to aws-application-migration-service-ap-south-1.s3.ap-south-1.amazonaws.com (aws-applica
tion-migration-service-ap-south-1.s3.ap-south-1.amazonaws.com)|52.219.64.119|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 14387 (14K) [binary/octet-stream]
Saving to: './aws-replication-installer-init.py'

100%[======================================================>] 14,387      --.-K/s   in 0s

2022-08-05 07:06:00 (136 MB/s) - './aws-replication-installer-init.py' saved [14387/14387]
```

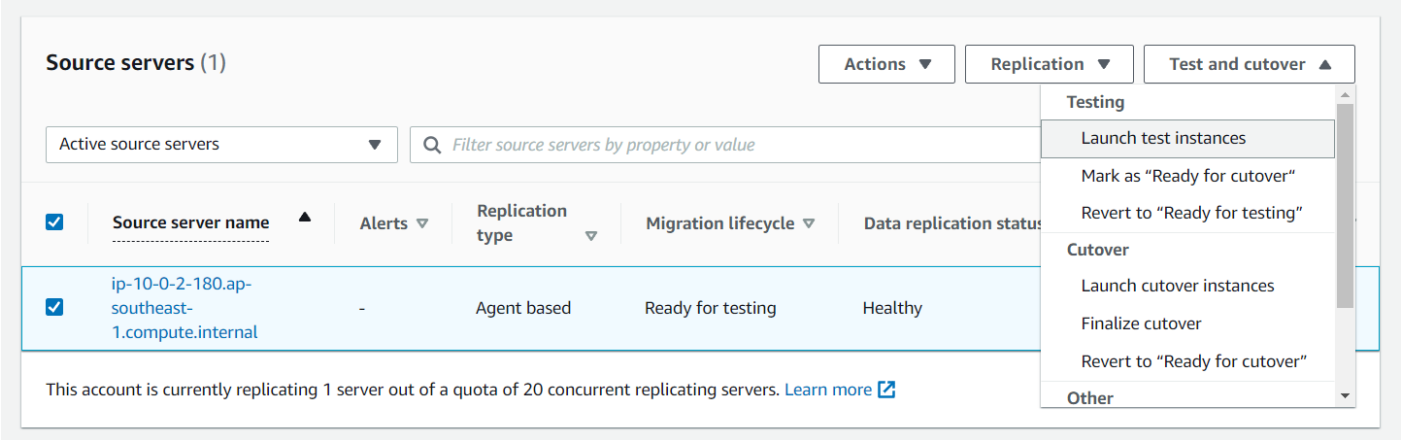
(4) Download the replication agent using the copied command.

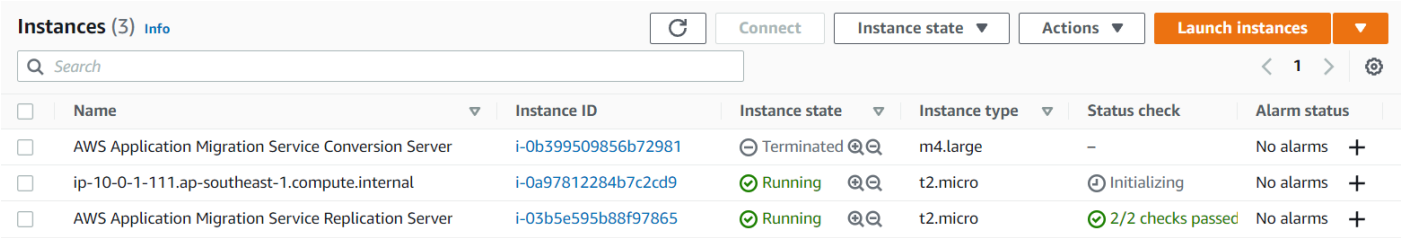
```
[root@ip-10-0-2-180 ~]#
[root@ip-10-0-2-180 ~]# sudo python3 aws-replication-installer-init.py --region ap-south-1 --aws-ac
cess-key-id AKIATYFGC35IEIFGI4IC --aws-secret-access-key 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 -
-no-prompt
The installation of the AWS Replication Agent has started.
Identifying volumes for replication.
Identified volume for replication: /dev/xvda of size 8 GiB
All volumes for replication were successfully identified.
Downloading the AWS Replication Agent onto the source server... Finished.
Installing the AWS Replication Agent onto the source server... Finished.
Syncing the source server with the Application Migration Service Console... Finished.
The following is the source server ID: s-e38c7e2c9bff08a89.
You now have 1 active source server out of a total quota of 20.
Learn more about increasing source servers limit at https://docs.aws.amazon.com/mgn/latest/ug/MGN-s
ervice-limits.html
The AWS Replication Agent was successfully installed.
[root@ip-10-0-2-180 ~]#
```

c. After adding source server to the migration service, wait for the replication to complete.



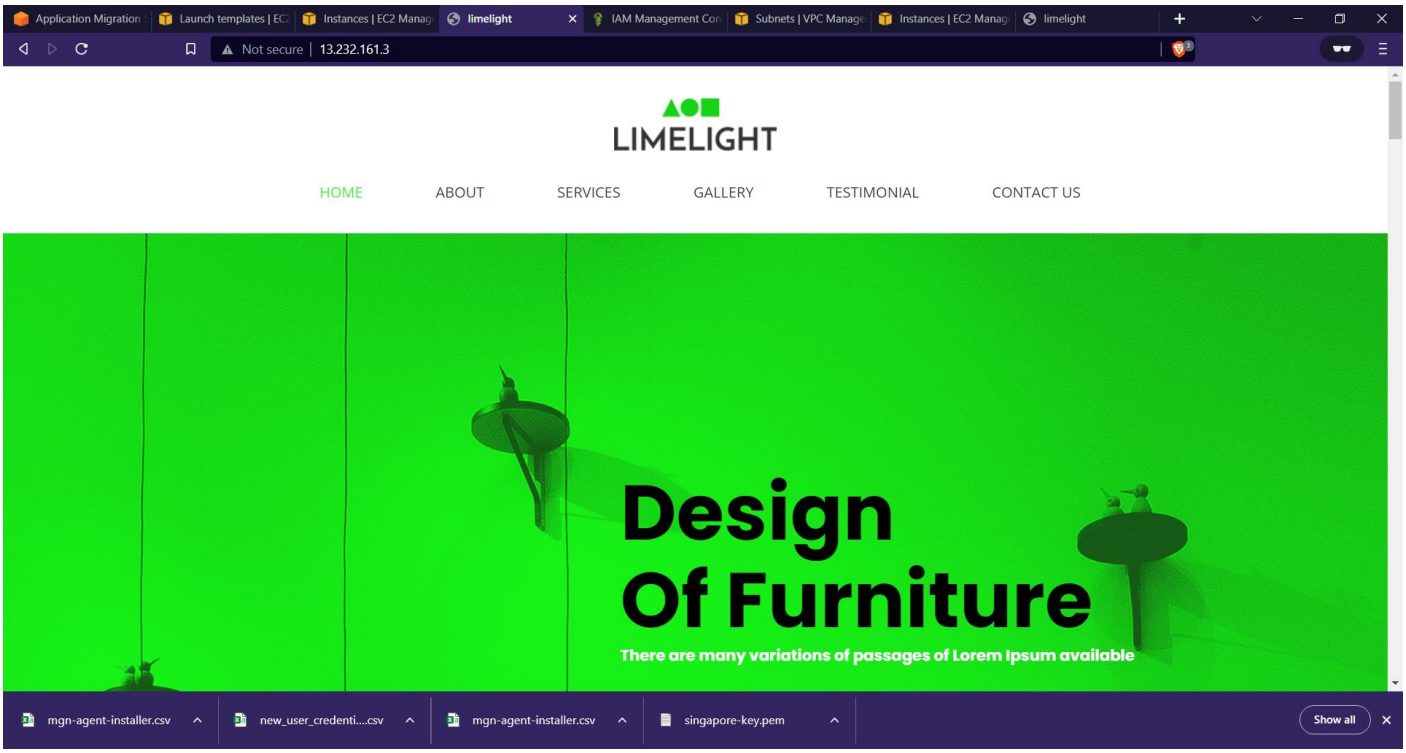
d. After the replication completed, I launched the test instance as specified in the next step.





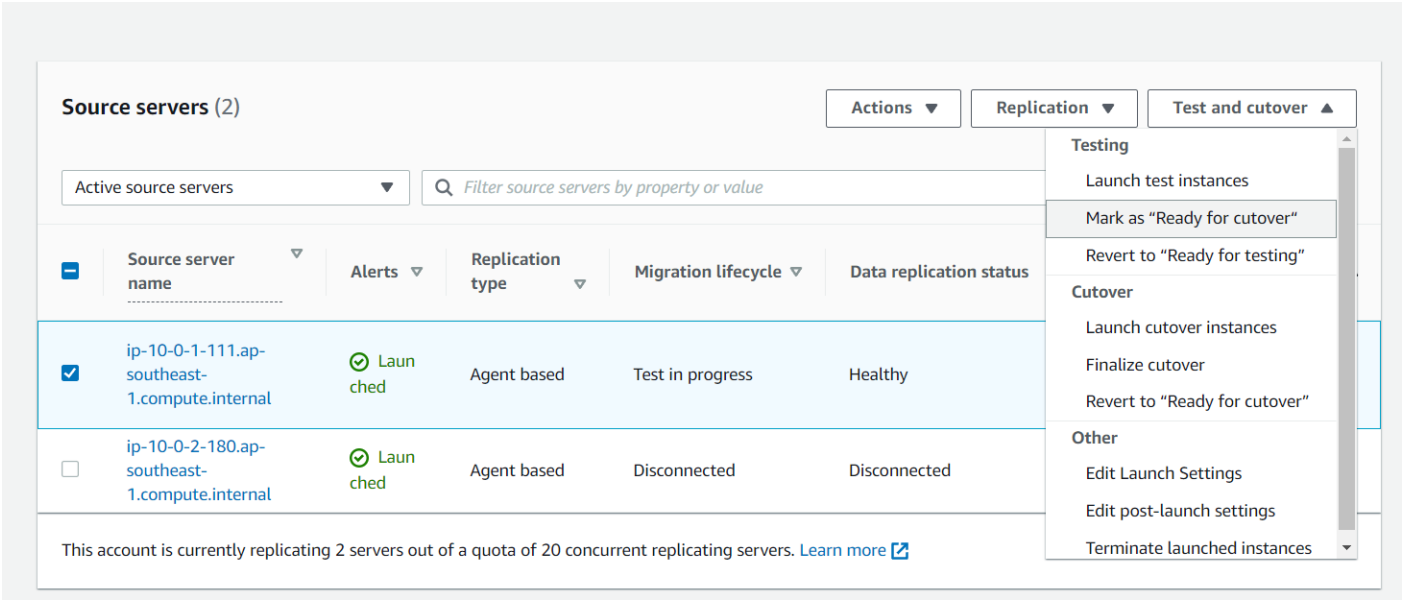
The launched test server reflected on the EC2 console.

e. Tested using the public IP of ip-10-0-1-111.ap-southeast-1.compute.internal instance to check if conversion was properly completed or not.

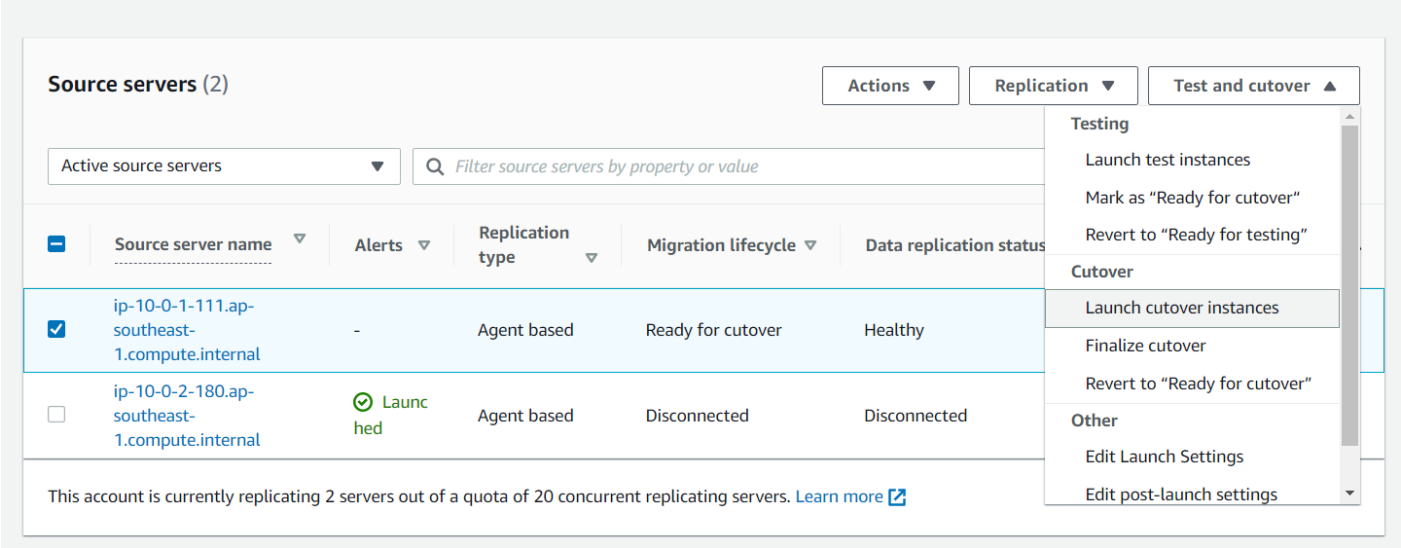


As the website was able to host on the public IP, I concluded that the conversion had been done properly.

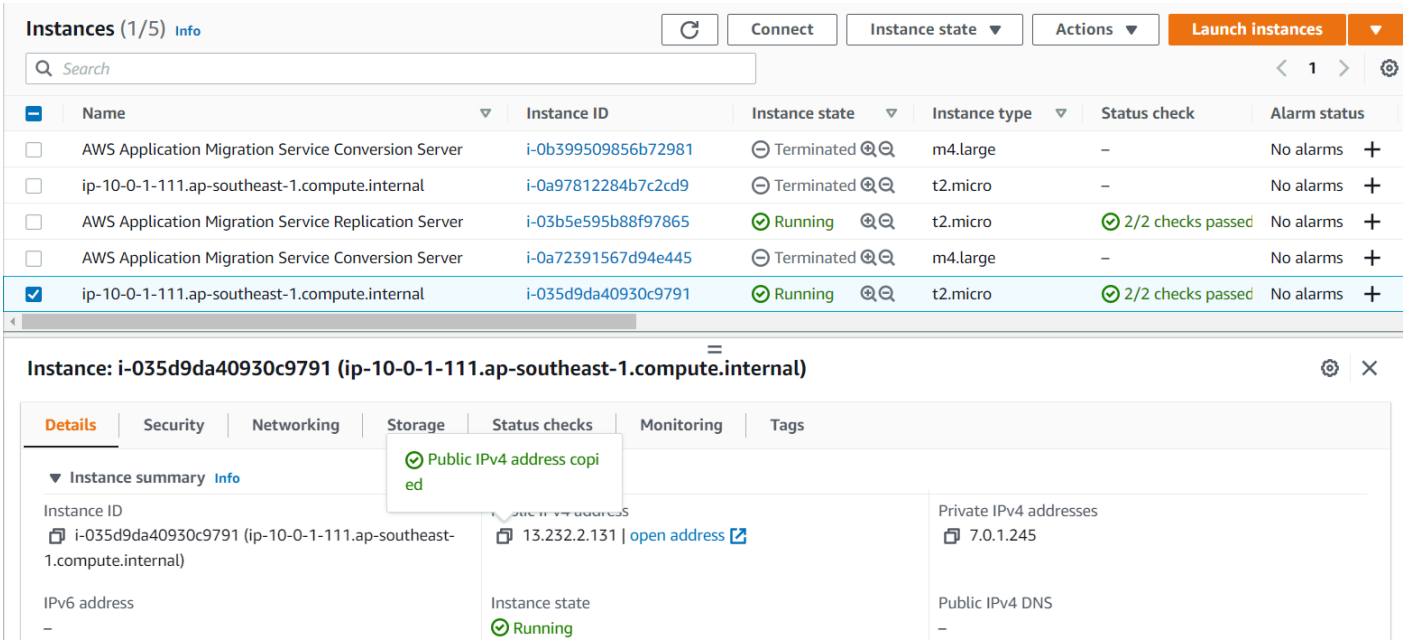
f. After testing was successful, I marked the server as “ready for cut-over” as was mentioned in the next step column.

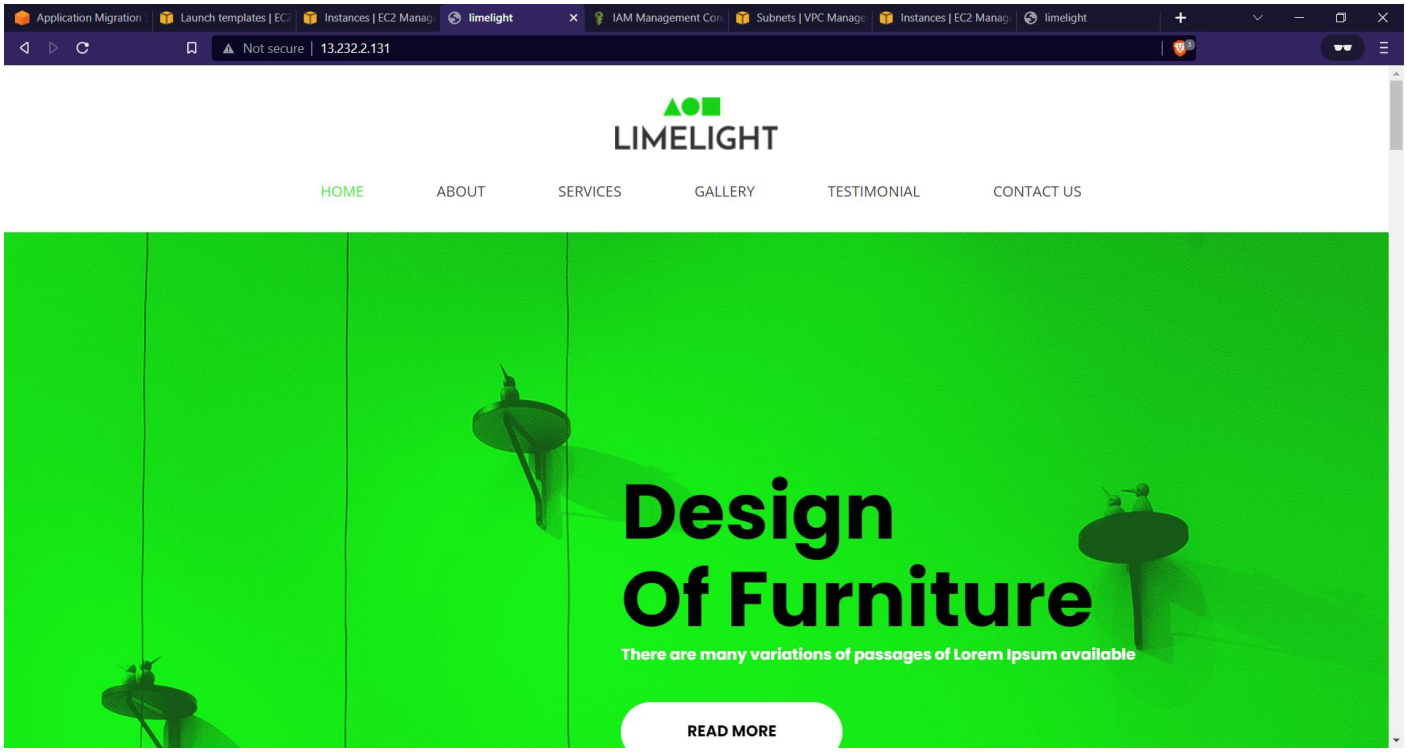


g. After I marked the server as “ready for cutover”, I then launched cutover instances as was mentioned in the next step.



I tested the cut-over server and it worked fine.





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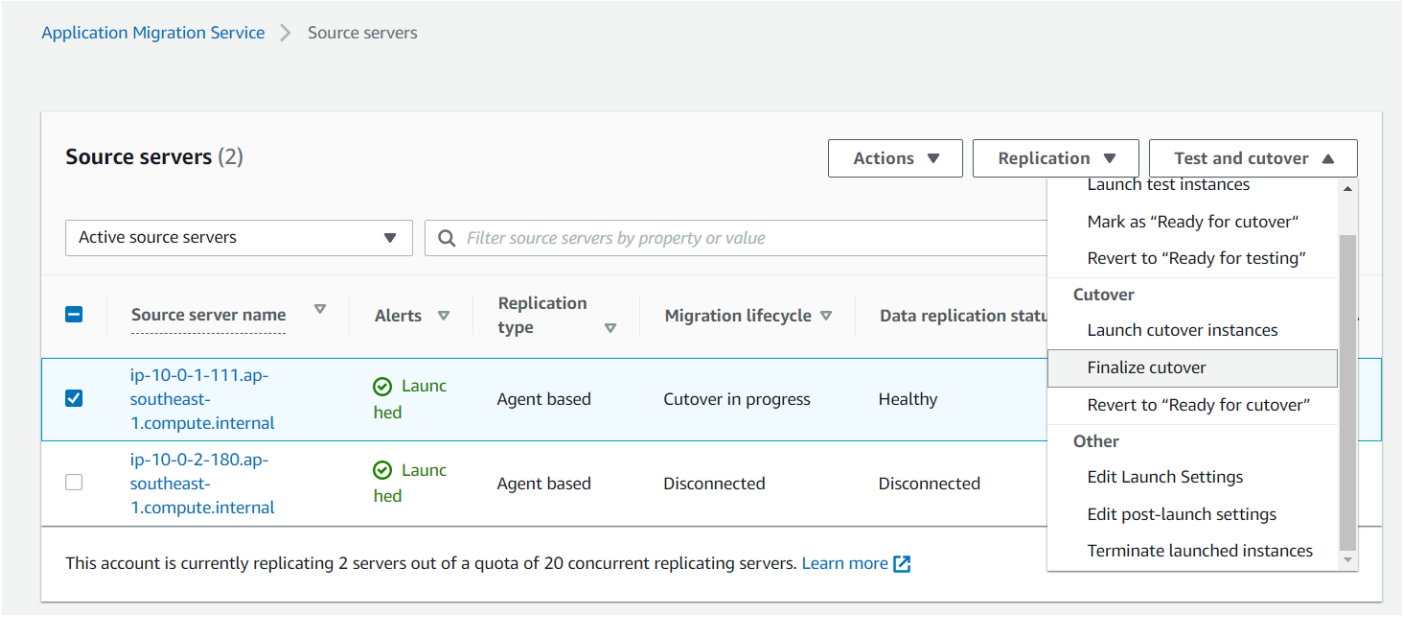
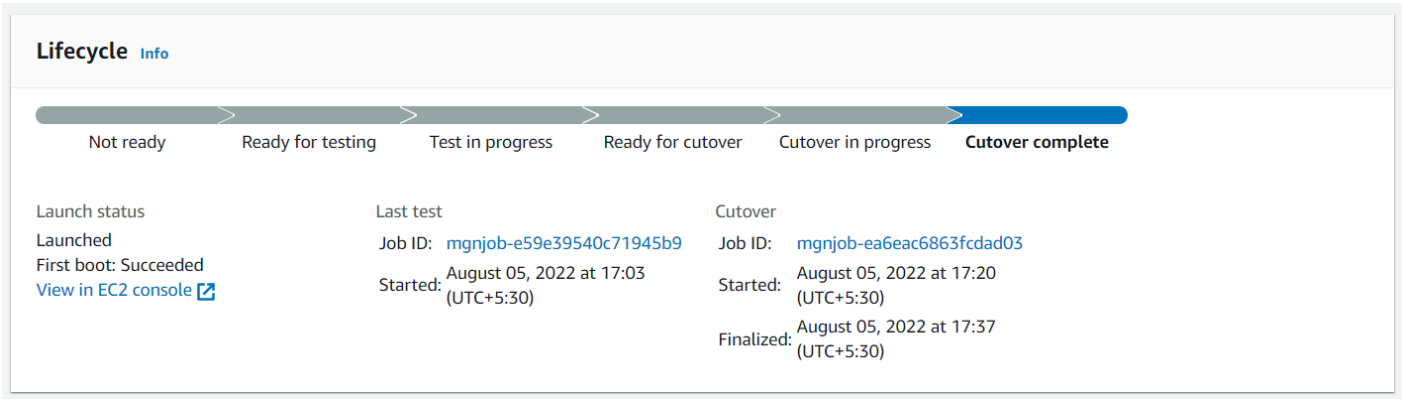
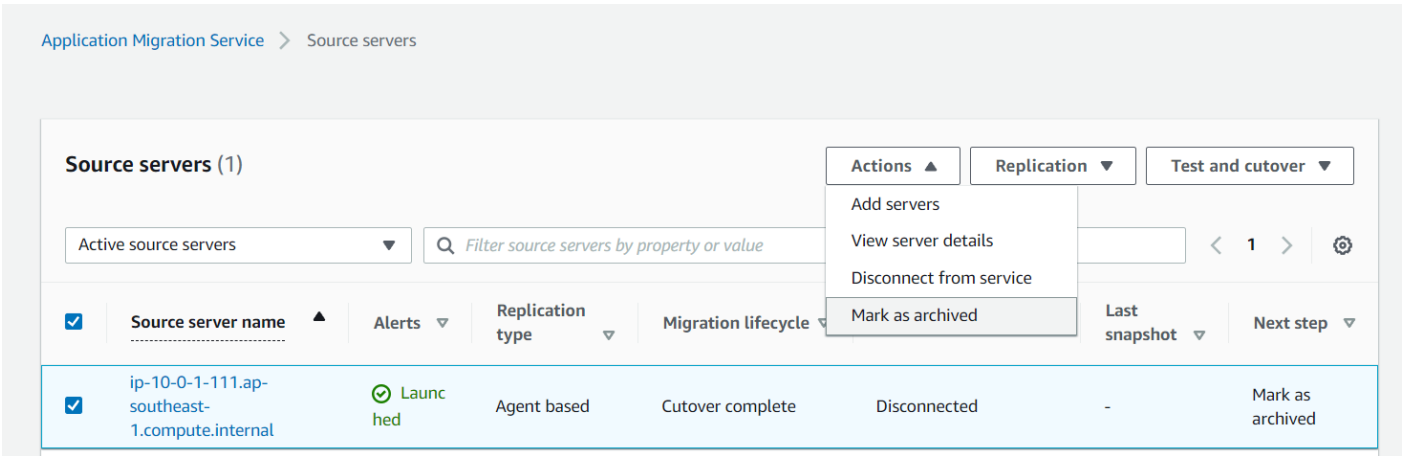
h. After testing the cut-over instances, I finalized the cut-over as was mentioned in the next step.





i. After the cut-over was completed, I was marked the server as archived as was mentioned in the next step column.



Now, Mumbai region also has the exact copy of the web-server present in Singapore, so server migration was successful from on-premises to AWS.