

Enterprise Standards and Best Practices for IT Infrastructure

Lab Report

Lab 01 - Creating an Amazon EBS-Backed Windows AMI

Lab 02 - Creating an Amazon EBS-Backed Linux AMI

Lab 03 - Creating an Amazon RDS Database

IT 120 67 916 – N.C Rathnavibushana

WEEKEND IT



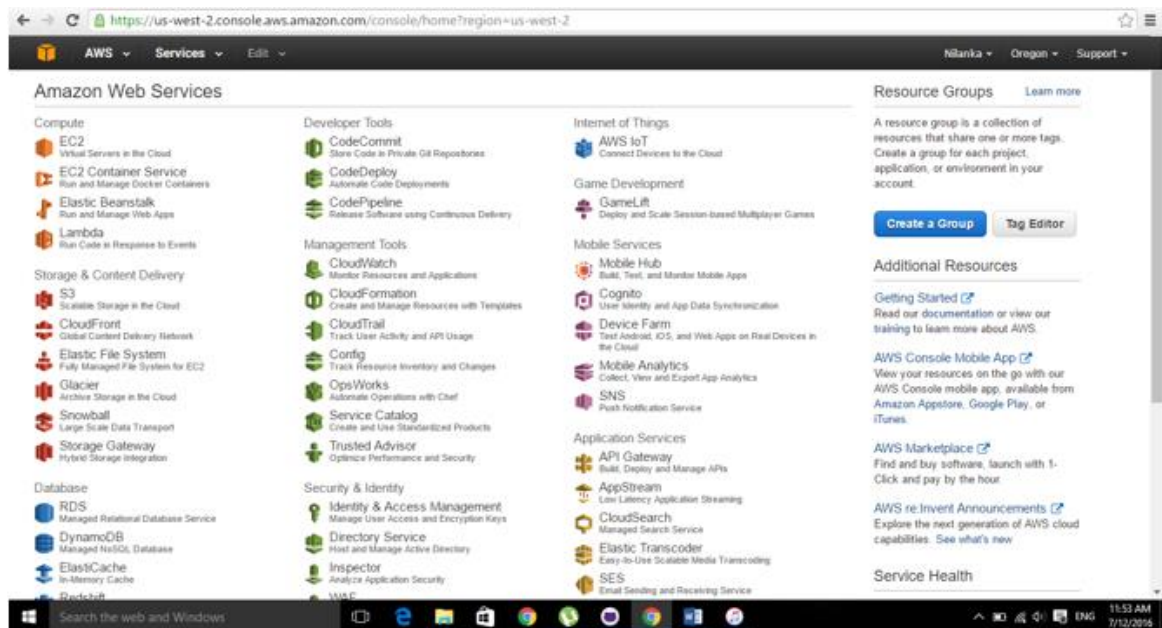
Sri Lanka Institute of Information Technology

B.Sc. Special (Honors) Degree in Information Technology

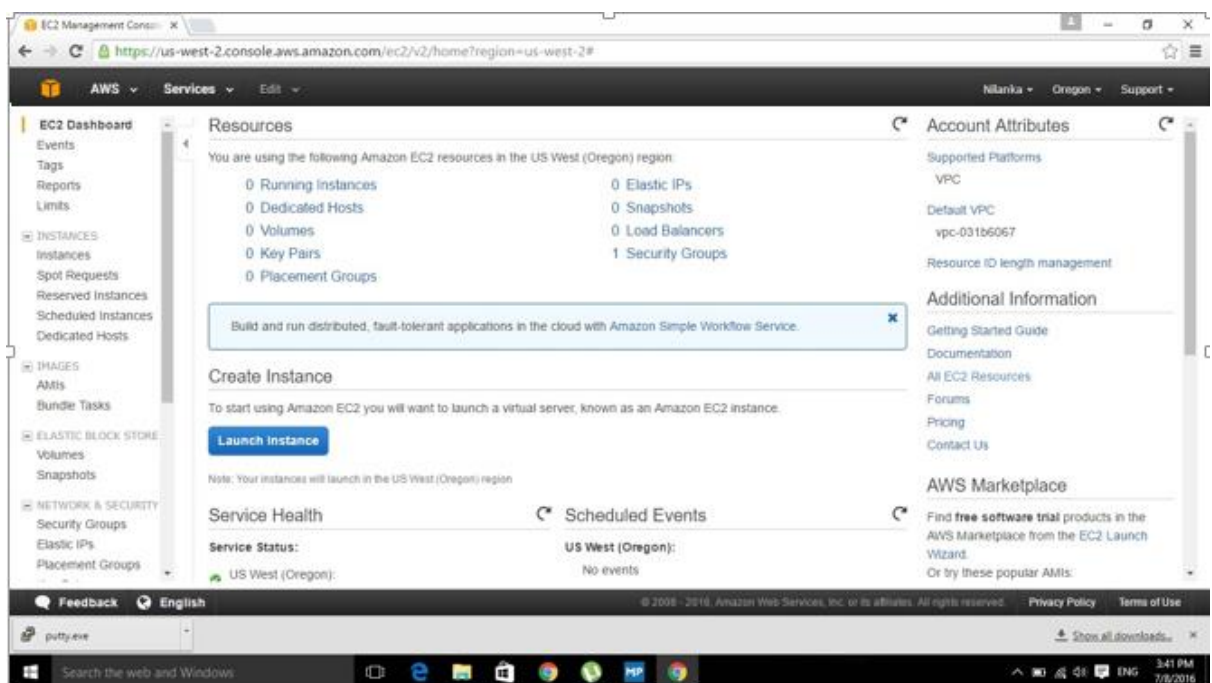
Specialized in Information Technology

Lab 01 - Creating an Amazon EBS-Backed Windows AMI

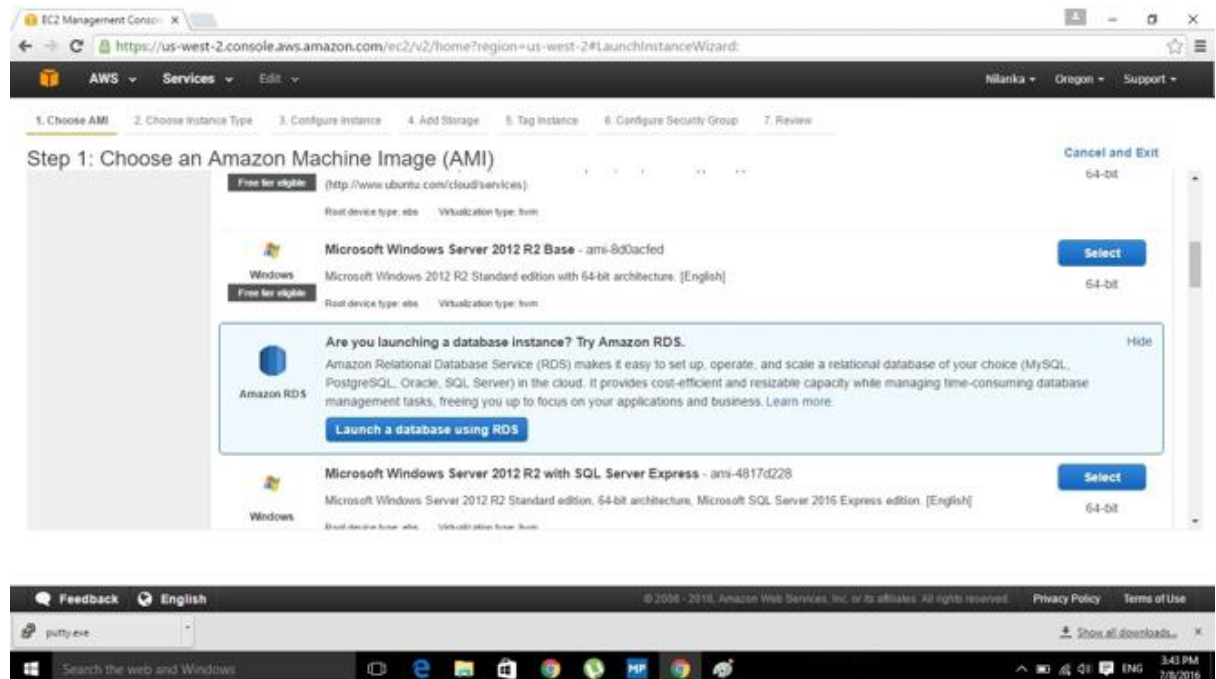
❖ **Step 01:** Select EC2 web service (virtual server in cloud) from Amazon web servers.



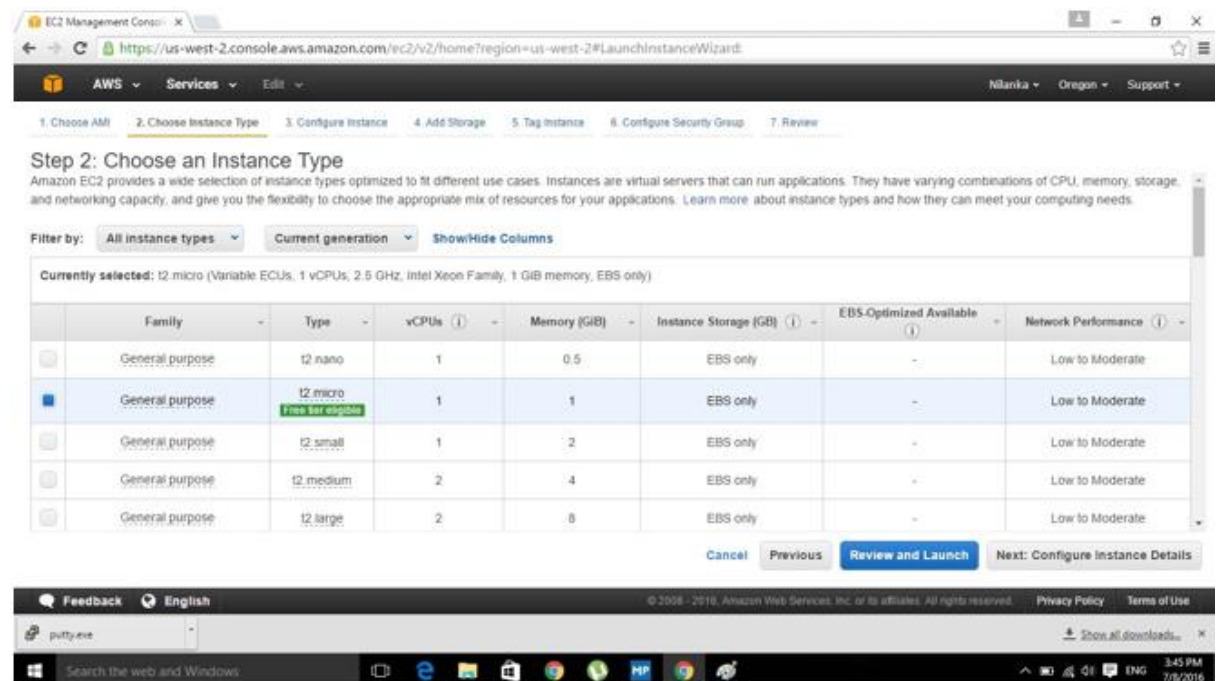
❖ **Step 02:** Select the Launch Instance under Create Instance in main interface.



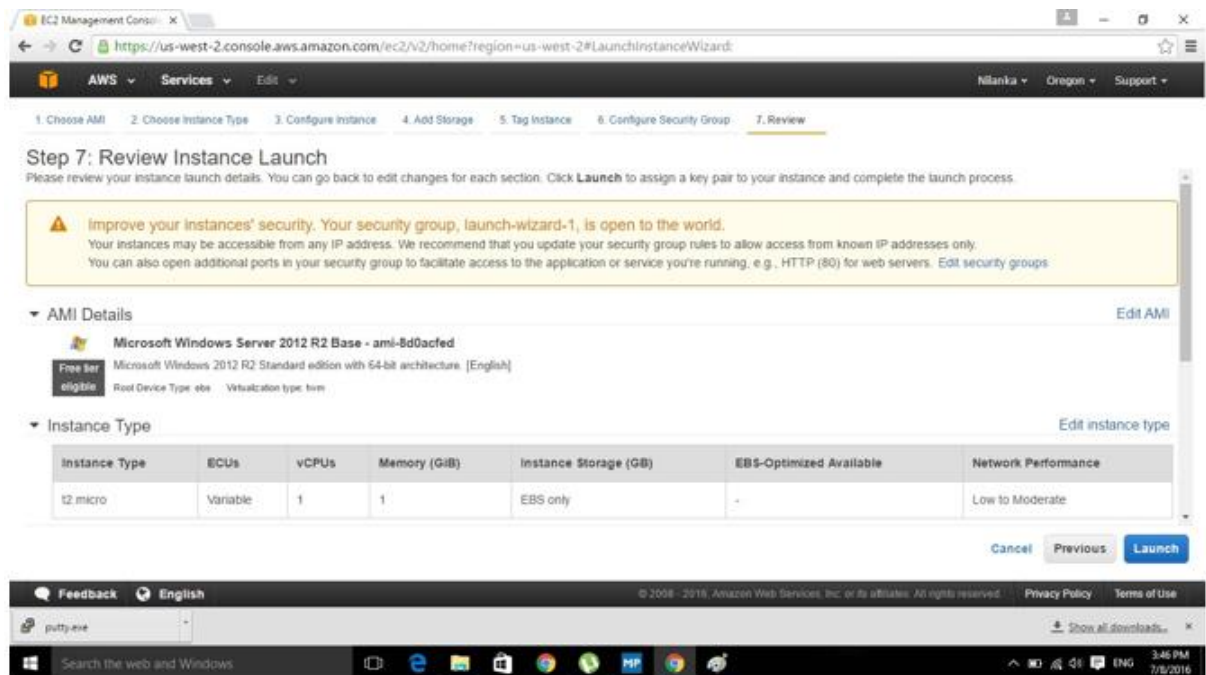
- ❖ **Step 03:** Choose an Amazon Machine image (AMI). Then Select Microsoft windows Server 2012 R2 Base.



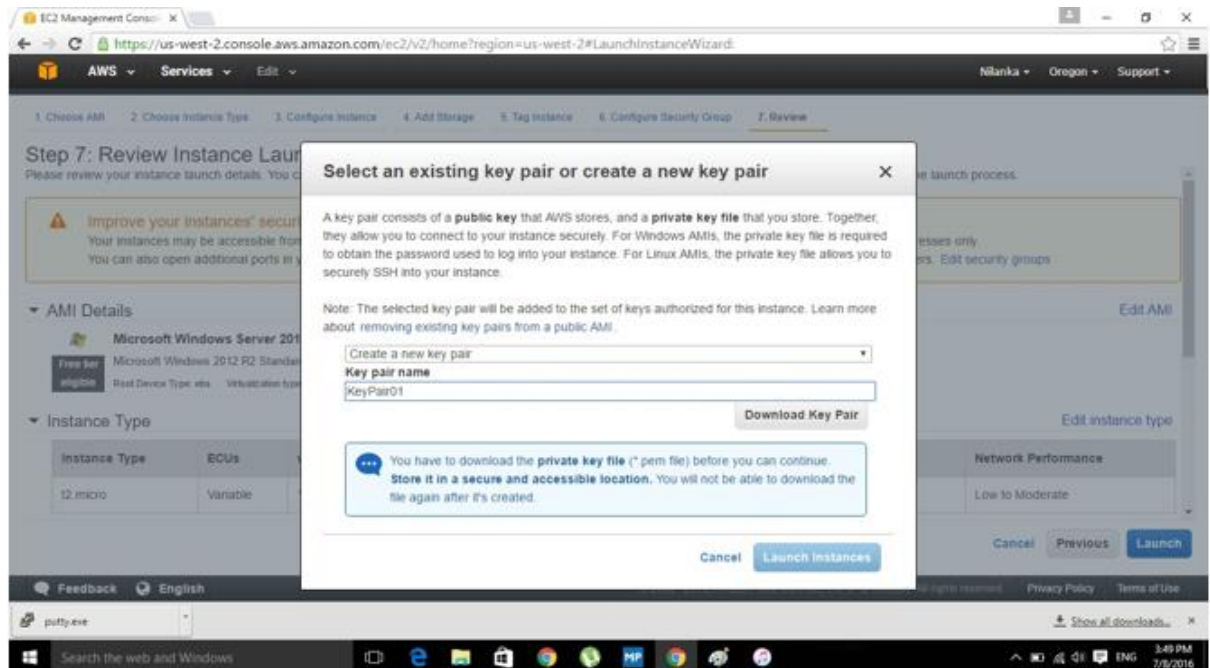
- ❖ **Step 04:** Choose an Instance type.



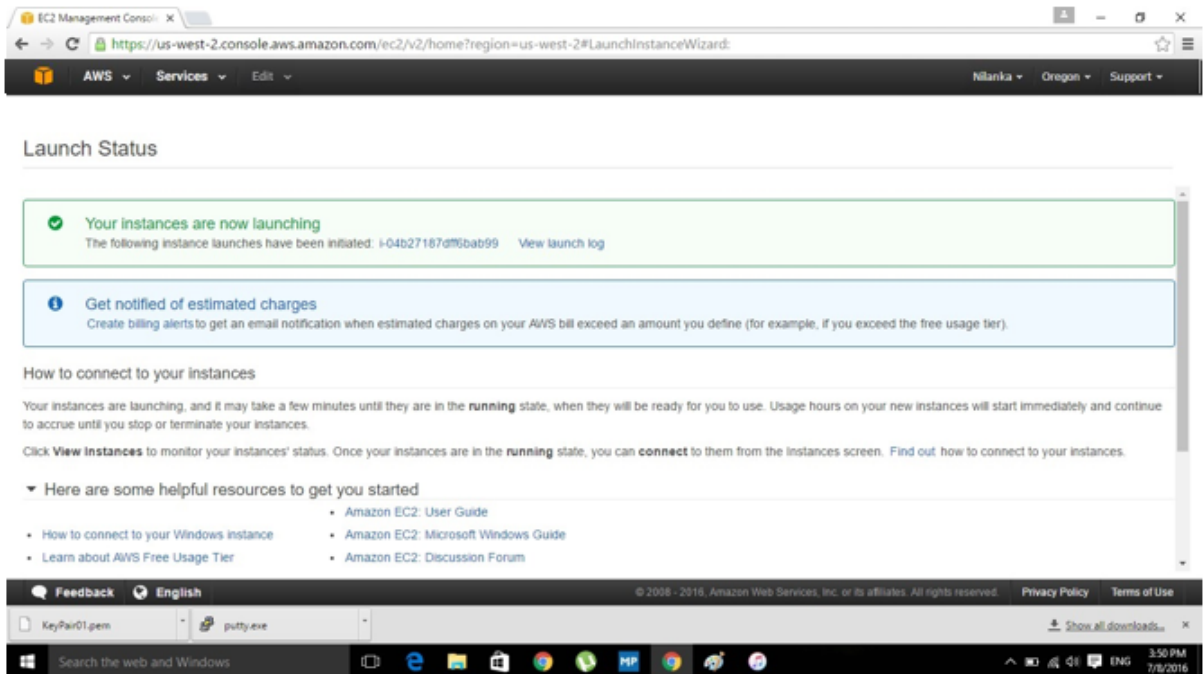
❖ Step 05: Review Instance Launch.



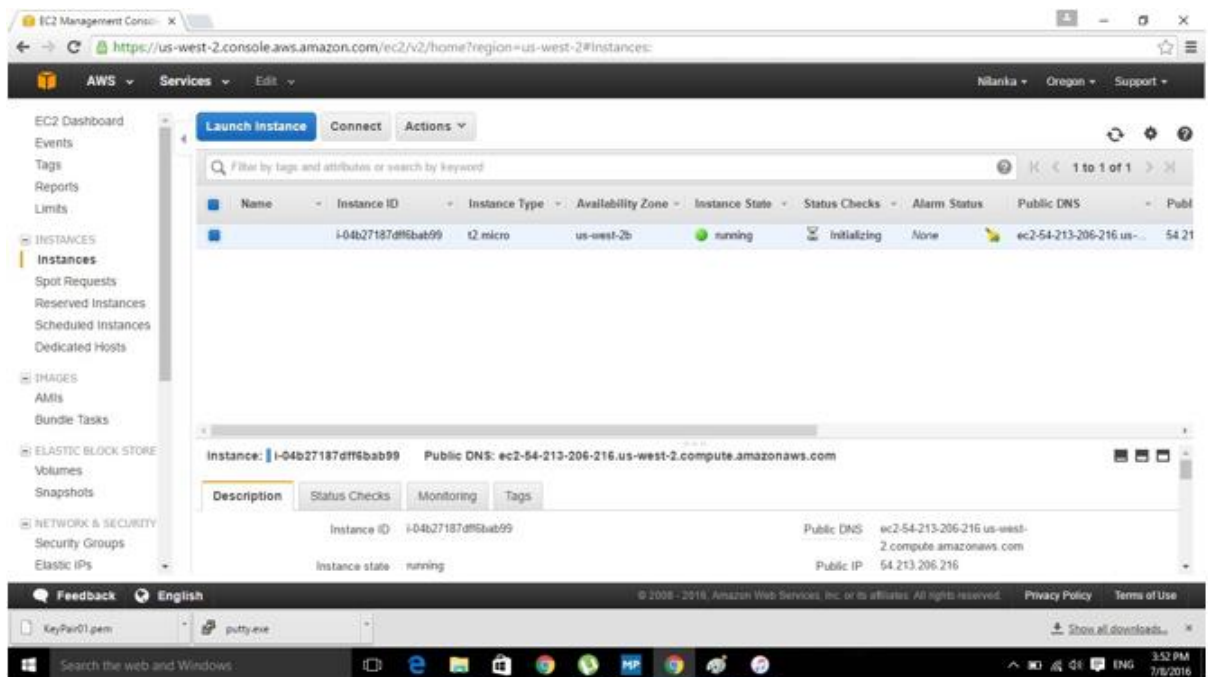
❖ Step 06: After launch there is popup box which is to select an existing key pair or create new key pair. Select new key pair and download the key pair. After downloading the key pair click Launch Instance.



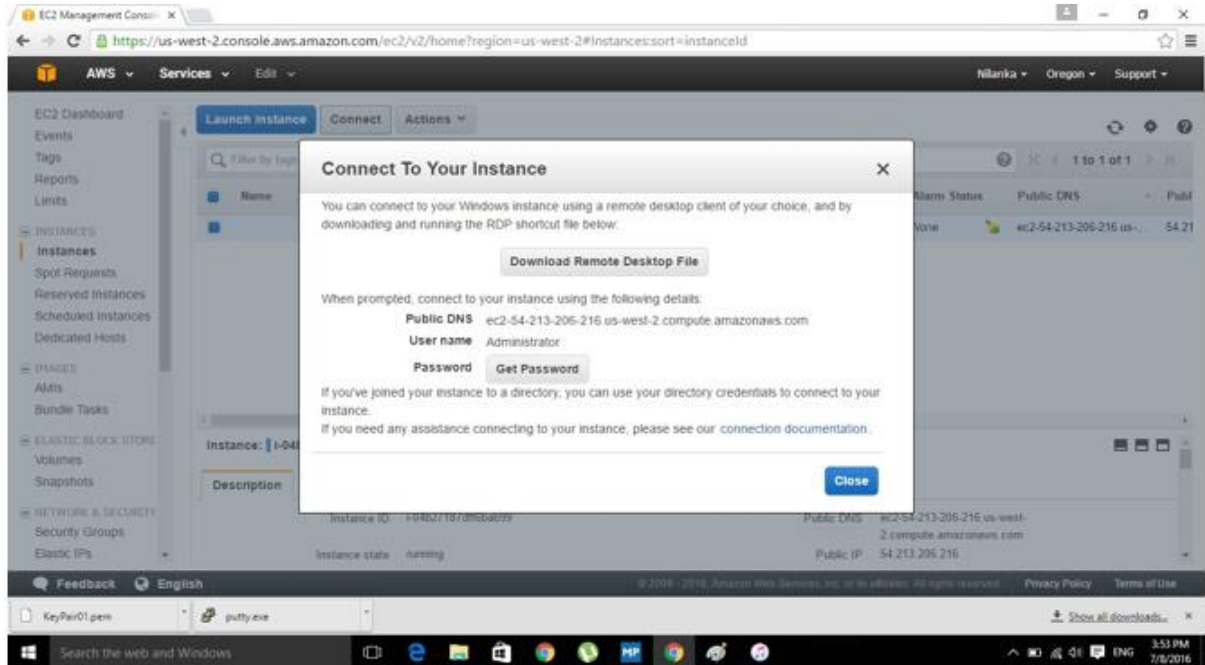
❖ Step 07: View instance after launching.



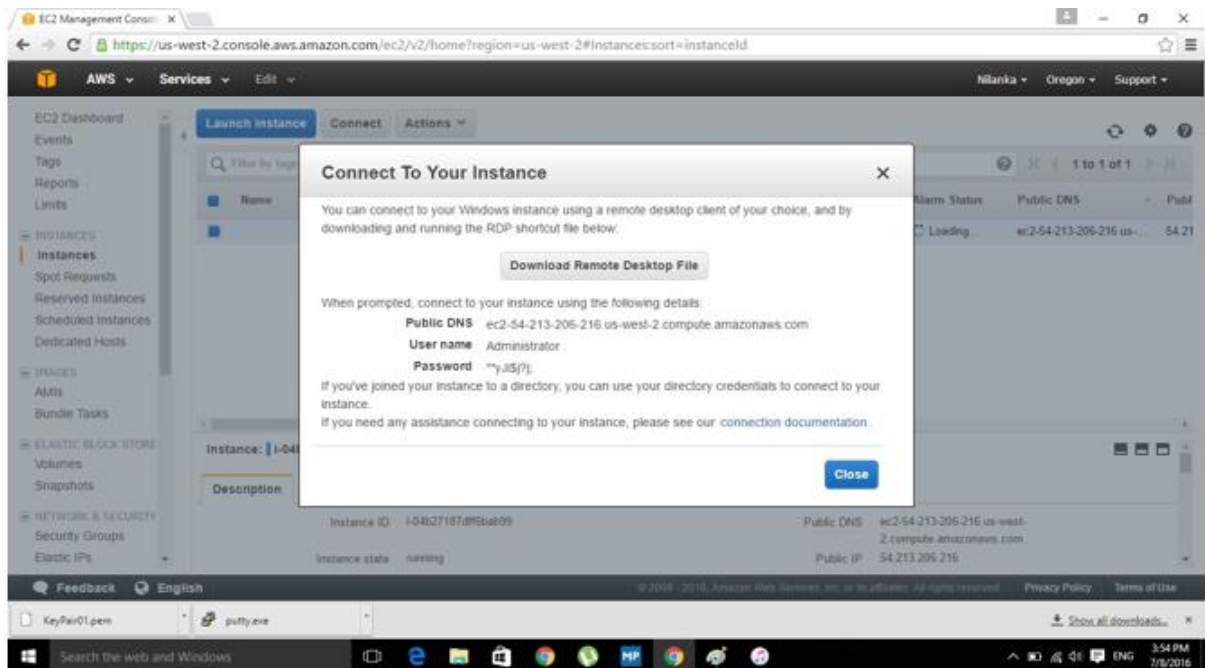
❖ Step 08: Select the created instance and then connect.



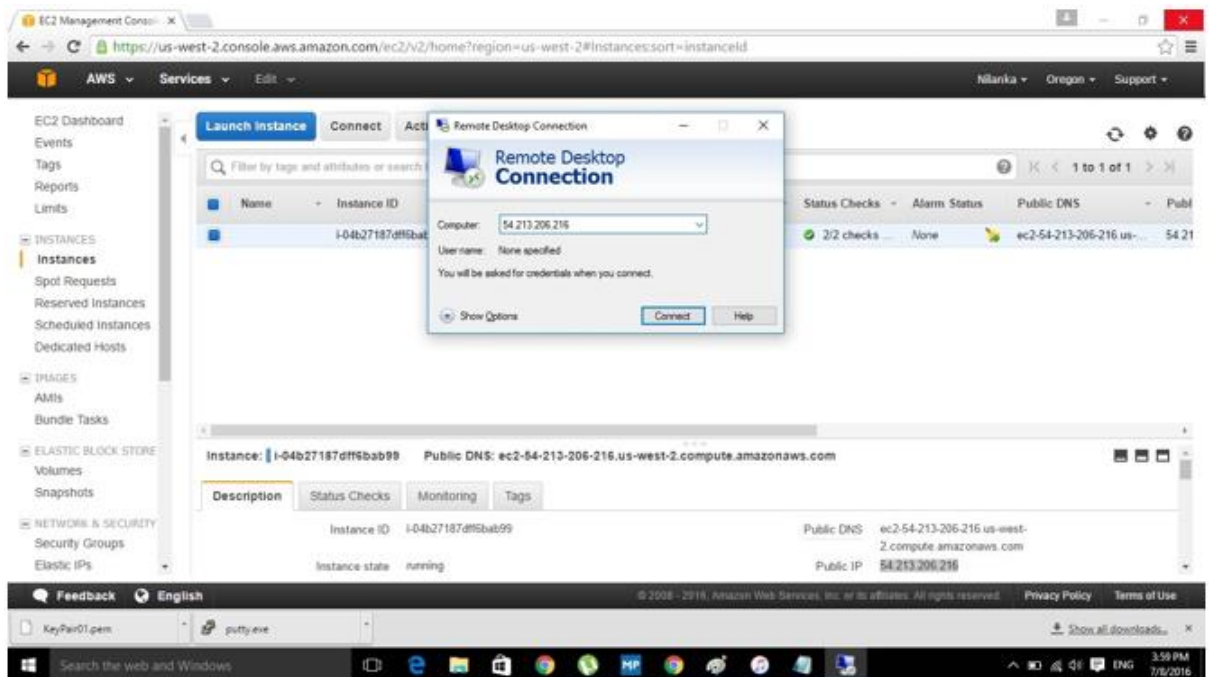
❖ **Step 09:** Get a password from Connect to Your Instance window.



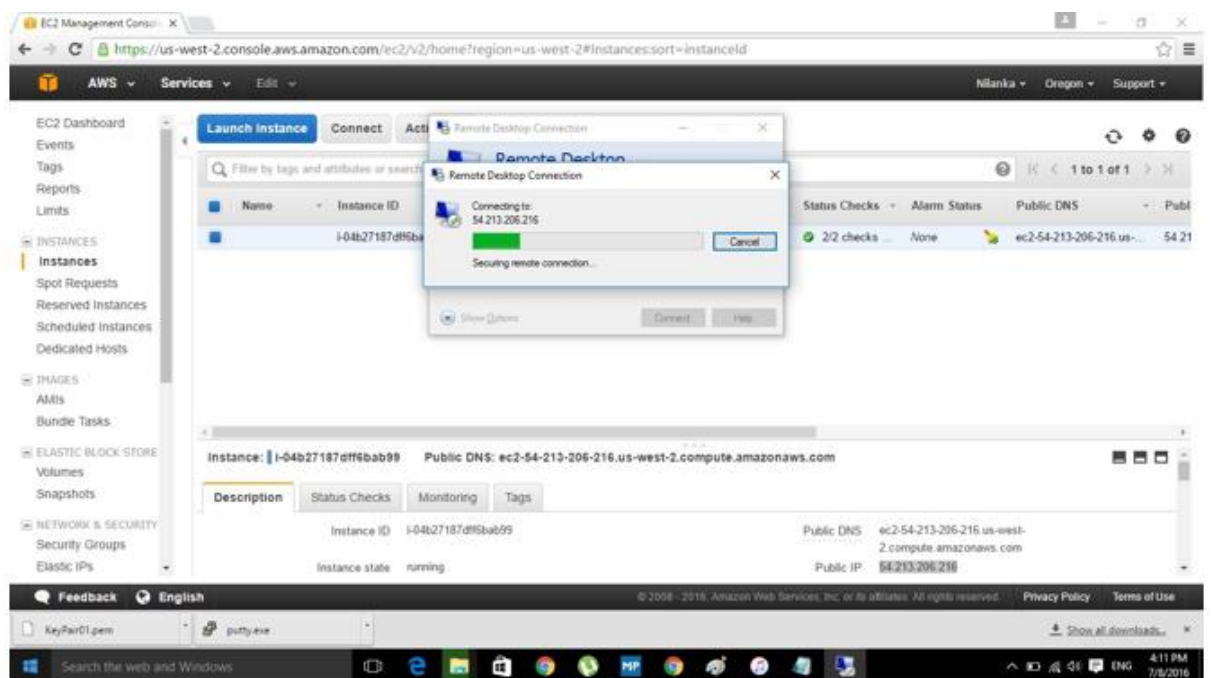
❖ **Step 10:** Decrypt the password. Note down the user name and the decrypted password.



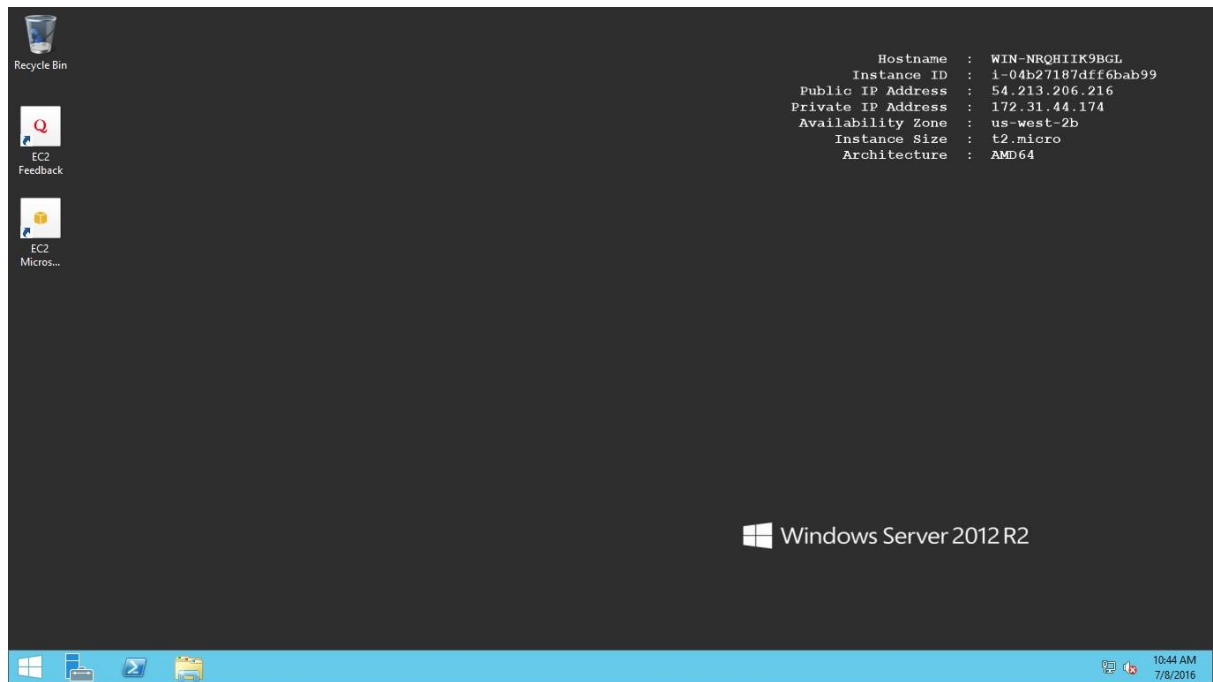
- ❖ **Step 11:** Open Remote Desktop Connection. Provide the public IP of the launched instance.



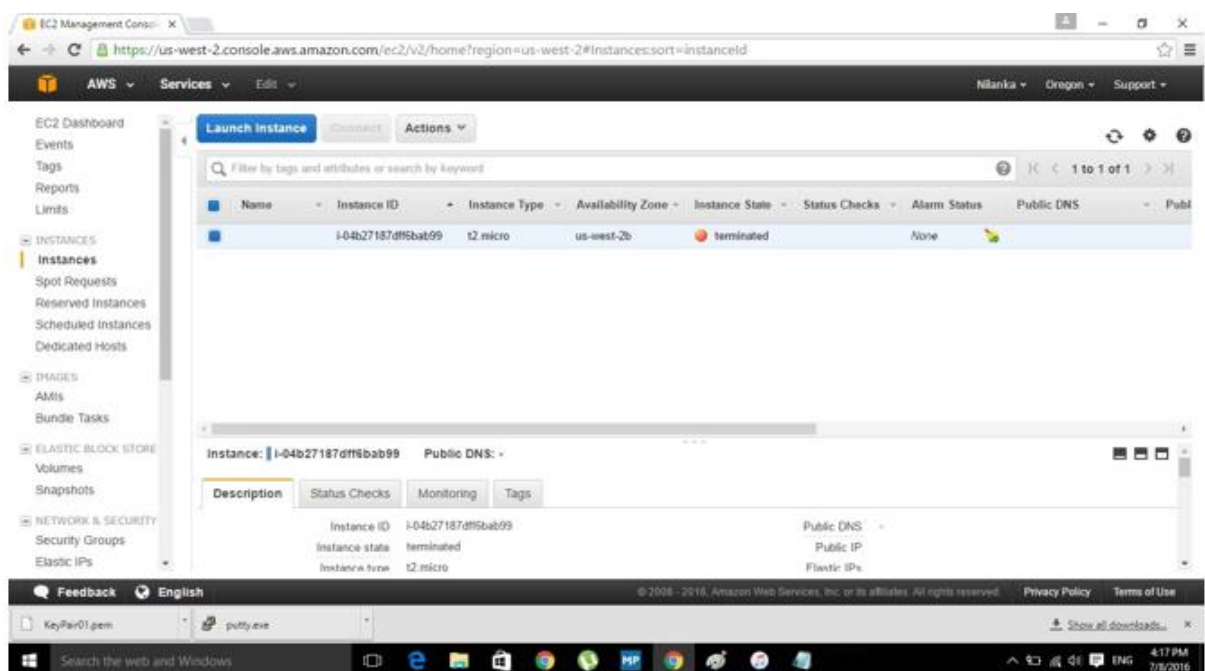
- ❖ **Step 12:** Connect to the created instance.



- ❖ **Step 13:** Log in to Windows Server 2012 R2 using the given user name and the decrypted password.

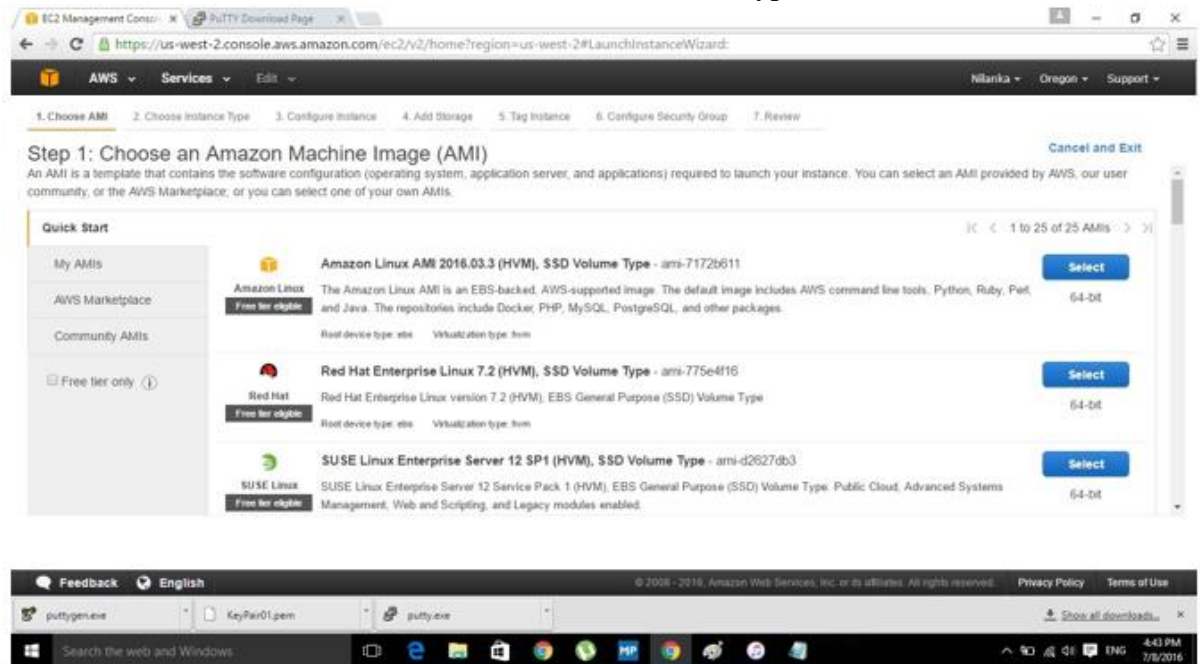


- ❖ **Step 14:** Right click on the created server instance and terminate it from the instance state. (Right click on instance -> Instance State -> Stop)

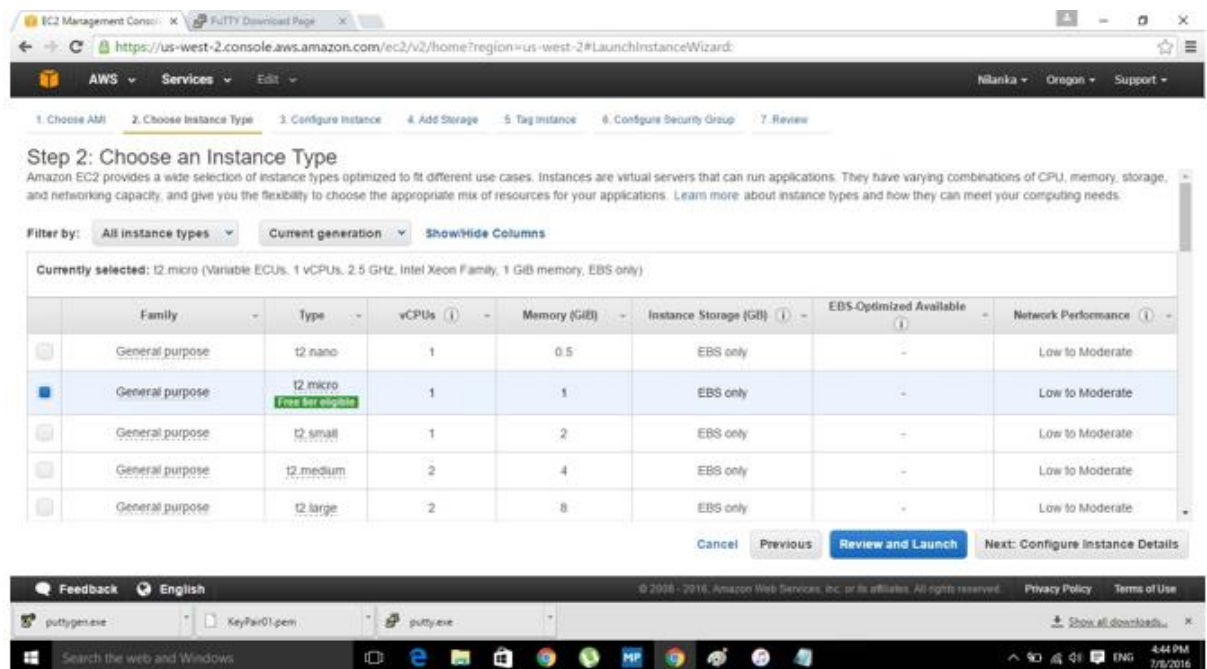


Lab 02 - Creating an Amazon EBS-Backed Linux AMI

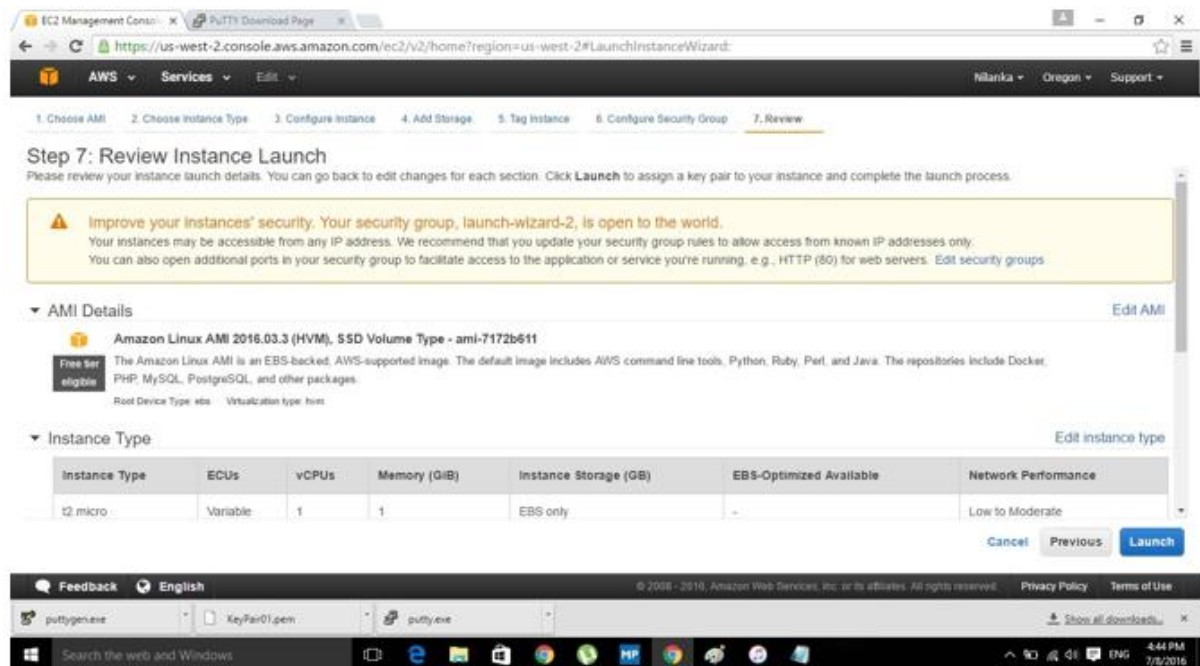
- ❖ **Step 01:** Choose an Amazon Machine Image (AMI). Select Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type



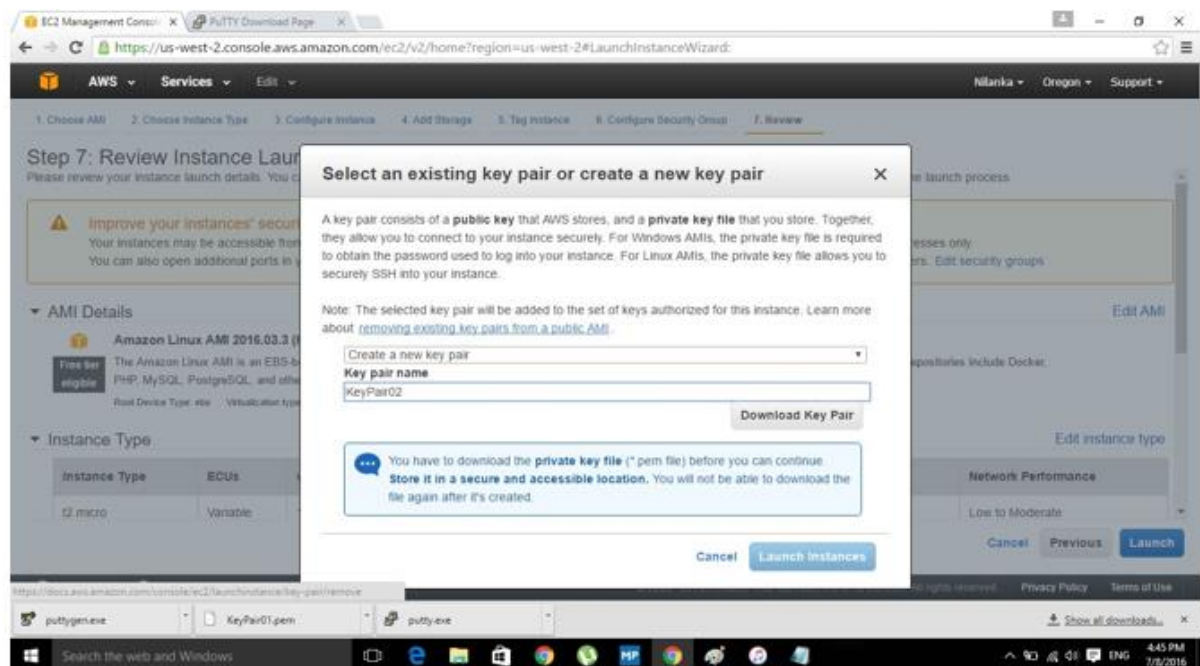
- ❖ **Step 02:** Choose an Instance Type. Then review and launch



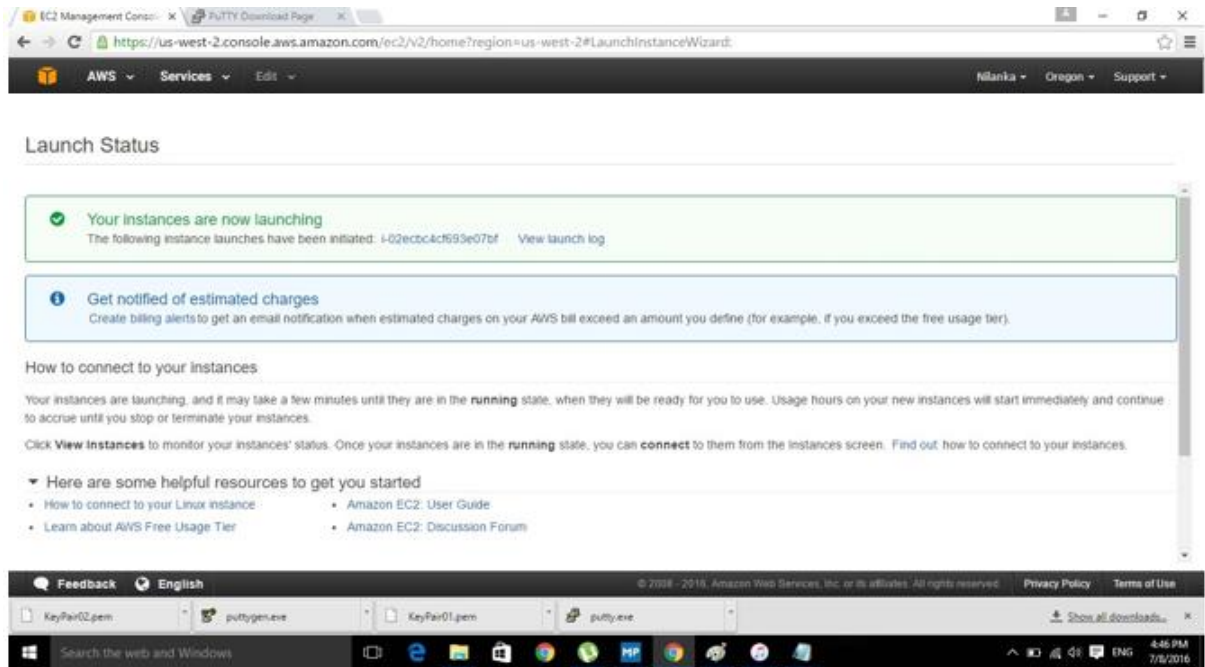
❖ Step 03: Review Instance Launch.



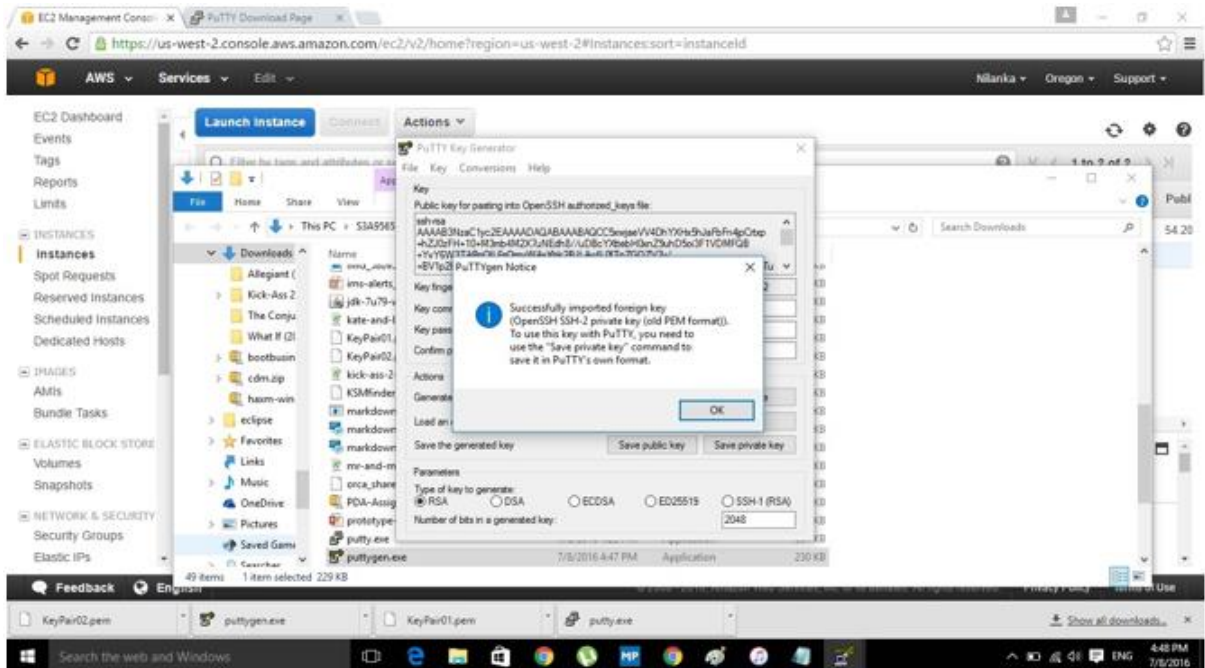
❖ Step 04: Choose create a new key pair to download a new key pair. Then give a key pair name. Then select Launch Instance.



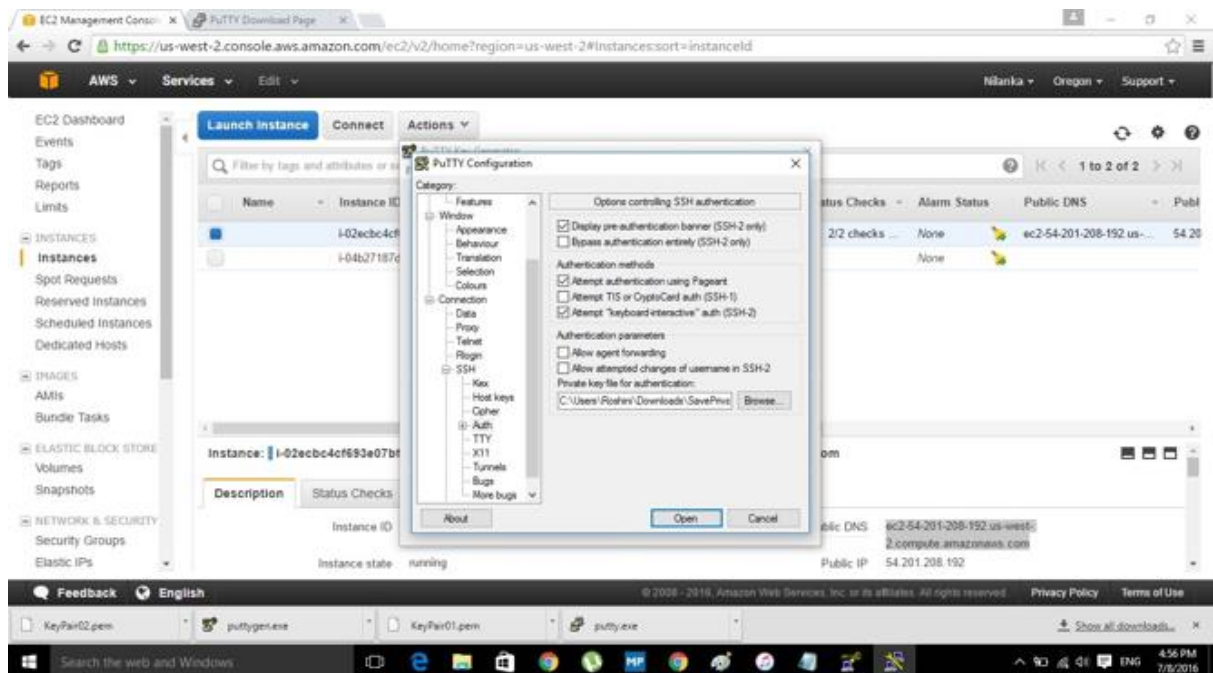
❖ **Step 05:** View Instances after launching.



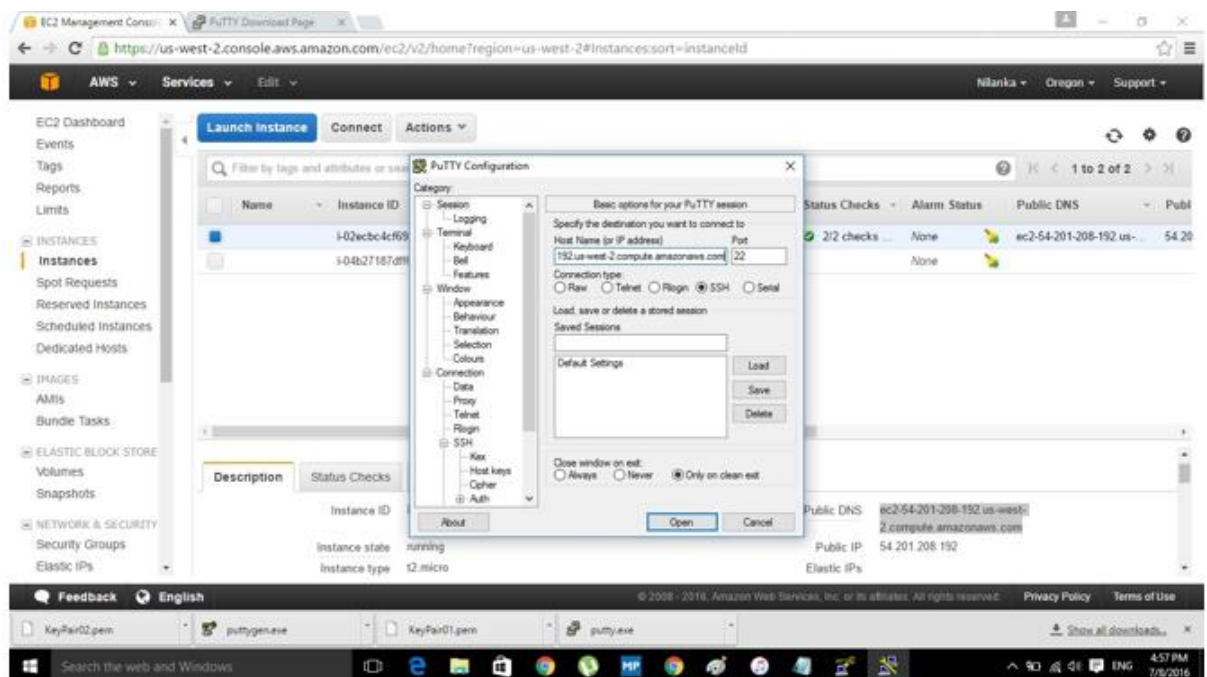
❖ **Step 06:** Open PUTTY Key Generator. Then browse and load the downloaded key



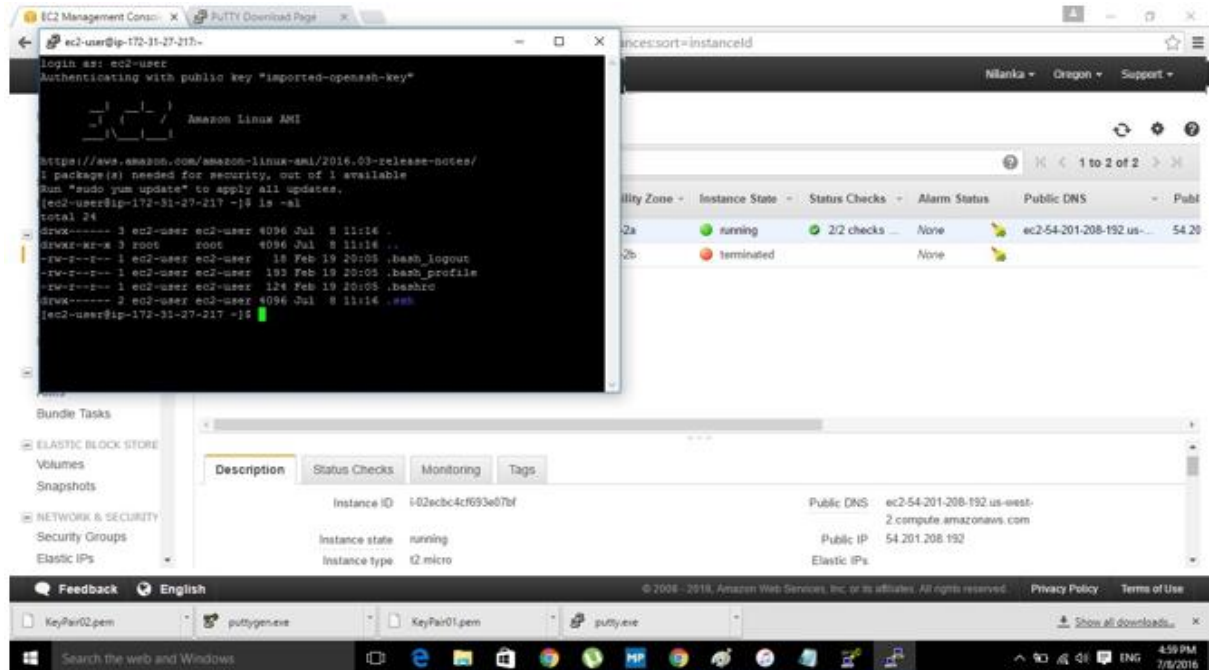
- ❖ **Step 07:** Open PUTTY Configuration. Go to Connection category for SSH authentication. (Connection -> SSH -> Author) Then under authentication parameters browse saved private key and open.



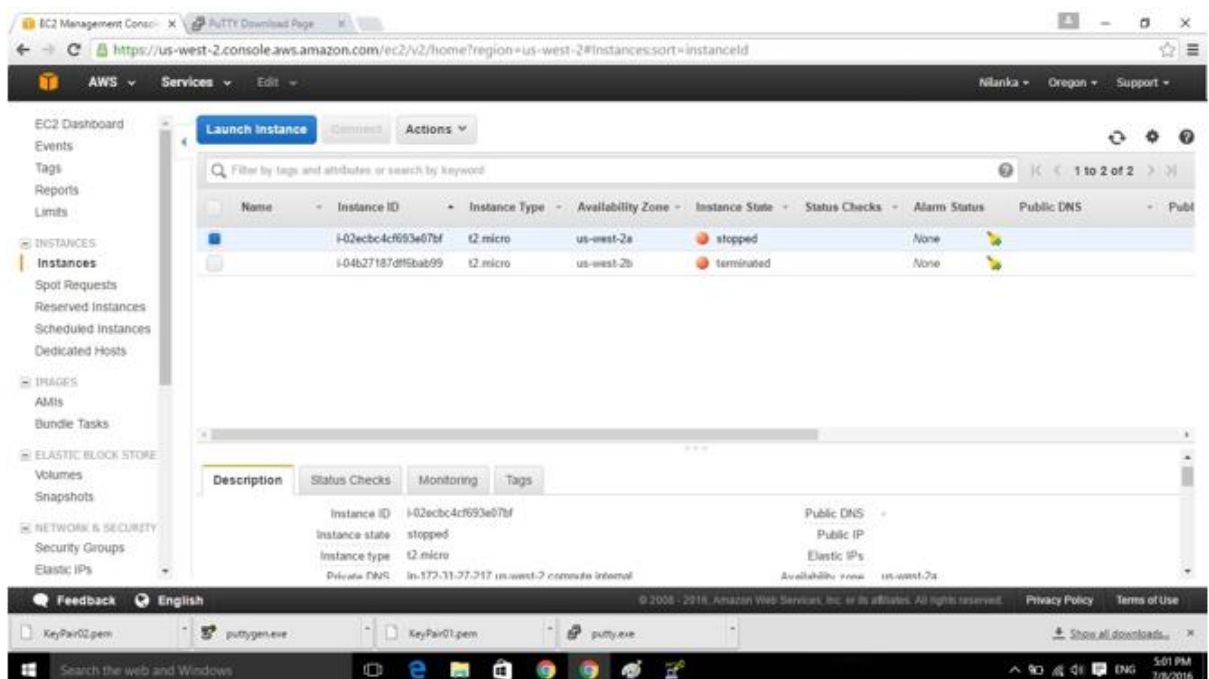
- ❖ **Step 08:** Go back to Session category in PUTTY Configuration. Copy the Public DNS of created instance and paste it under Host Name. Set Connection type to SSH and open.



- ❖ **Step 09:** Log in to Linux by giving user name in the kernel. (ec2-user). Type some Linux commands to check. (ls -al)

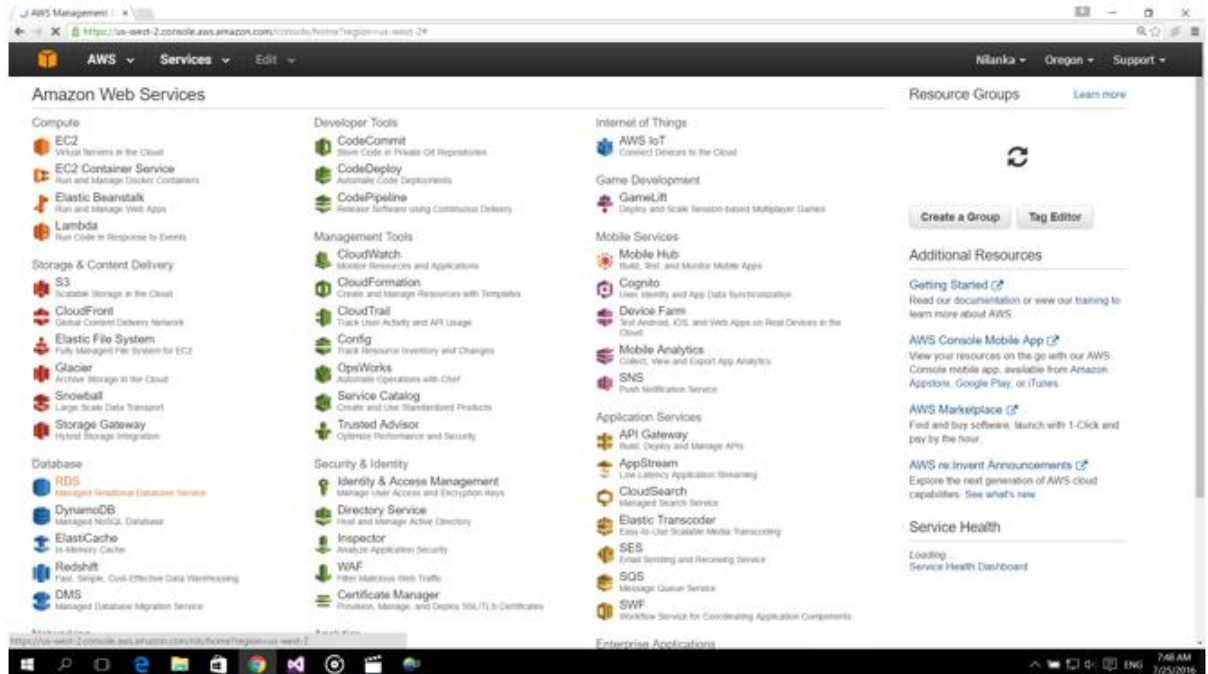


- ❖ **Step 10:** Terminate or stop the instance from instance state.(Right click on instance -> Instance State -> Terminate/ Stop).

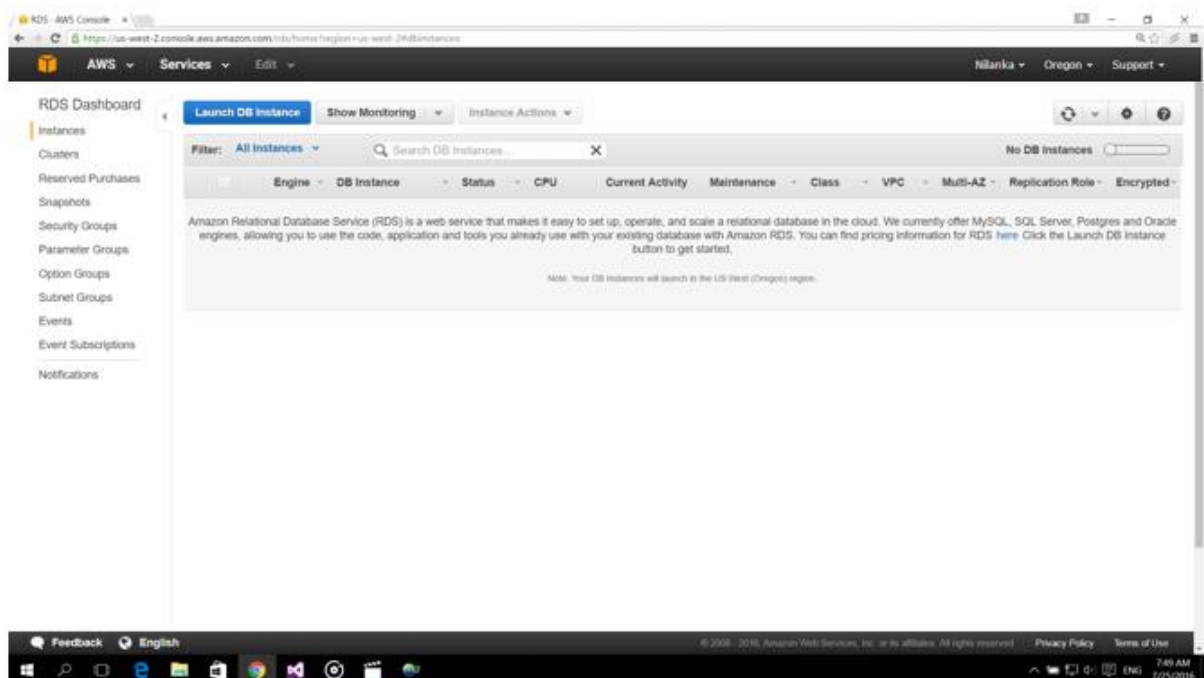


Lab 03 - Creating an Amazon RDS Database

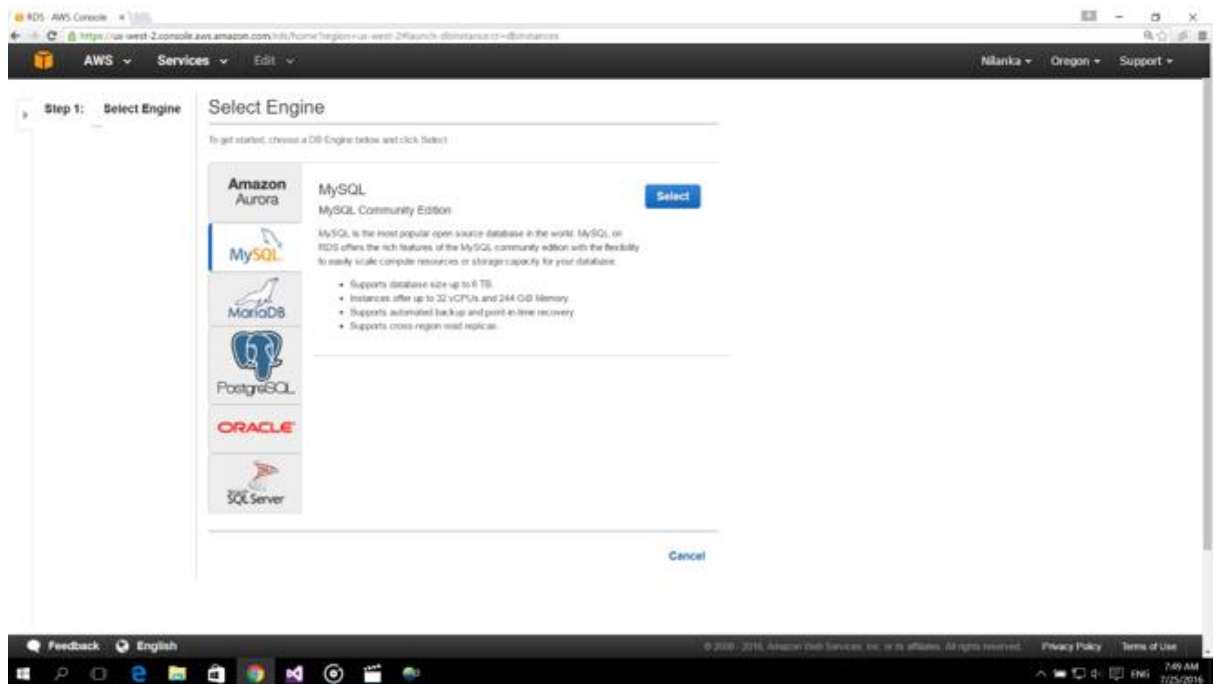
❖ Step 01: Select RDS from Amazon Web Services. (Services -> RDS)



❖ Step 02: Choose Instances from RDS Dashboard. Select Launch DB Instance.

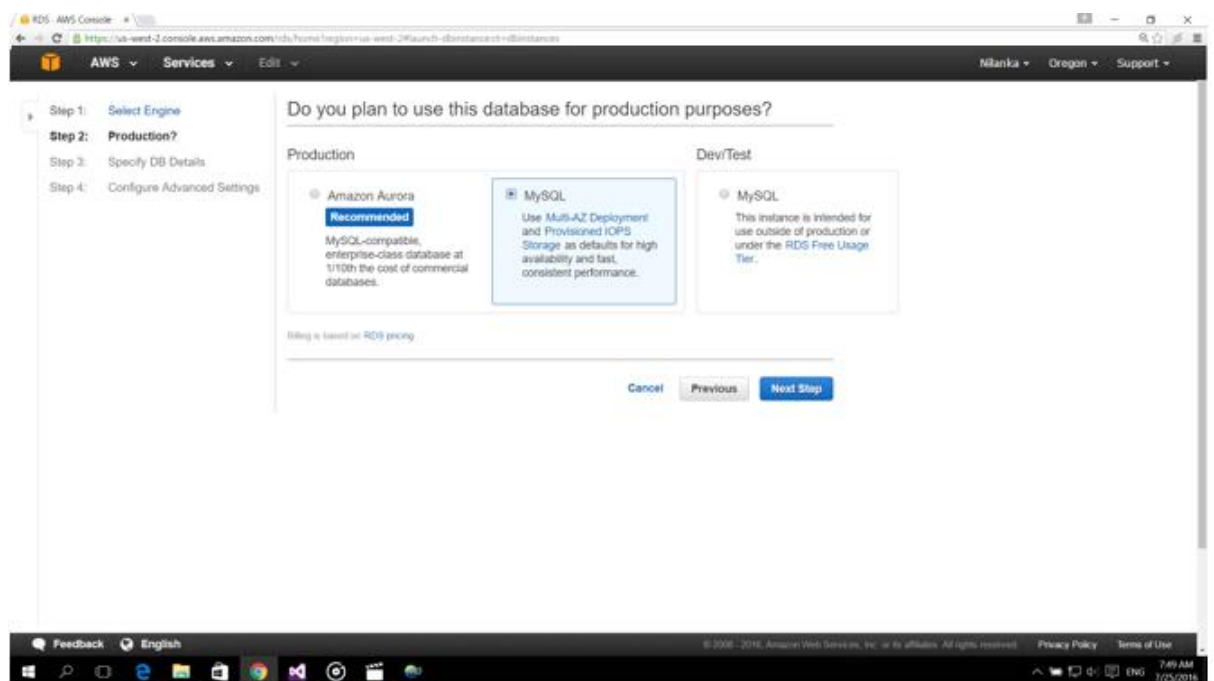


❖ **Step 03:** Choose MySQL from ‘Select Engine’ tab.



❖ **Step 04:** Select MySQL under ‘Production’ category.

Then proceed to next step.



❖ **Step 05:** Specify the DB details. (Instance Specifications and Settings)

License Model: general-public-license

DB Engine Version: 5.6.19a

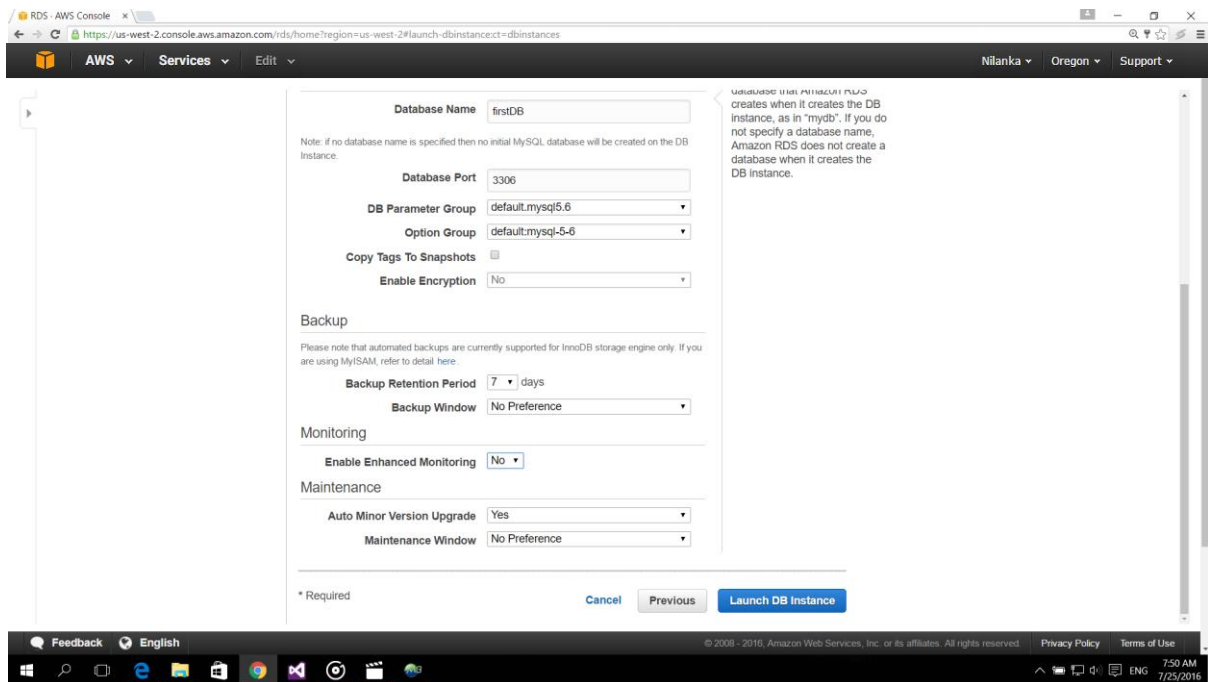
DB Instance Class: db.t2.micro – 1 vCPU, 1 GiB RAM

Multi-AZ Deployment: No

Storage Type: General Purpose (SSD)

Allocated Storage: 15 GB

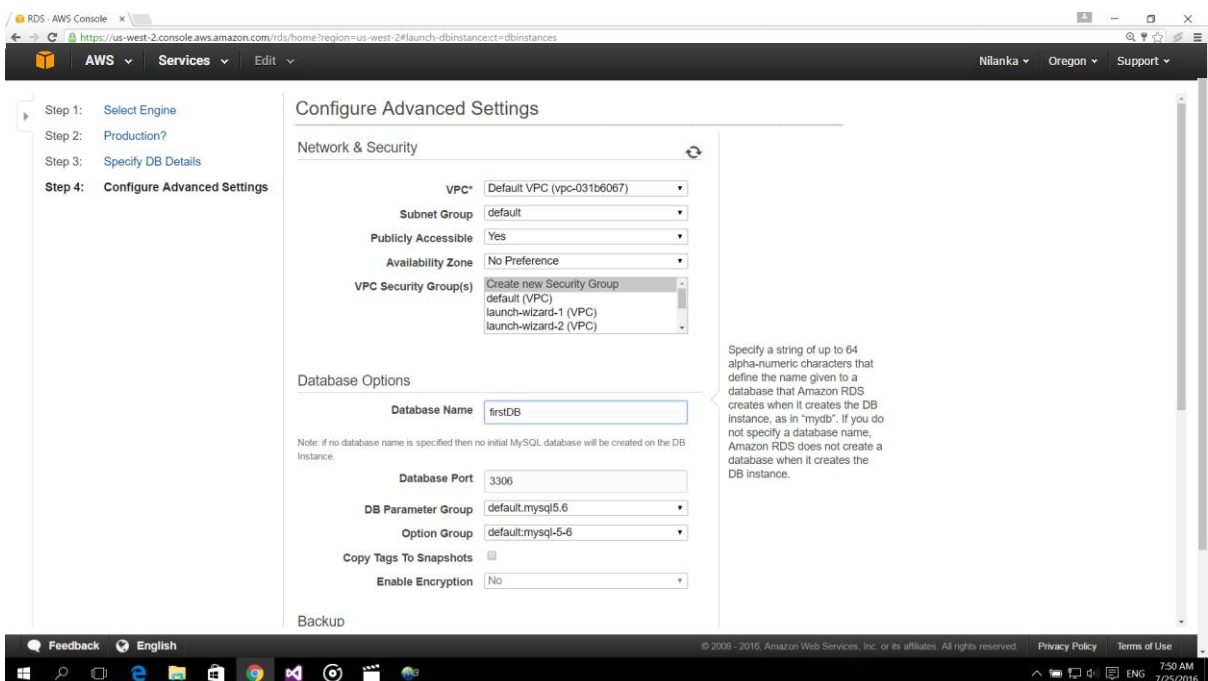
Provide a DB instance identifier, a master username and a master password.



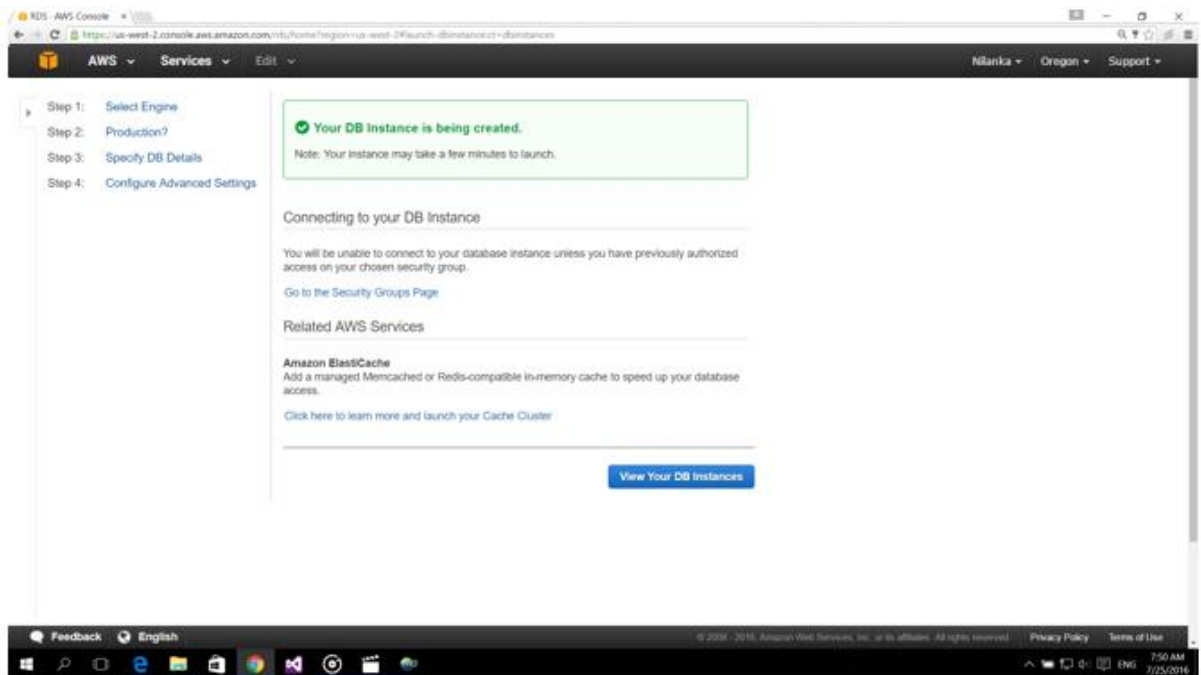
❖ **Step 06:** Give a database name in ‘Configure Advanced Settings’ tab. (Database Options)

Choose ‘No’ in Enable Enhanced Monitoring. (Monitoring)

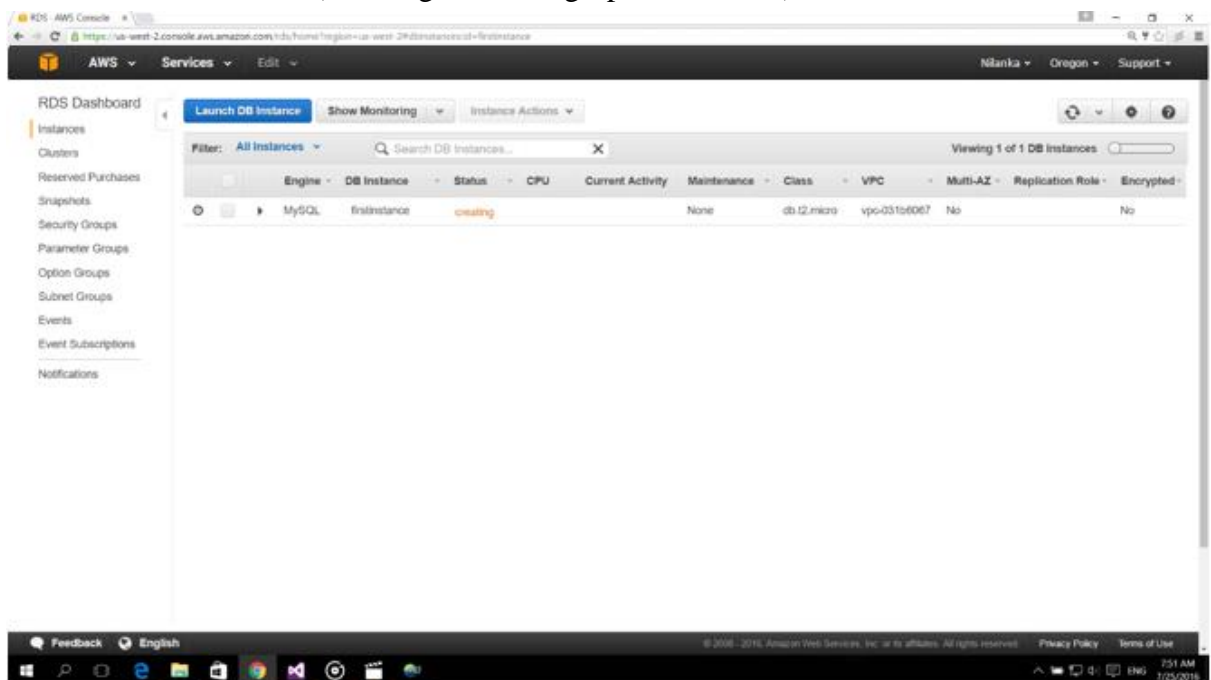
Click ‘Launch DB Instance’.

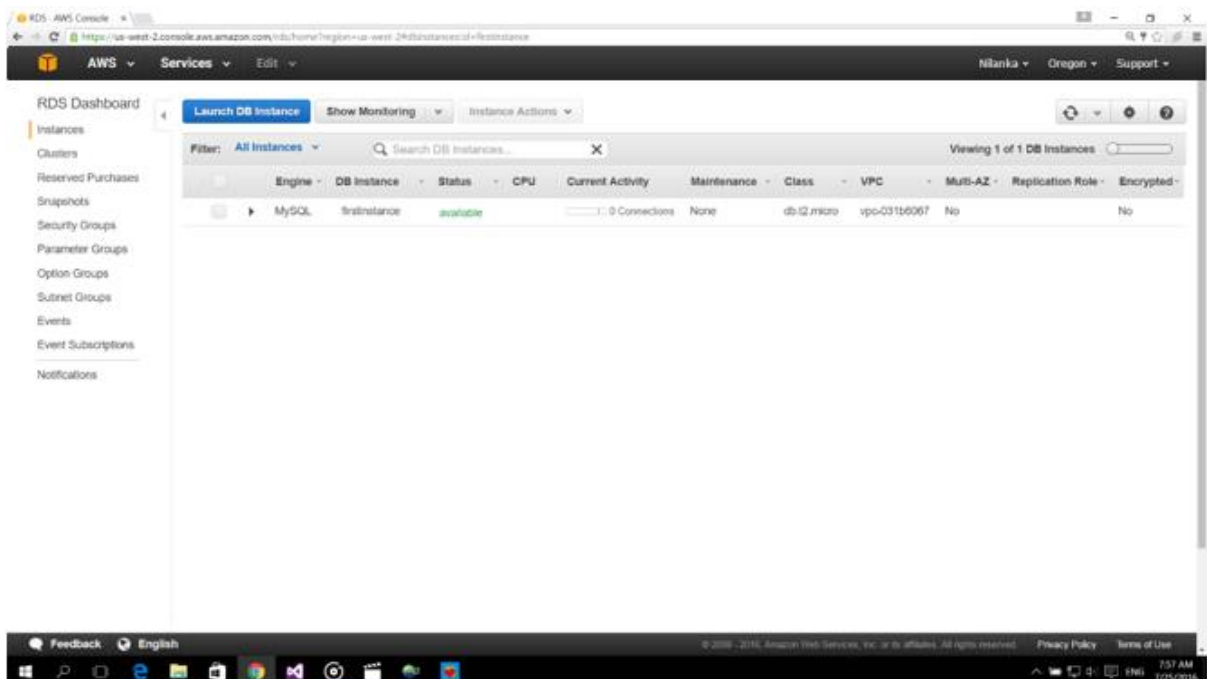
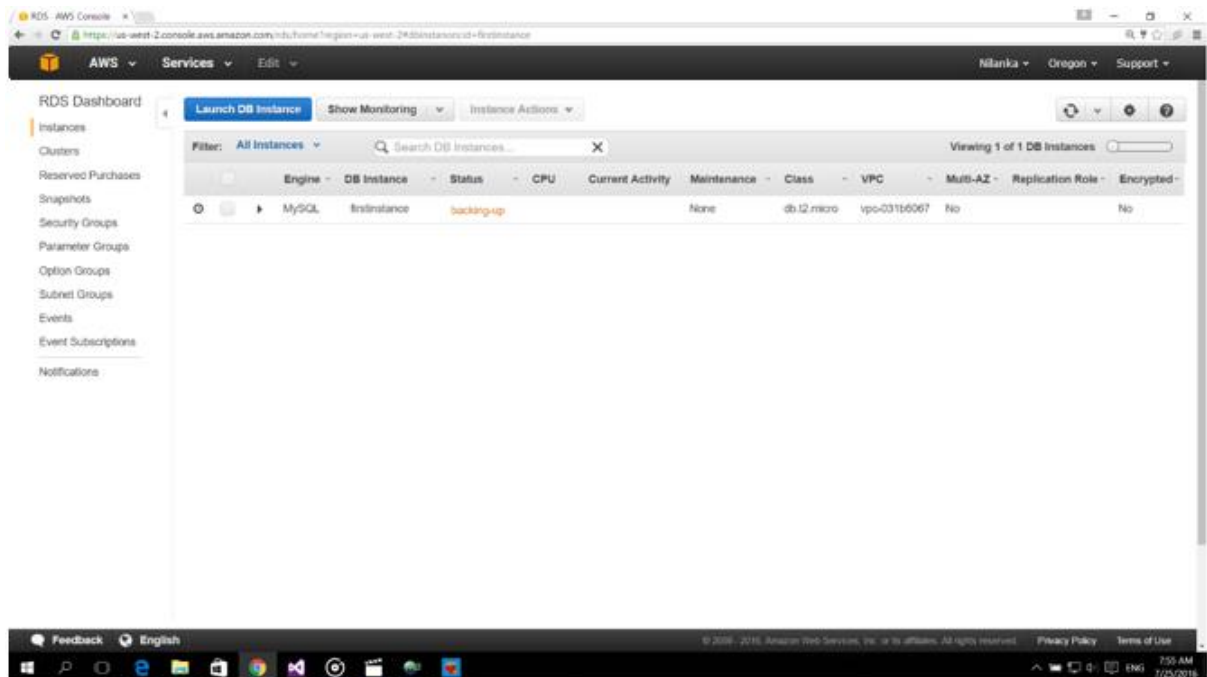


❖ **Step 07:** Click ‘View Your DB Instances’ from next window.

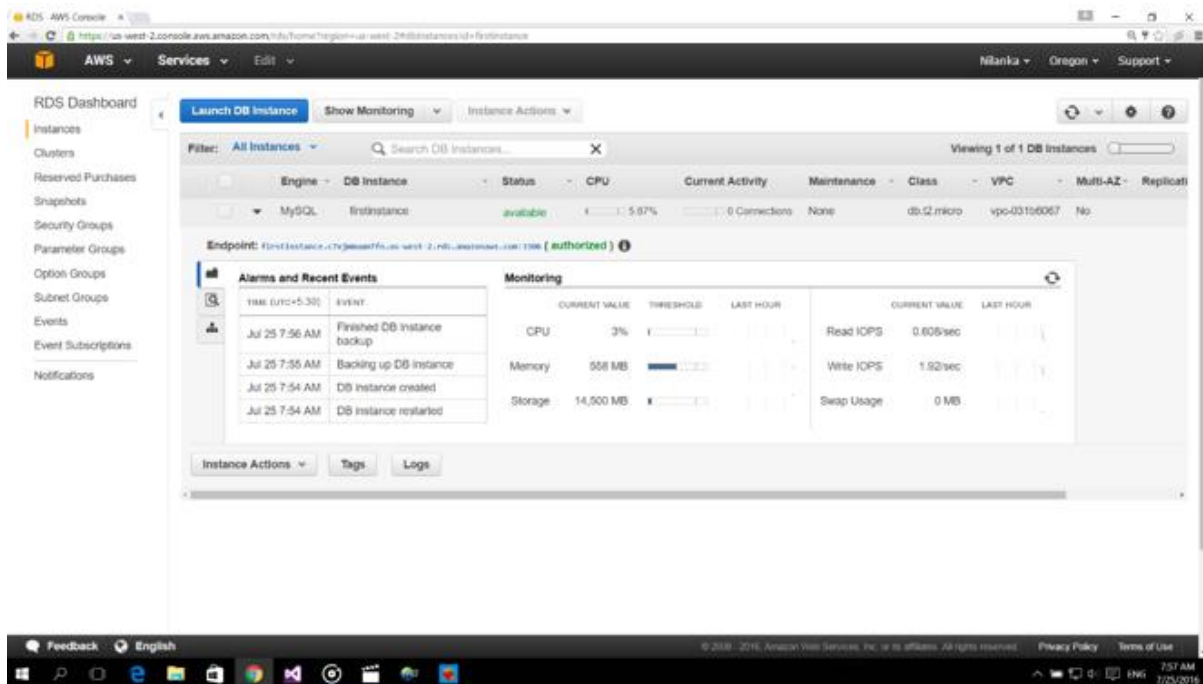


❖ **Step 08:** Wait until the instance status change to ‘available’ from ‘creating’.
(Creating -> backing-up -> available)

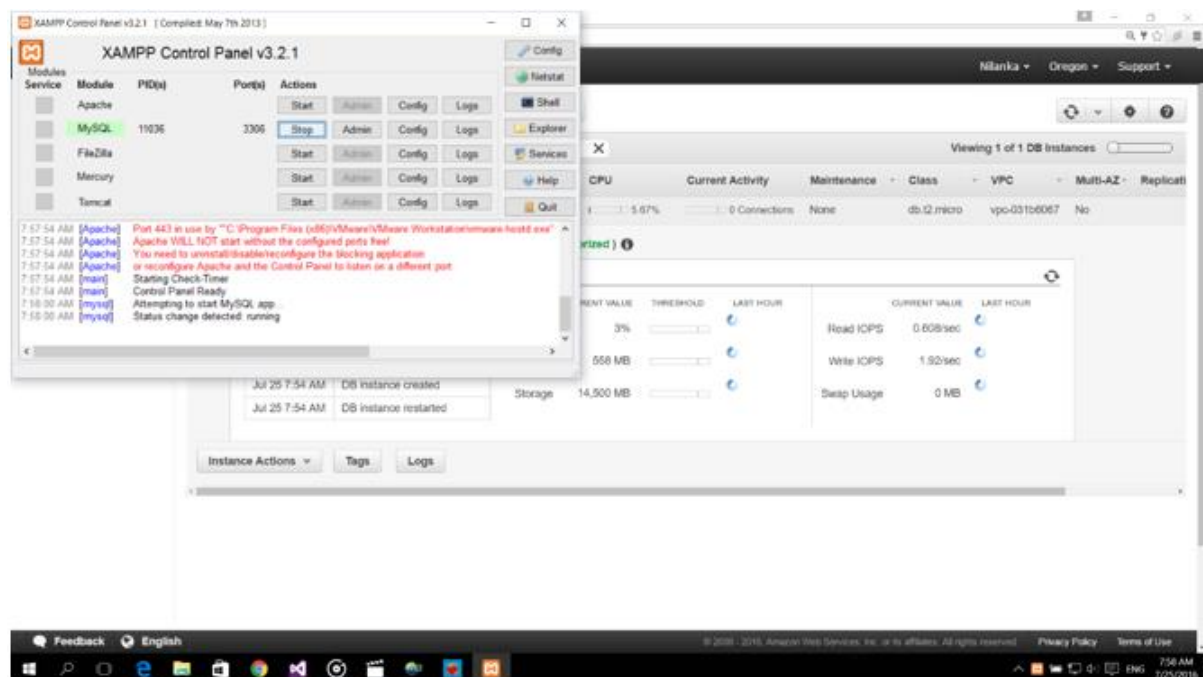




- ❖ **Step 09:** Expand the instance to view Endpoint.
- Copy the Endpoint without the port number.



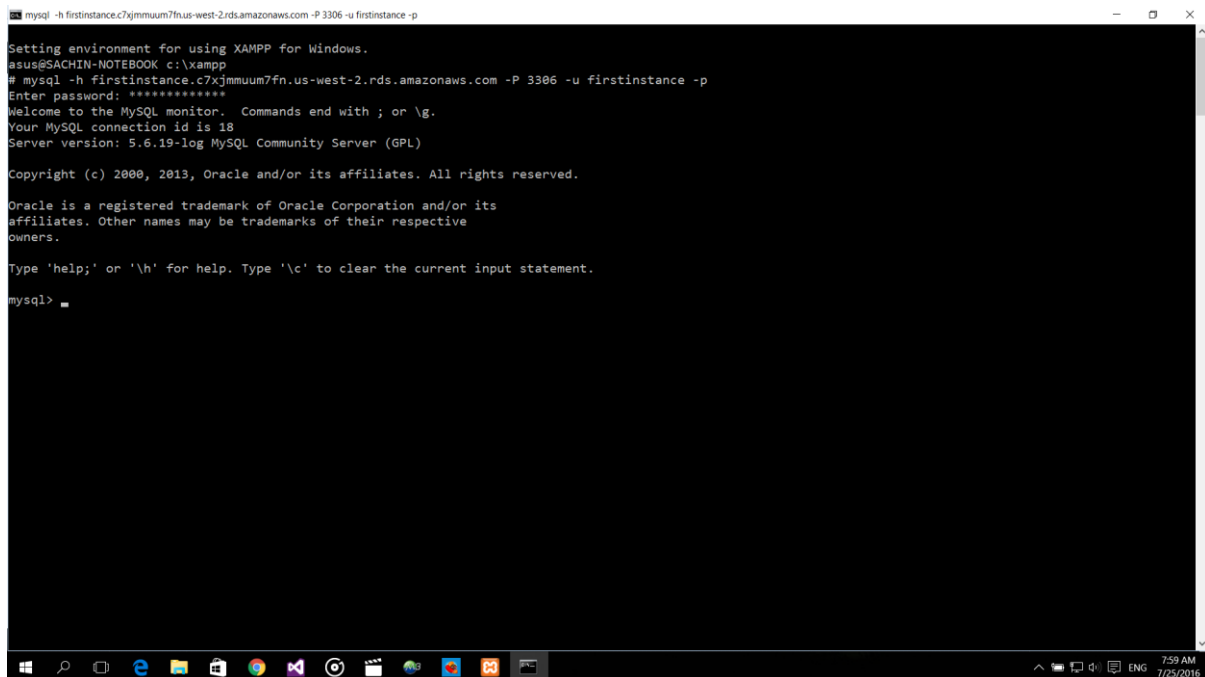
- ❖ **Step 10:** Open XAMPP Control Panel.
- Start MySQL.



❖ **Step 11:** Go to the Shell in XAMPP Control Panel.

Type the command. (mysql -h <endpoint> -P <port number> -u <instance name> -p)

Enter master password.



```
mysql -h firstinstance.c7xjmmu7fn.us-west-2.rds.amazonaws.com -P 3306 -u firstinstance -p

Setting environment for using XAMPP for Windows.
asus@SACHIN-NOTEBOOK c:\xampp
# mysql -h firstinstance.c7xjmmu7fn.us-west-2.rds.amazonaws.com -P 3306 -u firstinstance -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 18
Server version: 5.6.19-log MySQL Community Server (GPL)

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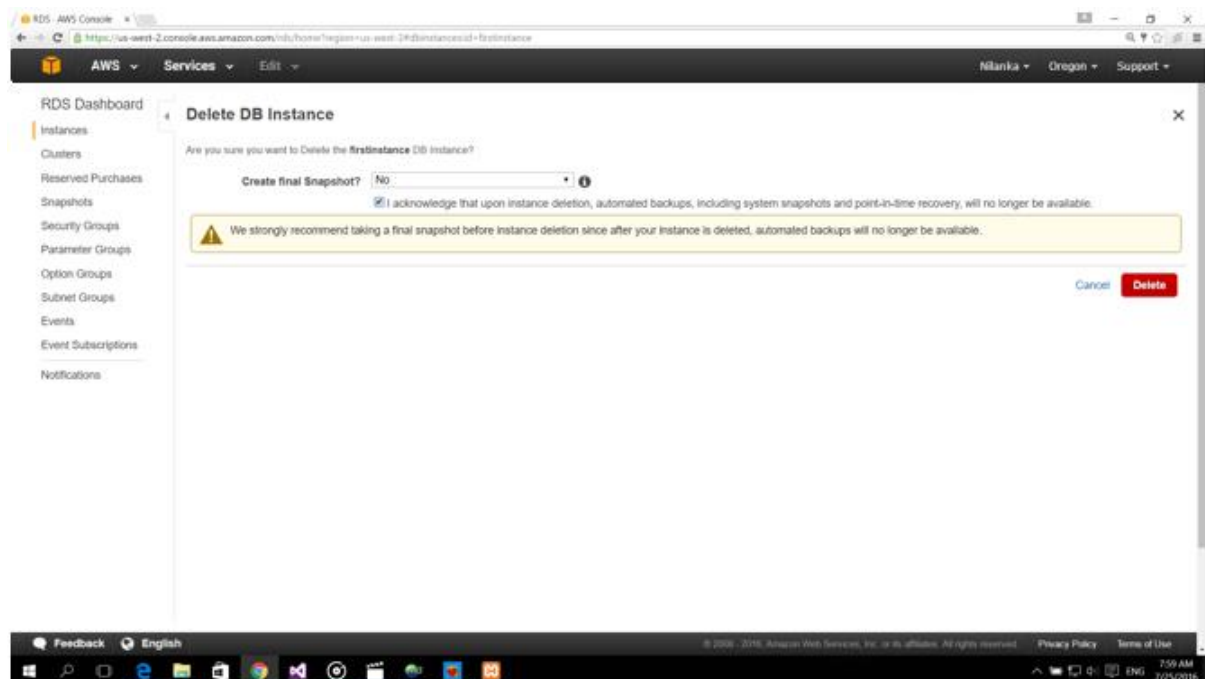
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

❖ **Step 12:** Delete the created DB instance. (Instance Actions -> Delete)

Choose 'No' in Create final Snapshot.

Confirm delete by clicking 'Delete'.



RDS Dashboard

Filter: All Instances | Search DB Instances... | Viewing 1 of 1 DB Instances

Engine	DB Instance	Status	CPU	Current Activity	Maintenance	Class	VPC	Multi-AZ	Replica
MySQL	firstinstance	deleting	1.17%	0 Connections	None	db.t2.micro	vpc-031b6067	No	

Endpoint: firstinstance.c7y6waa7fu.us-west-2.rds.amazonaws.com:3306 (authorized)

Alarms and Recent Events

TIME (UTC+5:30)	EVENT
Jul 25 7:56 AM	Finished DB instance backup
Jul 25 7:55 AM	Backing up DB instance
Jul 25 7:54 AM	DB instance created
Jul 25 7:54 AM	DB instance restarted

Monitoring

	CURRENT VALUE	THRESHOLD	LAST HOUR
CPU	1.17%		
Memory	556 MB		
Storage	14,500 MB		

Instance Actions | Tags | Logs

RDS Dashboard

Filter: All Instances | Search DB Instances... | No DB Instances

Amazon Relational Database Service (RDS) is a web service that makes it easy to set up, operate, and scale a relational database in the cloud. We currently offer MySQL, SQL Server, Postgres and Oracle engines, allowing you to use the code, application and tools you already use with your existing database with Amazon RDS. You can find pricing information for RDS [here](#). Click the Launch DB Instance button to get started.

Note: Your DB Instances will launch in the US West (Oregon) region.

Launch DB Instance | Show Monitoring | Instance Actions