

Sri Lanka Institute of Information Technology

Enterprise Standards and Best Practices for IT Infrastructure

4th Year 2nd Semester 2016

AWS Instances Summary Report

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AWS username : Achini

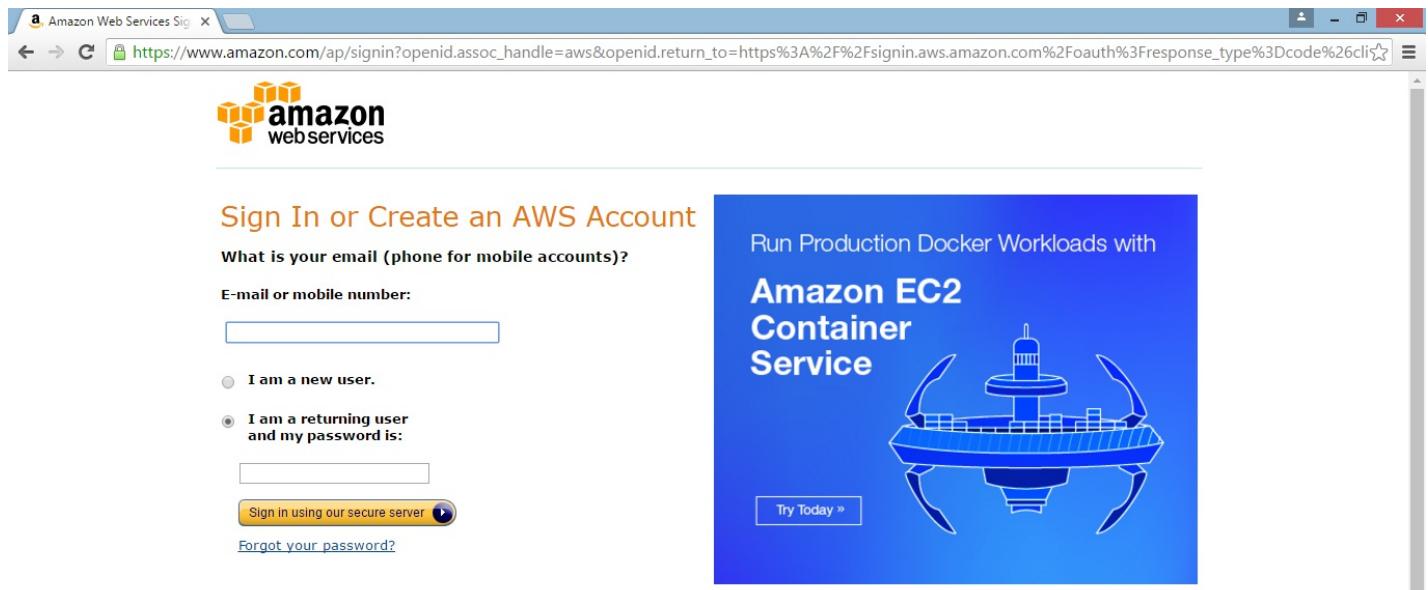
Practical Session: WD (Friday 3.30 pm- 5.30 pm)

Practical Number: Lab 01

Practical Title: Creating an Amazon EBS-Backed Windows AMI

Step 01 – First, create an AWS account by providing relevant details.

Step 02 – Then need to sign in to Amazon Web Services by providing a valid E-mail and a password. Now click on “Sign in using our secure server” button.



Step 03 – Click EC2 link.

The screenshot shows the AWS Management Console Home page. In the "Shortcuts and Recently Viewed Services" section, there are two icons: "EC2" and "RDS".

AWS Services SHOW CATEGORIES

- COMPUTE
 - EC2
 - EC Container Service
 - Elastic Beanstalk
 - Lambda
- STORAGE & CONTENT DELIVERY
 - S3
- DEVELOPER TOOLS
 - CodeCommit
 - CodeDeploy
 - CodePipeline
- MANAGEMENT TOOLS
 - CloudWatch
 - CloudFormation
- INTERNET OF THINGS
 - AWS IoT
- GAME DEVELOPMENT
 - GameLift
- MOBILE SERVICES
 - Mobile Hub

Service Health [View Dashboard](#)

All services are operating normally.
Updated Jul 19 2016 15:23:00 GMT+0530

Step 04 – To launch an Amazon EC2 instance, click on “Launch Instance” button.

The screenshot shows the EC2 Management Console Home page. On the left, the navigation menu includes "EC2 Dashboard", "INSTANCES", "IMAGES", "ELASTIC BLOCK STORE", "NETWORK & SECURITY", and "Feedback". The main area displays "Resources" information and a "Create Instance" section with a "Launch Instance" button.

Resources

You are using the following Amazon EC2 resources in the US West (Oregon) region:

0 Running Instances	0 Elastic IPs
0 Dedicated Hosts	0 Snapshots
1 Volumes	0 Load Balancers
8 Key Pairs	10 Security Groups
0 Placement Groups	

Build and run distributed, fault-tolerant applications in the cloud with [Amazon Simple Workflow Service](#).

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

Launch Instance

Note: Your instances will launch in the US West (Oregon) region

Service Health

Service Status:

US West (Oregon): This service is operating normally

Scheduled Events

US West (Oregon): No events

Account Attributes

Supported Platforms
VPC
Default VPC
vpc-99a9dbfd
Resource ID length management

Additional Information

Getting Started Guide
Documentation
All EC2 Resources
Forums
Pricing
Contact Us

AWS Marketplace

Find free software trial products in the AWS Marketplace from the [EC2 Launch Wizard](#).
Or try these popular AMIs:
[Tableau Server \(10 users\)](#)

Step 05– Choose an Amazon Machine Image (AMI). Select Microsoft Windows Server 2012 R2 Base. Click on “Select” button.

Step 1: Choose an Amazon Machine Image (AMI)

Root device type: ebs Virtualization type: hvm

Ubuntu Server 14.04 LTS (HVM), SSD Volume Type - ami-d732f0b7
Ubuntu Server 14.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).
Select 64-bit

Microsoft Windows Server 2012 R2 Base - ami-8d0acfcd
Microsoft Windows 2012 R2 Standard edition with 64-bit architecture. [English]
Select 64-bit

Are you launching a database instance? Try Amazon RDS.
Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database of your choice (MySQL, PostgreSQL, Oracle, SQL Server) in the cloud. It provides cost-efficient and resizable capacity while managing time-consuming database management tasks, freeing you up to focus on your applications and business. Aurora is a MySQL-compatible, enterprise-class database at 1/10th the cost of commercial databases. [Learn more about RDS](#)

Launch a database using RDS



Step 06 – Choose t2 micro (Free tier eligible) instance as instance type. Click on “Review and Launch” button.

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 types Current generation Show/Hide Columns

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	m4.large	2	8	EBS only	Yes	Moderate

Cancel Previous Review and Launch Next: Configure Instance Details



Step 07 – Then Review instance launch details. Click “Launch” button to complete the launch process.

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.

AMI Details

Instance Type

Security Groups

Launch

Step 08 – Then to complete the launch process “Selecting an existing key pair or create a new key pair” window appears. Select “Create a new key pair” from drop down list and give a name for key pair. Then click on “Download Key Pair” button. Now click on “Launch instances” button.

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair

Key pair name

Achini_IT13019600

Download Key Pair

You have to download the **private key file (*.pem file)** before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel Launch Instances

Step 09 – Then the Key pair will be downloaded. The extension is .pem and now instances are launching. Click on the instance code.

Your instances are now launching
The following instance launches have been initiated: [i-0c7ade42905c36ca0](#) [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 Windows instance
- Amazon EC2: User Guide
- Amazon EC2: Microsoft Windows Guide

Step 10 – The instance details are shown in the window. The instance's state will become to running state shortly.

EC2 Dashboard

Events

Tags

Reports

Limits

INSTANCES

Instances

Spot Requests

Reserved Instances

Scheduled Instances

Dedicated Hosts

Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP
i-0c7ade42905c36ca0	t2.micro	us-west-2b	Pending	Initializing	None	ec2-54-191-179-26.us-w...	54.191.179.26

Step 11 - Now click on "Connect" button.

The screenshot shows the AWS EC2 Management Console. The left sidebar has sections for EC2 Dashboard, Events, Tags, Reports, Limits, INSTANCES (selected), Instances, Spot Requests, Reserved Instances, Scheduled Instances, Dedicated Hosts, IMAGES, AMIs, Bundle Tasks, ELASTIC BLOCK STORE, Volumes, Snapshots, and NETWORK & SECURITY. The main content area shows a table of instances. One row is selected, showing details for an instance with Instance ID i-0c7ade42905c36ca0, Instance Type t2.micro, Availability Zone us-west-2b, Instance State running, Status Checks Initializing, Alarm Status None, Public DNS ec2-54-191-179-26.us-west-2.compute.amazonaws.com, and Public IP 54.191.179.26. Below the table, a modal window titled "Instance: i-0c7ade42905c36ca0 Public DNS: ec2-54-191-179-26.us-west-2.compute.amazonaws.com" displays the instance's description, status checks, monitoring, and tags. The "Description" tab is selected. At the bottom of the modal, there are tabs for Description, Status Checks, Monitoring, and Tags. The status bar at the bottom right shows the date and time as 7/19/2016 3:26 PM.

Step 12 – In order to connect to the instance username and password are needed. Click on “Get Password” button.

The screenshot shows the AWS EC2 Management Console with the "Connect" button highlighted in the top navigation bar. A modal window titled "Connect To Your Instance" is open. It instructs users to connect using a remote desktop client or download an RDP shortcut file. It provides the Public DNS (ec2-54-191-179-26.us-west-2.compute.amazonaws.com), User name (Administrator), and a "Get Password" button. Below this, it says if the instance is joined to a directory, directory credentials can be used. It also links to connection documentation. At the bottom of the modal is a "Close" button. The background shows the same EC2 Instances table as the previous screenshot. The status bar at the bottom right shows the date and time as 7/19/2016 3:26 PM.

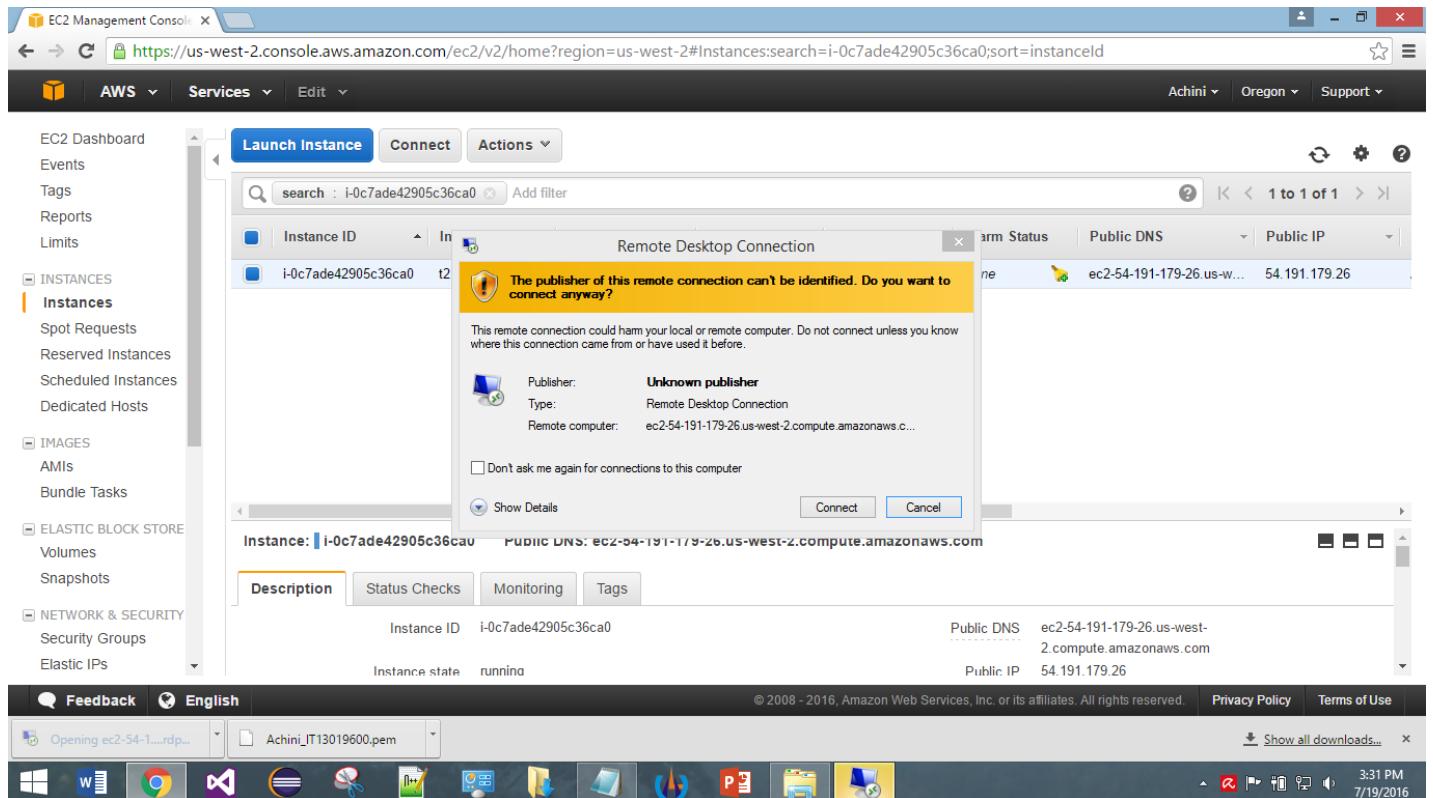
Step 13 - So browse the .pem file which was downloaded at the beginning and click on “Decrypt Password” button.

The screenshot shows the AWS EC2 Management Console. In the center, a modal window titled "Connect To Your Instance > Get Password" is open. It contains the following text:
The following Key Pair was associated with this instance when it was created.
Key Name Achini_IT13019600.pem
In order to retrieve your password you will need to specify the path of this Key Pair on your local machine:
Key Pair Path Choose File Achini_IT13019600.pem
Or you can copy and paste the contents of the Key Pair below:
-----BEGIN RSA PRIVATE KEY-----
MIIEogIBAAKCAQEAliegE+MC3rG3LgxjZt7J/T6Ahd+QnNHcD18VTaxtd0TGPQN1QzsJFide2YaNu
+ORBIL1uabMZN6vy8b1iGH0oUzMoVFXsOE8NvpyWdRfJQgTsmeaYgfci/ZGrXXLBVWWrYNyGw
m
80nWNScI0r5CumYN0uMaOeE9+zUGdKQFs6eQ1OA9VCMJg3x2//ZdX+oNi2c5BKP9xfEbhbathSaR
Below this is a "Decrypt Password" button. At the bottom of the modal are "Back" and "Close" buttons. The main EC2 dashboard shows an instance with Instance ID i-0c7ade42905c36ca0, Public DNS ec2-54-191-179-26.us-west-2.compute.amazonaws.com, and Public IP 54.191.179.26. A download bar at the bottom shows "Achini_IT13019600.pem".

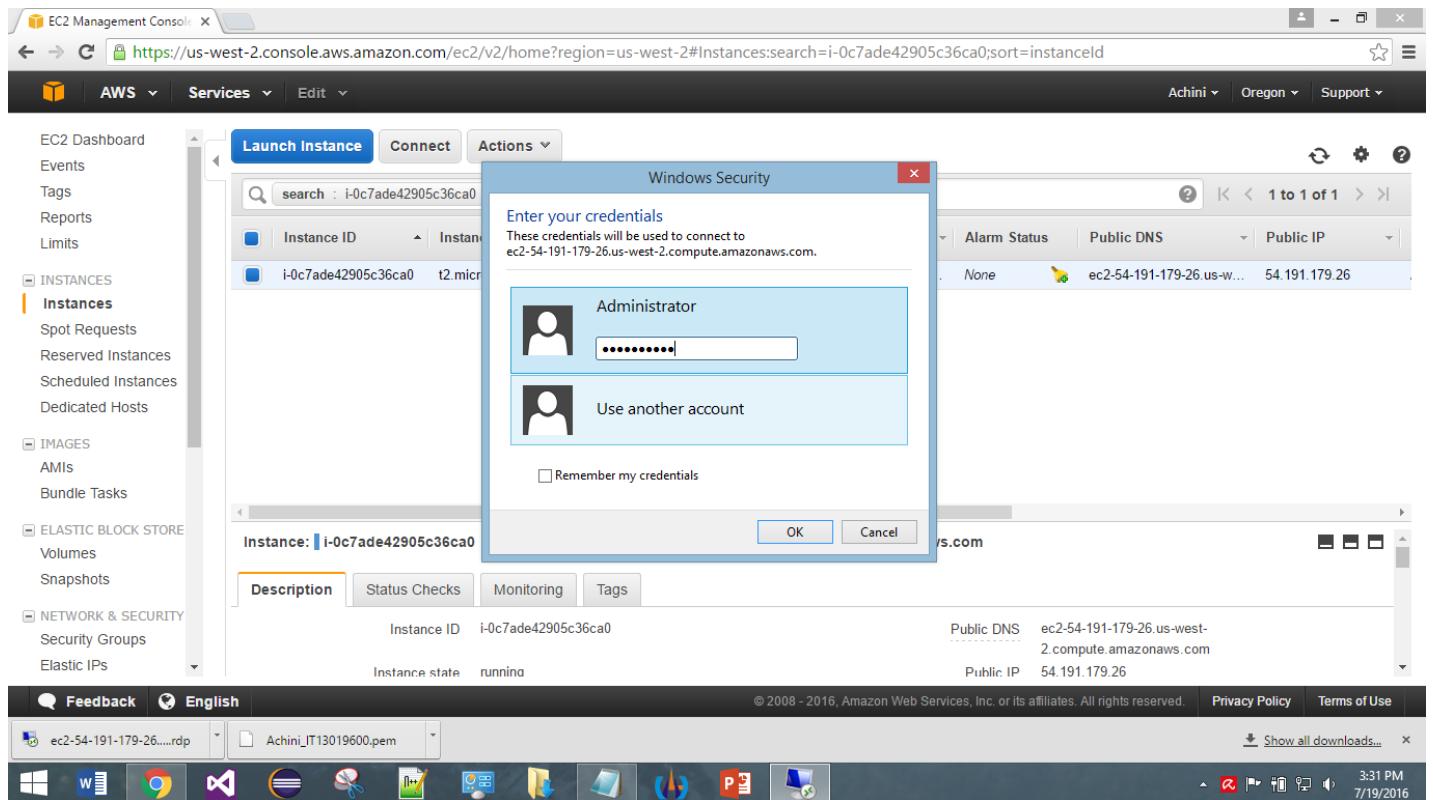
Step 14 – Here copy and paste this Public DNS and Password somewhere future use. Then click on “Download Remote Desktop File” button to download the remote desktop file. Now click on “Close” button.

The screenshot shows the AWS EC2 Management Console. In the center, a modal window titled "Connect To Your Instance" is open. It contains the following text:
You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:
Download Remote Desktop File
When prompted, connect to your instance using the following details:
Public DNS ec2-54-191-179-26.us-west-2.compute.amazonaws.com
User name Administrator
Password 2ScnBUV%4v
If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.
If you need any assistance connecting to your instance, please see our [connection documentation](#).
At the bottom are "Close" and "Download" buttons. The main EC2 dashboard shows an instance with Instance ID i-0c7ade42905c36ca0, Public DNS ec2-54-191-179-26.us-west-2.compute.amazonaws.com, and Public IP 54.191.179.26. A download bar at the bottom shows "Achini_IT13019600.pem".

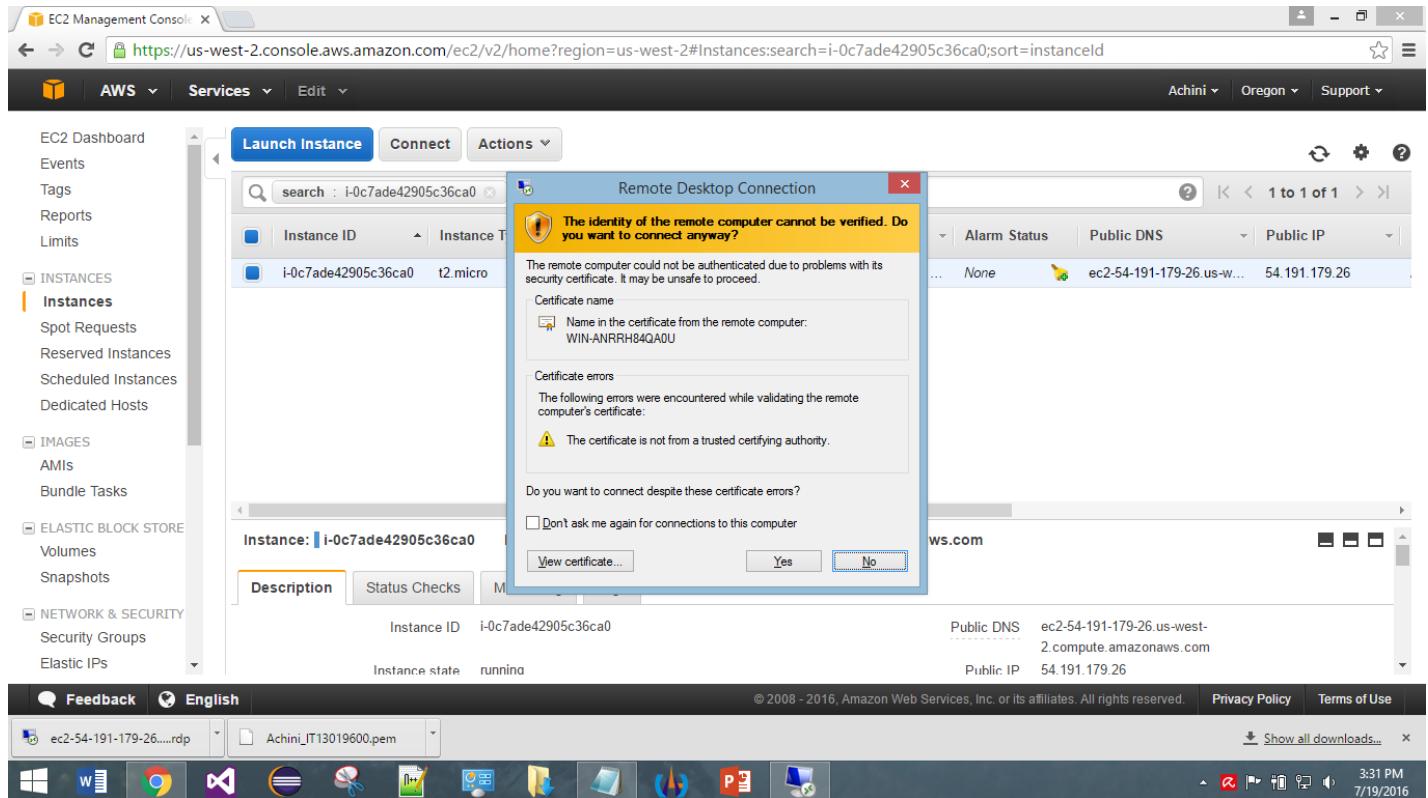
Step 15 – It will download the file. Then Run it. IT will appear the “Remote Desktop Connection” window. Click on “Connect” button.



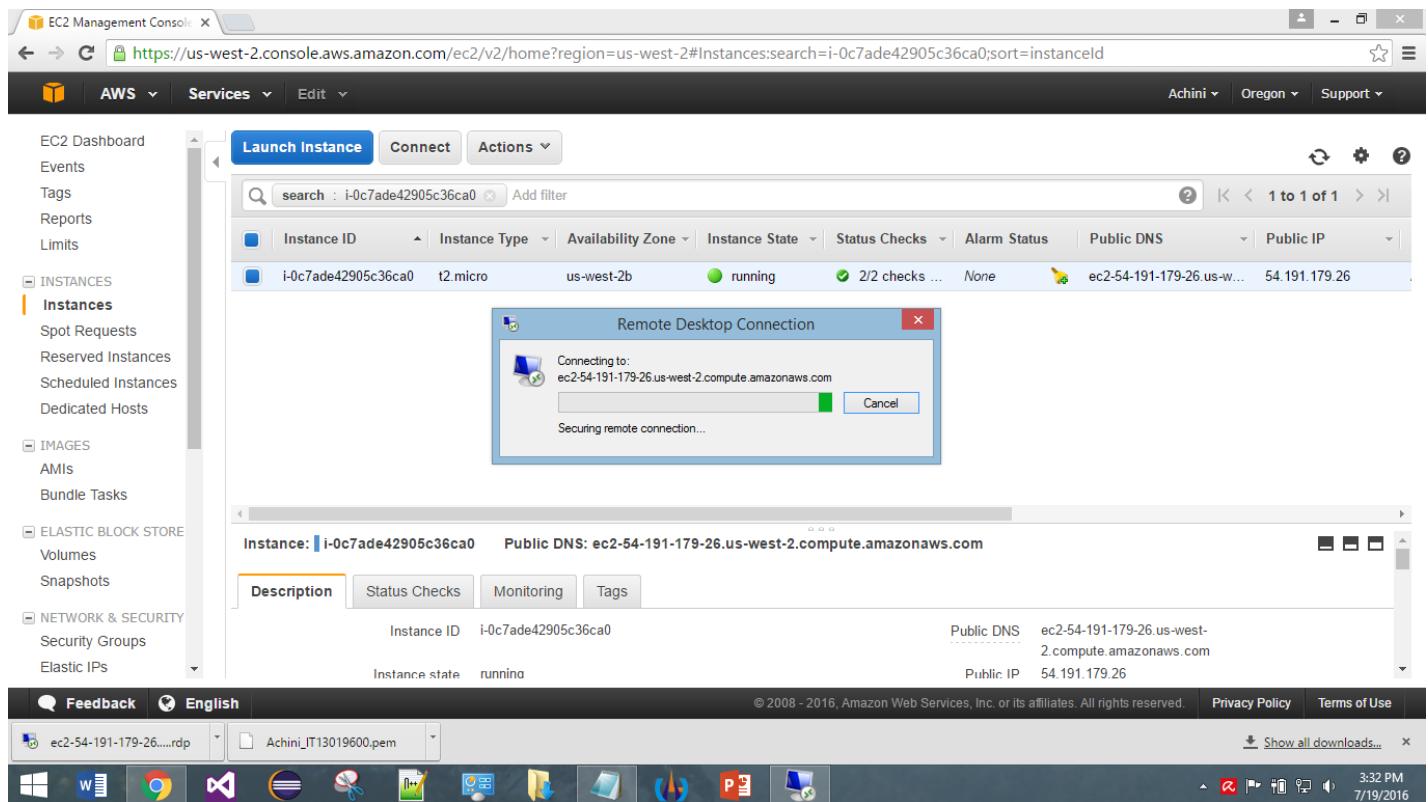
Step 16 – Enter the password which was saved in Step 12 as the Administrator password. Then click on “OK” button.



Step 17 – Click on “Yes” button in this window.



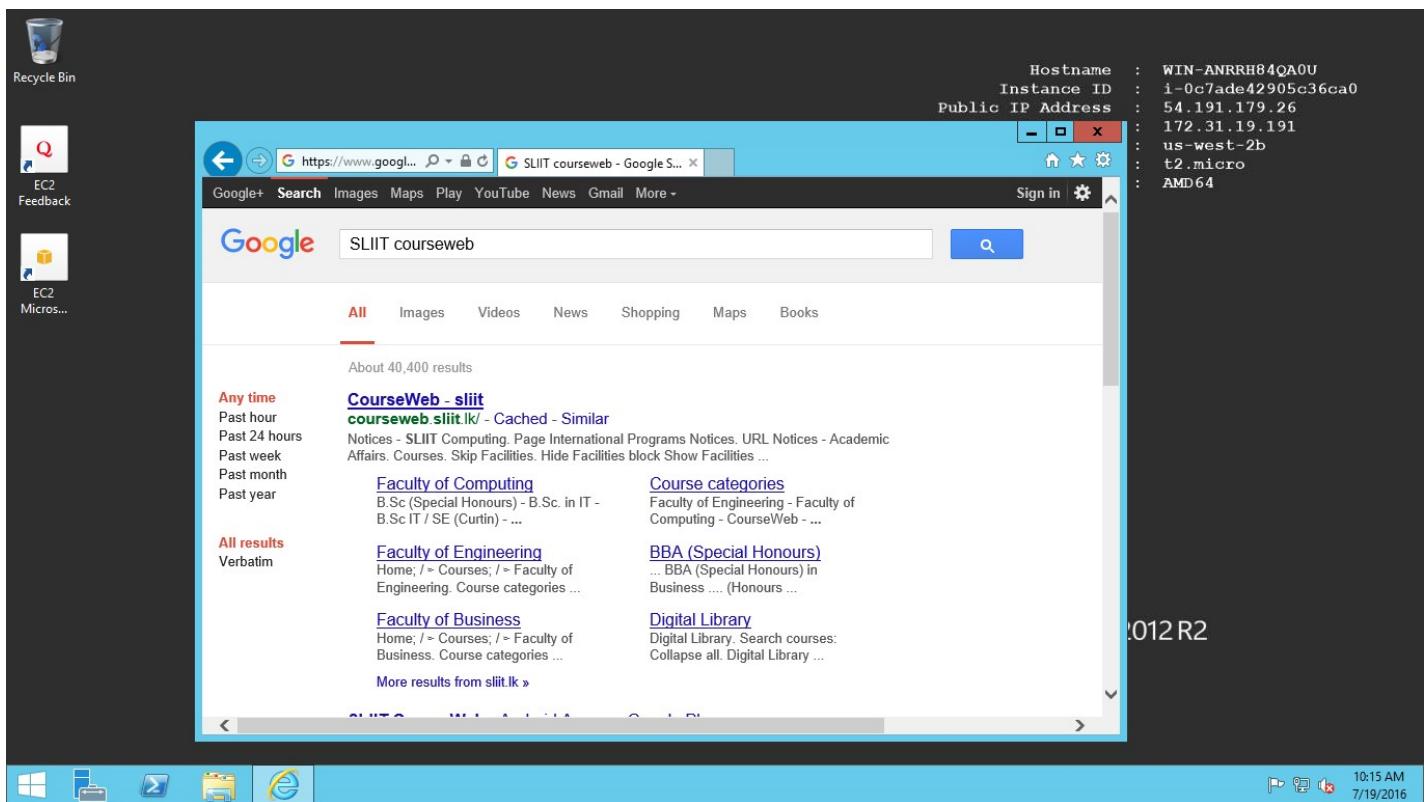
Step 18- It will initialize the remote desktop connection.



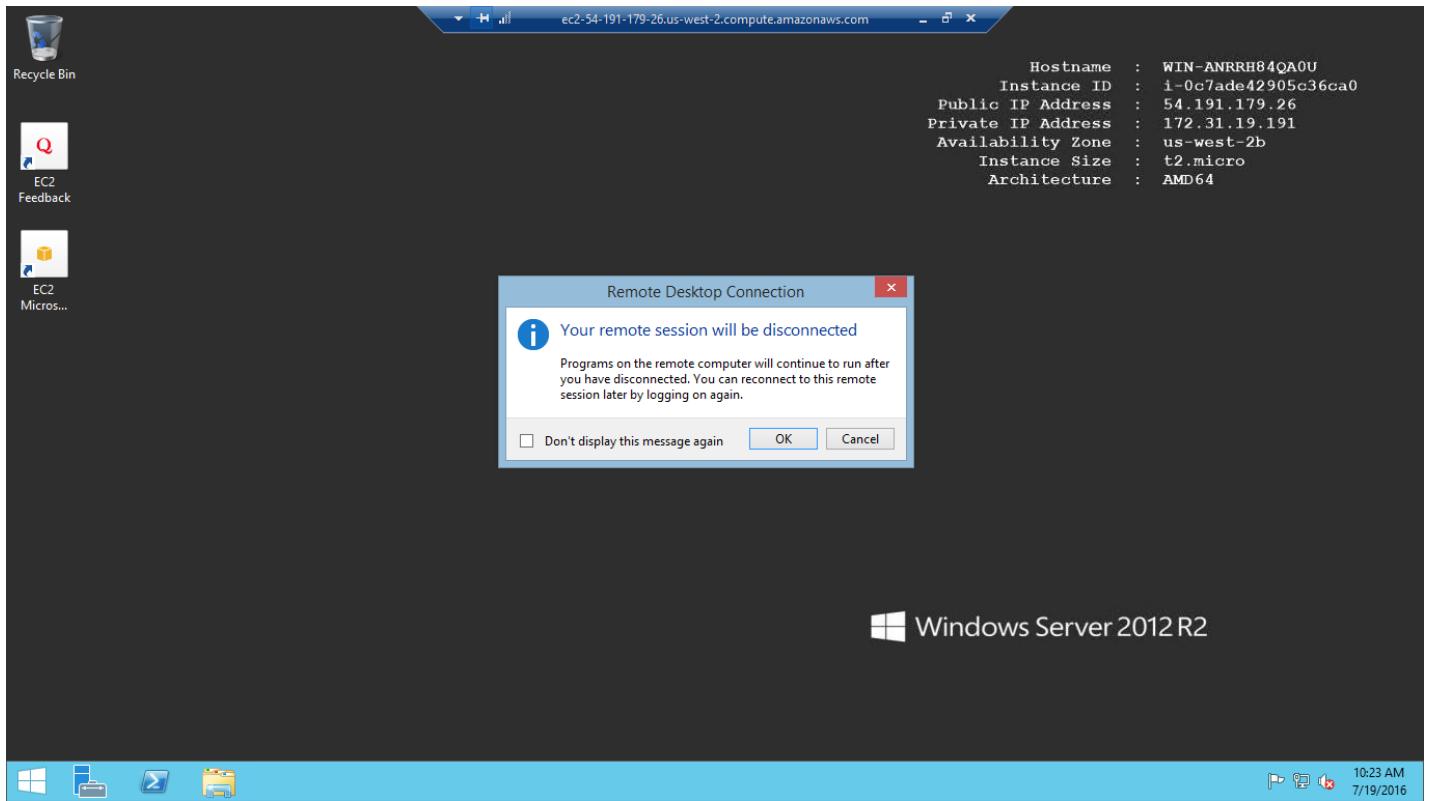
Step 19 – Now can get the Microsoft Windows Server 2012 R2. This virtual server can be used for working purposes.



Step 20 – Do some work.



Step 21 – After finishing the work close it.



Step 22 - Even after the closing, the instance is still running. To terminate it,

Right click on the instance -> Instance State -> Terminate

The screenshot shows the AWS EC2 Management Console interface. On the left, there's a sidebar with options like EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Images, Elastic Block Store, and Network & Security. The 'Instances' section is selected. In the main area, a table lists instances. One instance, 'i-0c7ade42905c36ca0' (t2.micro), is selected and its details are shown in a modal: Instance ID: i-0c7ade42905c36ca0, Public DNS: ec2-54-191-179-26.us-west-2.compute.amazonaws.com, Instance state: running. Below the table, there are tabs for Description, Status Checks, Monitoring, and Tags. At the bottom, there's a toolbar with icons for Feedback, English, Show all downloads..., and system status (3:53 PM, 7/19/2016). A context menu is open over the selected instance, with 'Actions' expanded. The 'Terminate' option is highlighted in orange.

Step 23– Confirmation to terminate. Click on “Yes, Terminate” button.

This screenshot shows the same EC2 Management Console interface as the previous one, but with a modal dialog box in the foreground. The dialog is titled 'Terminate Instances'. It contains a warning message: 'On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.' Below the message, a question is asked: 'Are you sure you want to terminate these instances?' followed by the instance ID 'i-0c7ade42905c36ca0 (ec2-54-191-179-26.us-west-2.compute.amazonaws.com)'. At the bottom right of the dialog, there are 'Cancel' and 'Yes, Terminate' buttons, with 'Yes, Terminate' being highlighted in blue. The background of the console shows the same instance details and toolbar as the previous screenshot.

Step 24– Now the instance is in Shutting-down state. It will become Terminated state shortly.

The screenshot shows the AWS EC2 Management Console interface. The left sidebar is collapsed, and the main area displays a table of instances. A search bar at the top of the table lists the instance ID 'i-0c7ade42905c36ca0'. The table columns include Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS, and Public IP. The first row shows an instance with the following details:

Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP
i-0c7ade42905c36ca0	t2.micro	us-west-2b	shutting-do...	None			

Step 25 – Now the instance is in Terminated state.

The screenshot shows the AWS EC2 Management Console interface. The left sidebar is collapsed, and the main area displays a table of instances. A search bar at the top of the table lists the instance ID 'i-0c7ade42905c36ca0'. The table columns include Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS, and Public IP. The first row shows an instance with the following details:

Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP
i-0c7ade42905c36ca0	t2.micro	us-west-2b	terminated	None			

Below the table, a detailed view of the instance is shown. The 'Description' tab is selected, displaying the following information:

Instance ID	Public DNS
i-0c7ade42905c36ca0	-

Other tabs available are Status Checks, Monitoring, and Tags.

Practical Number: Lab 02

Practical Title: Creating an Amazon Linux AMI

Step 01– Sign in to AWS account by providing a valid E-mail and a password. Now click on “Sign in using our secure server” button.

Step 02– Click EC2 link.

Step 03 –To launch an Amazon EC2 instance, click on “Launch Instance” button.

The screenshot shows the AWS EC2 Management Console interface. The left sidebar navigation includes links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances (with sub-links for Instances, Spot Requests, Reserved Instances, Scheduled Instances, Dedicated Hosts), Images (AMIs, Bundle Tasks), Elastic Block Store (Volumes, Snapshots), and Network & Security (Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces). The main content area displays the 'Resources' section, which states: "You are using the following Amazon EC2 resources in the US West (Oregon) region: 0 Running Instances, 0 Dedicated Hosts, 1 Volumes, 9 Key Pairs, 0 Placement Groups, 0 Elastic IPs, 0 Snapshots, 0 Load Balancers, 11 Security Groups". Below this, there is a callout box for "Amazon Simple Workflow Service". A large blue button labeled "Launch Instance" is prominently displayed. To the right, there are sections for "Account Attributes" (Supported Platforms, VPC, Default VPC), "Additional Information" (Getting Started Guide, Documentation, All EC2 Resources, Forums, Pricing, Contact Us), and "AWS Marketplace" (listing products like Tableau Server). The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

Step 04 – Choose an Amazon Machine Image (AMI). Select Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type or Red Hat Enterprise Linux 7.2. HVM), SSD Volume Type Click on “Select” button.

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace, or you can select one of your own AMIs.

Quick Start							
My AMIs		Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type - ami-7172b611		<input type="button" value="Select"/>		Cancel and Exit	
AWS Marketplace		Amazon Linux <small>Free tier eligible</small>		The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.		64-bit	
Community AMIs		Root device type: ebs Virtualization type: hvm					
<input type="checkbox"/> Free tier only <small>(i)</small>		Red Hat Enterprise Linux 7.2 (HVM), SSD Volume Type - ami-775e4f16		<input type="button" value="Select"/>		64-bit	
<small>Free tier eligible</small>		Red Hat Enterprise Linux version 7.2 (HVM), EBS General Purpose (SSD) Volume Type		Root device type: ebs Virtualization type: hvm			
SUSE Linux <small>Free tier eligible</small>		SUSE Linux Enterprise Server 12 SP1 (HVM), SSD Volume Type - ami-d2627db3		<input type="button" value="Select"/>		64-bit	
		SUSE Linux Enterprise Server 12 Service Pack 1 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.		Root device type: ebs Virtualization type: hvm			

Step 05 – Choose t2 micro (Free tier eligible) instance as instance type. Click on “Review and Launch” button.

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 types <small>(i)</small> Current generation <small>(i)</small> Show/Hide Columns							
Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)							
	Family	Type	vCPUs <small>(i)</small>	Memory (GiB)	Instance Storage (GB) <small>(i)</small>	EBS-Optimized Available <small>(i)</small>	Network Performance <small>(i)</small>
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	m4.large	2	8	EBS only	Yes	Moderate

Cancel **Previous** **Review and Launch** **Next: Configure Instance Details**

Step 06 – Then Review instance launch details. Click “Launch” button to complete the launch process.

The screenshot shows the AWS EC2 Management Console. The URL in the address bar is <https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard>. The top navigation bar includes links for AWS Services, Edit, and regions (Achini, Oregon, Support). Below the navigation is a progress bar with steps 1 through 7, where step 7 is highlighted. The main content area is titled "Step 7: Review Instance Launch". A warning message in an orange box says: "⚠ Improve your instances' security. Your security group, launch-wizard-11, 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](#)". Below this is a section titled "AMI Details" with a sub-section for "Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type - ami-7172b611". It notes that the image is "Free tier eligible" and describes it as an EBS-backed, AWS-supported image with Docker, PHP, MySQL, PostgreSQL, and other packages. The root device type is ebs and the virtualization type is hvm. The "Instance Type" section shows a table for t2.micro: ECUs (Variable), vCPUs (1), Memory (GiB) (1), Instance Storage (GB) (EBS only), EBS-Optimized Available (-), and Network Performance (Low to Moderate). The "Security Groups" section lists "Edit security groups". At the bottom right are "Cancel", "Previous", and "Launch" buttons. The taskbar at the bottom includes icons for Feedback, English, and various Windows applications like File Explorer, Task View, and Edge. The system tray shows the date and time as 7/20/2016 10:30 AM.

Step 07 – Then to complete the launch process “Selecting an existing key pair or create a new key pair” window appears. Select “Create a new key pair” from drop down list and give a name for key pair. Then click on “Download Key Pair” button. Now click on “Launch instances” button.

The screenshot shows the AWS EC2 Management Console. The URL in the address bar is <https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard>. The top navigation bar includes links for AWS Services, Edit, and regions (Achini, Oregon, Support). Below the navigation is a progress bar with steps 1 through 7, where step 7 is highlighted. The main content area is titled "Step 7: Review Instance Launch". A warning message in an orange box says: "⚠ Improve your instances' security. 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](#)". Below this is a section titled "AMI Details" with a sub-section for "Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type - ami-7172b611". It notes that the image is "Free tier eligible" and describes it as an EBS-backed, AWS-supported image with Docker, PHP, MySQL, PostgreSQL, and other packages. The root device type is ebs and the virtualization type is hvm. The "Instance Type" section shows a table for t2.micro: ECUs (Variable), vCPUs (1), Memory (GiB) (1), Instance Storage (GB) (EBS only), EBS-Optimized Available (-), and Network Performance (Low to Moderate). The "Security Groups" section lists "Edit security groups". A modal dialog box titled "Select an existing key pair or create a new key pair" is open. It contains a note about key pairs and a dropdown menu set to "Create a new key pair". A text input field is pre-filled with "Achini_IT13019600_Lab02". A "Download Key Pair" button is visible. A message in the dialog says: "You have to download the private key file (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created." At the bottom of the dialog are "Cancel" and "Launch Instances" buttons. The taskbar at the bottom includes icons for Feedback, English, and various Windows applications like File Explorer, Task View, and Edge. The system tray shows the date and time as 7/20/2016 10:31 AM.

Step 08 – Then the Key pair will be downloaded. The extension is .pem and now instances are launching. Click on the instance code.

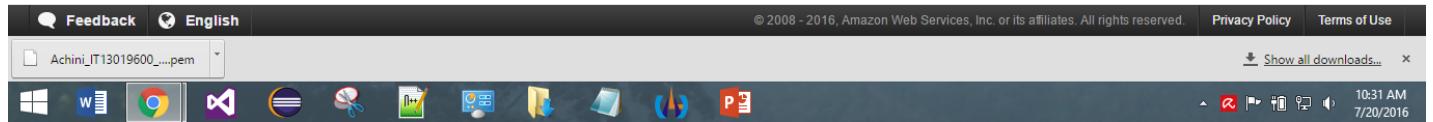
Your instances are now launching
The following instance launches have been initiated: i-00b8b1c5575199af2 [View launch log](#)

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](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)



Step 09 – The instance details are shown in the window. The instance's state will become running state shortly.

EC2 Dashboard

Events

Tags

Reports

Limits

INSTANCES

Instances

Spot Requests

Launch Instance Connect Actions

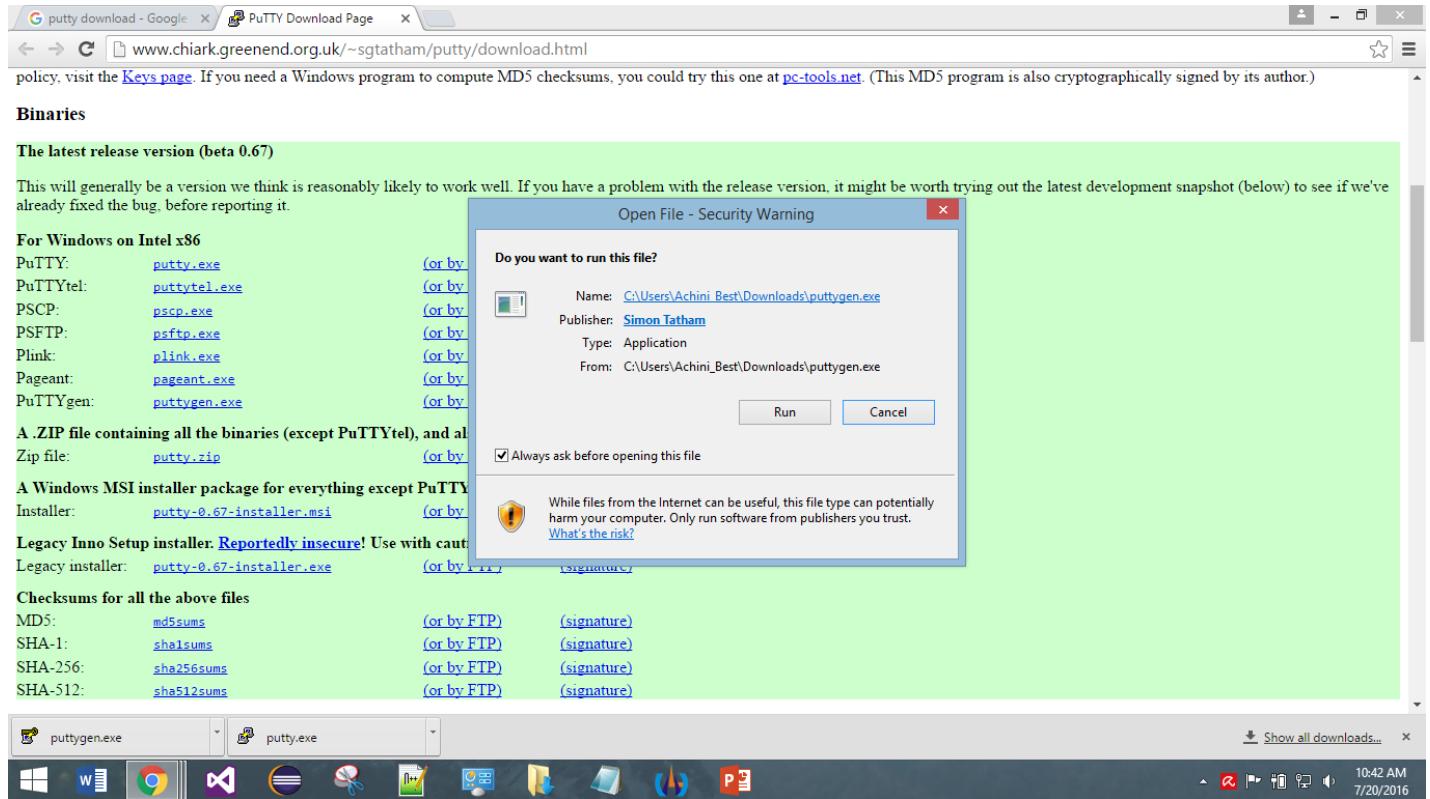
search : i-00b8b1c5575199af2 Add filter

Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP
i-00b8b1c5575199af2	t2.micro	us-west-2b	running	Initializing	None	ec2-54-218-125-246.us...	54.218.125.246

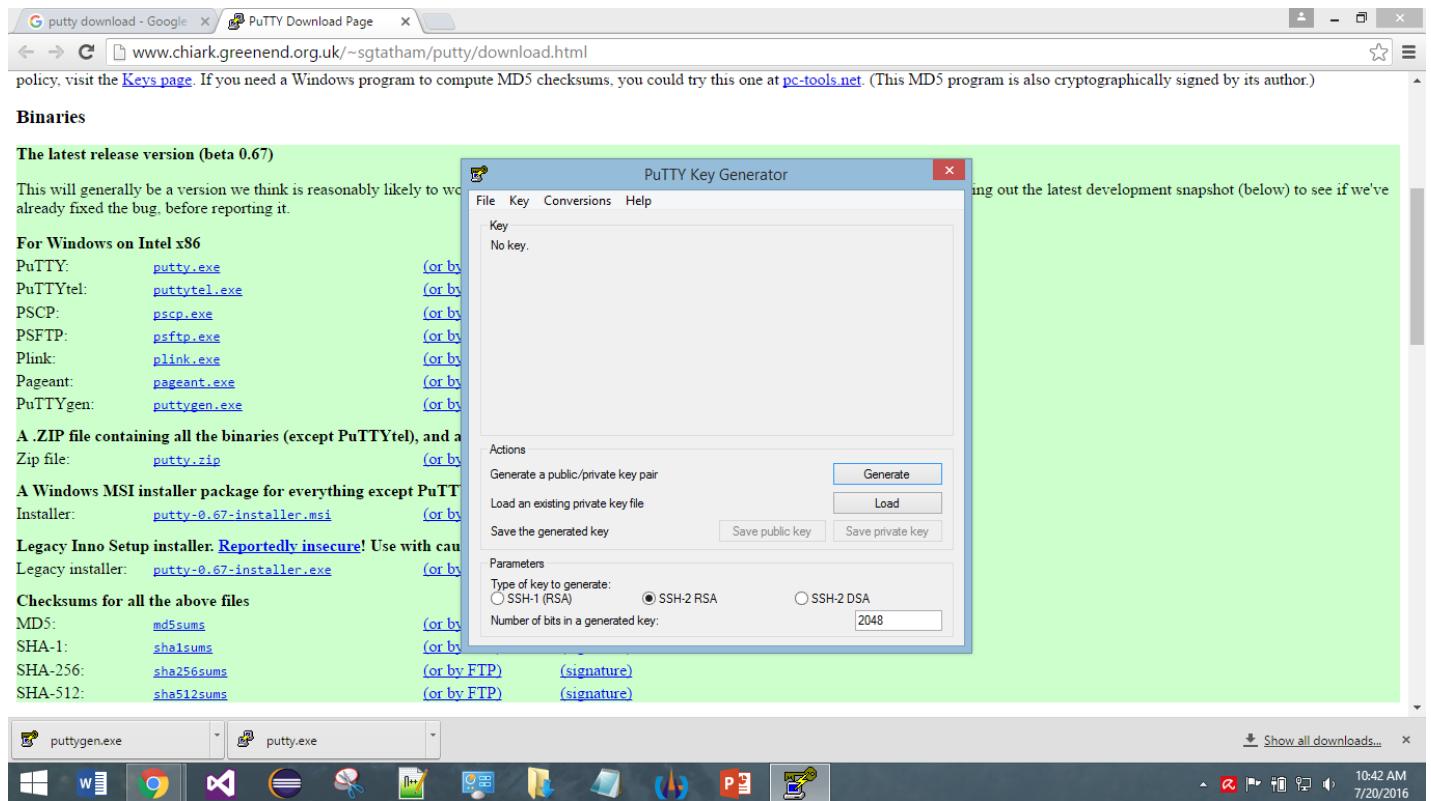
Step 10- In here it is different from Windows virtual server. Now download “Putty” application from link in below screenshot. Click on putty.exe and puttygen.exe links.

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

Step 11– Then double click on puttygen.exe to run it. It looks like this. Now click on “Run” button.

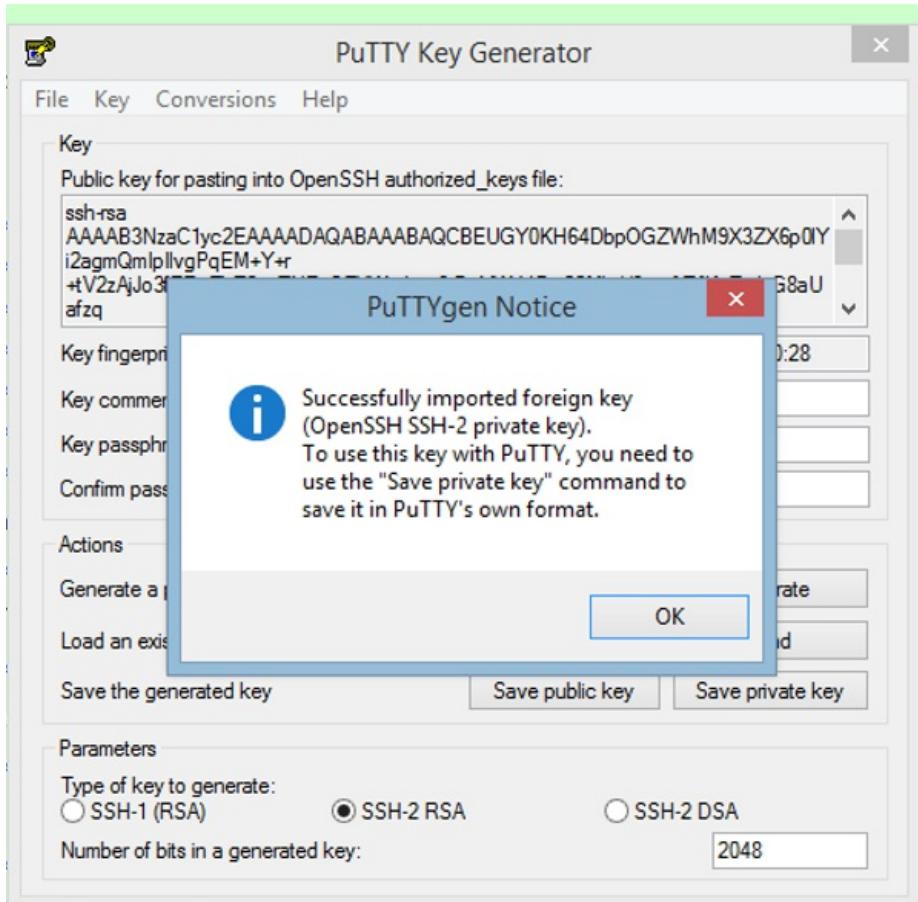


Step 12– Putty Key Generator window appears as shown as below screenshot.

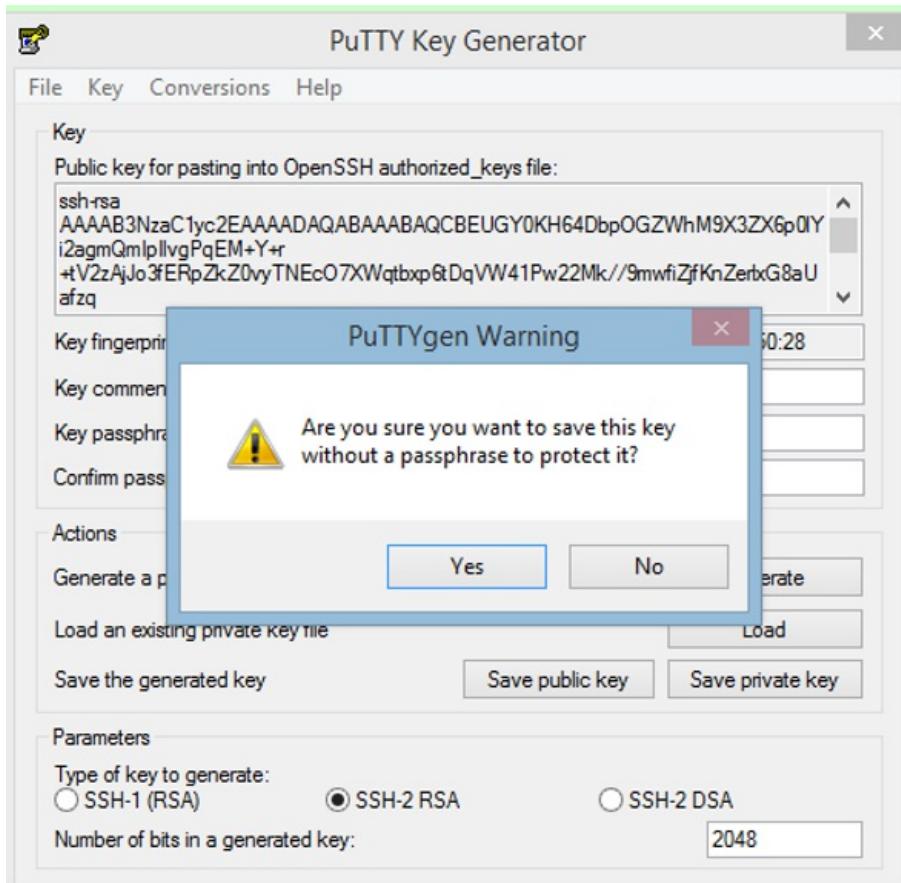


Step 13– Then load the .pem file which was downloaded at the beginning after click on “Load” button.

Step 14— Click on “OK” button and “Save private key” button in Putty Key Generator interface.

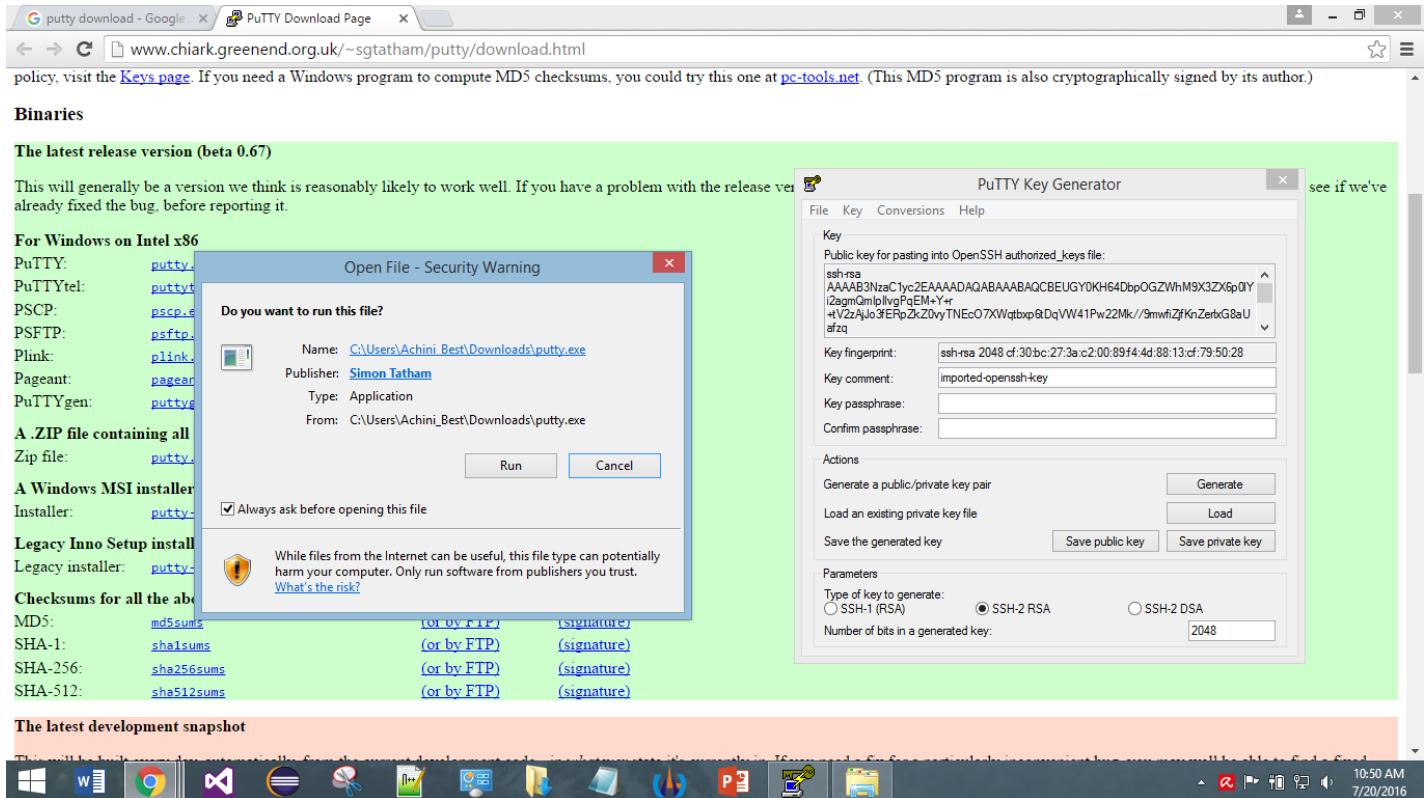


Step 15— Then click on “Yes” button.



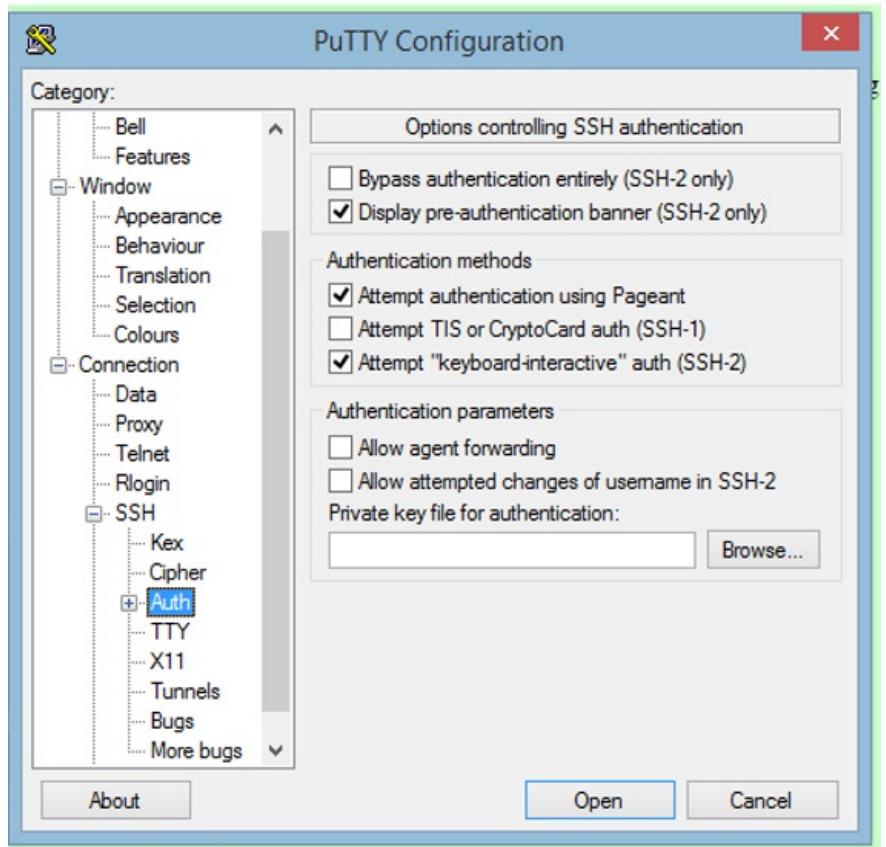
Step 16– Save the key by giving appropriate name.

Step 17- Then double click on putty.exe to run it. It looks like this. Now click on “Run” button.

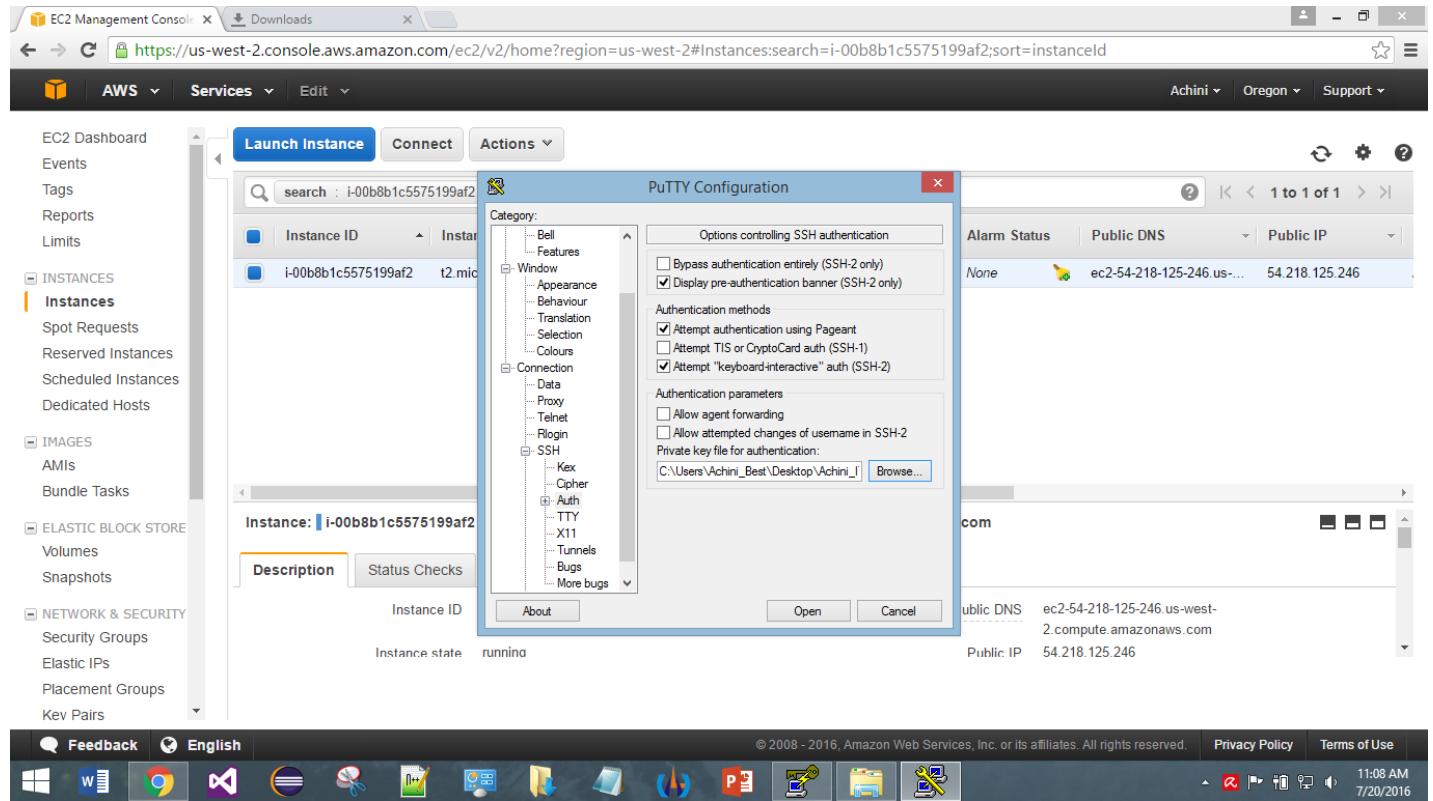


Step 18– In Putty Configuration window select,

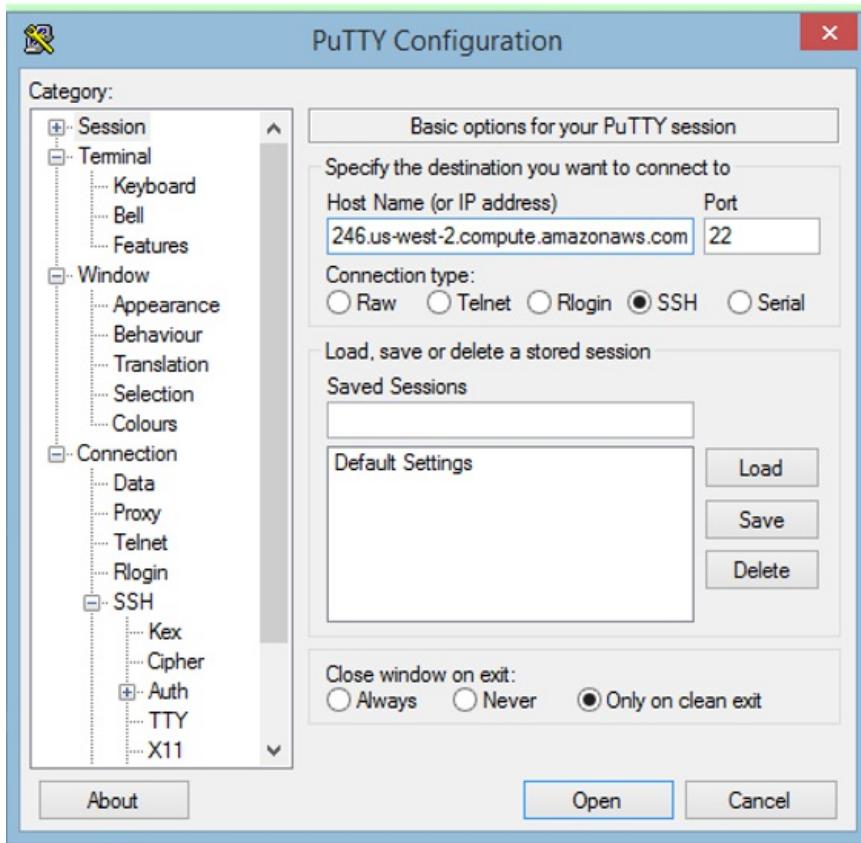
SSH -> Auth from category



Step 19– Browse and select .ppk file saved in Step 17.



Step 20– Now select Session from category. Copy the Public DNS in Amazon web services page right hand side. Paste it in Host Name field in Putty Configuration window.



Step 21–All steps are completed. Now click on “Open” button. Now Linux terminal is launching. Click on “Yes” button in Putty Security Alert window.

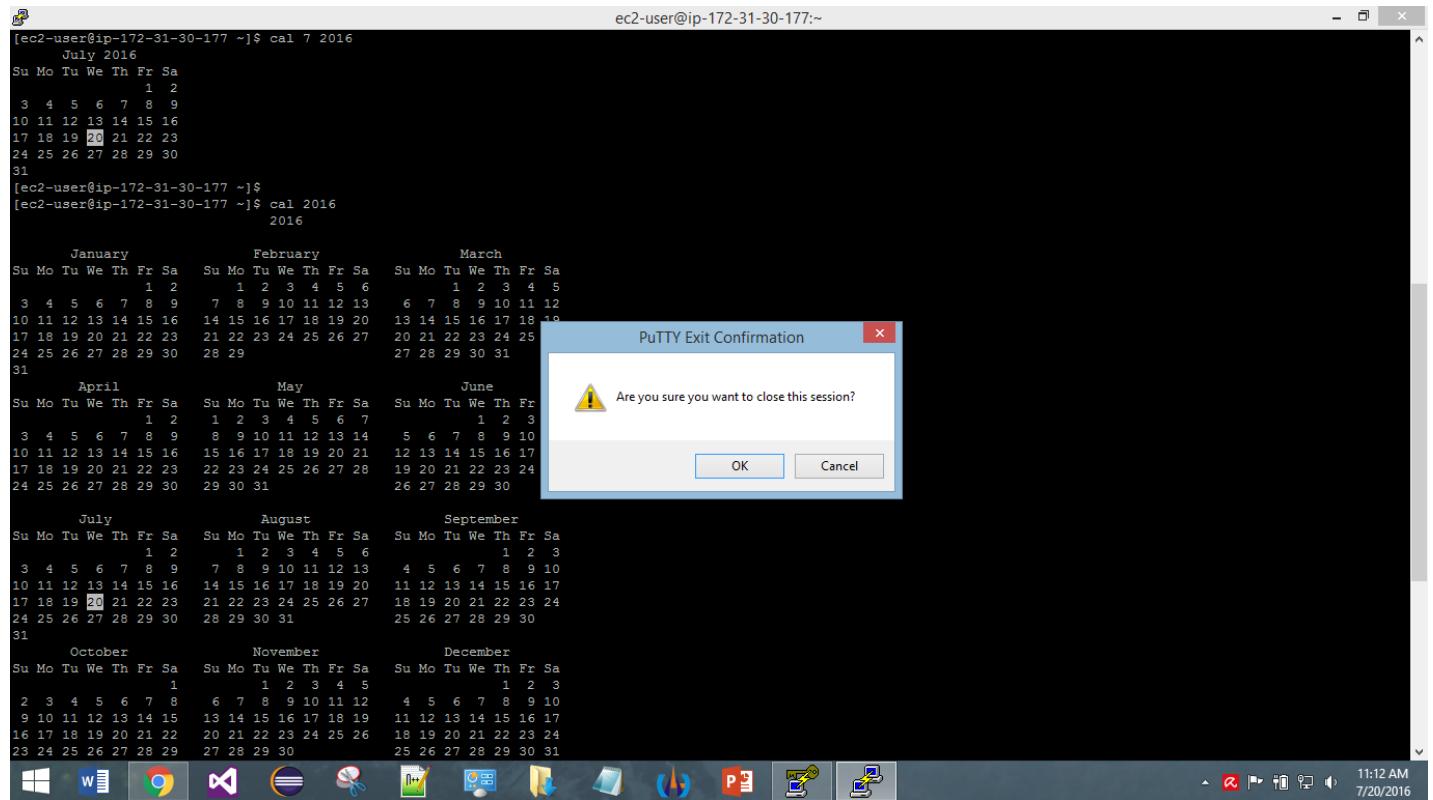
A screenshot of a terminal window showing a successful SSH session. The session starts with "login as: ec2-user" and "Authenticating with public key "imported-openssh-key"". The user is then presented with a graphical welcome screen for "Amazon Linux AMI". After the screen, the user runs "ls" and "ls -al" commands, which show a directory listing with files like ".bash_logout", ".bash_profile", and ".bashrc". The session ends with "[ec2-user@ip-172-31-31-169 ~]\$".

Step 22– Now type commands that are acceptable in Linux environment and get the output. Examples are shown below.

```
(ls -al, date, hostname, uname -a, uptime, w, echo 10+5|bc -l, cal 7 2016, cal 2016)
```

```
ec2-user@ip-172-31-30-177:~$ ls -al
Authenticating with public key "imported-openssh-key"
Last login: Wed Jul 20 05:27:36 2016 from 112.134.87.102
total 28
drwx----- 3 ec2-user ec2-user 4096 Jul 20 05:26 .
drwxr-xr-x 3 root root 4096 Jul 20 05:01 ..
-rw----- 1 ec2-user ec2-user 82 Jul 20 05:36 .bash_history
-rw-r--r-- 1 ec2-user ec2-user 18 Feb 19 20:05 .bash_logout
-rw-r--r-- 1 ec2-user ec2-user 193 Feb 19 20:05 .bash_profile
-rw-r--r-- 1 ec2-user ec2-user 124 Feb 19 20:05 .bashrc
drwx----- 2 ec2-user ec2-user 4096 Jul 20 05:01 .ssh
[ec2-user@ip-172-31-30-177 ~]$ date
Wed Jul 20 05:39:03 UTC 2016
[ec2-user@ip-172-31-30-177 ~]$ hostname
ip-172-31-30-177
[ec2-user@ip-172-31-30-177 ~]$ uname -a
Linux ip-172-31-30-177 4.4.11-23.53.amzn1.x86_64 #1 SMP Wed Jun 1 22:22:50 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux
[ec2-user@ip-172-31-30-177 ~]$ uptime
05:39:43 up 37 min, 1 user, load average: 0.00, 0.03, 0.04
[ec2-user@ip-172-31-30-177 ~]$ w
[ec2-user@ip-172-31-30-177 ~]$ w
05:39:52 up 38 min, 1 user, load average: 0.00, 0.02, 0.04
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
ec2-user pts/0 112.134.87.102 05:38 0.00s 0.00s 0.00s w
[ec2-user@ip-172-31-30-177 ~]$ echo 10+5|bc -l
15
[ec2-user@ip-172-31-30-177 ~]$ cal 7 2016
July 2016
Su Mo Tu We Th Fr Sa
      1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
[ec2-user@ip-172-31-30-177 ~]$
```

Step 23– Now to exit, type exit and enter or else close the window. Click on “OK”.



Step 24- Even after the closing, the instance is still running. To terminate it,

Right click on the instance -> Instance State -> Terminate

The screenshot shows the AWS EC2 Management Console interface. On the left, there's a sidebar with various navigation options like EC2 Dashboard, Instances, Images, and Network & Security. The main area displays a table of instances. One instance, with the ID i-00b8b1c5575199af2, is selected and shown in more detail below the table. A context menu is open over this instance, with 'Actions' expanded. Under 'Actions', 'Instance State' is selected, which then reveals a submenu with options: Start, Stop, Reboot, and Terminate. The 'Terminate' option is highlighted with a dark background. At the bottom of the screen, there's a taskbar with icons for Feedback, English, and several pinned applications.

Step 25- Confirmation to terminate. Click on "Yes, Terminate" button.

The screenshot shows the same EC2 Management Console interface as before, but now a modal dialog box is centered over the instance details. The dialog has a yellow warning header that reads: "Warning: On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost." Below this, a question is posed: "Are you sure you want to terminate these instances? i-00b8b1c5575199af2 (ec2-54-218-125-246.us-west-2.compute.amazonaws.com)". At the bottom right of the dialog are two buttons: "Cancel" and "Yes, Terminate". The "Yes, Terminate" button is highlighted with a blue background. The rest of the interface remains visible in the background.

Step 26– Now the instance is in Shutting-down state. It will become Terminated state shortly.

The screenshot shows the AWS EC2 Management Console interface. The left sidebar is titled 'Instances' and has sections for 'Instances', 'Spot Requests', and 'Described Instances'. The main content area has tabs for 'Launch Instance', 'Connect', and 'Actions'. A search bar at the top of the main area contains the text 'search : i-00b8b1c5575199af2'. Below the search bar is a table with columns: Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS, and Public IP. One row in the table is highlighted, showing the instance ID 'i-00b8b1c5575199af2', instance type 't2.micro', availability zone 'us-west-2b', instance state 'shutting-do...', status checks 'None', and a yellow progress bar icon.

Step 27– Now the instance is in Terminated state.

This screenshot shows the same AWS EC2 Management Console interface as the previous one, but the instance state has changed. The table in the main content area now shows the instance state as 'terminated' (indicated by a red circle icon). The rest of the table data remains the same: Instance ID 'i-00b8b1c5575199af2', Instance Type 't2.micro', Availability Zone 'us-west-2b', Status Checks 'None', and Public DNS '-'.

Practical Number: Lab 03

Practical Title: Creating an Amazon RDS Database

Step 01– Sign in to AWS account by providing a valid E-mail and a password. Now click on “Sign in using our secure server” button.

Step 02– Click RDS link.

The screenshot shows the AWS Management Console home page for the US West (Oregon) region. At the top, there are quick start options like "Build a web app", "Launch a Virtual Machine (EC2 Instance)", "Back up your files", "Build a backend for your mobile app", "Host a static website", and "Analyze big data". Below this is a section for "Shortcuts and Recently Viewed Services" with icons for RDS and EC2. The main navigation bar includes links for AWS services like Compute, Developer Tools, Internet of Things, Game Development, and Mobile Services. A "Service Health" status bar at the bottom indicates "All services are operating normally" with an update time of Jul 28 2016 20:13:00 GMT+0530. The URL in the address bar is https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#.

Step 03– To launch an Amazon RDS DB instance, click on “Launch a DB Instance” button.

The screenshot shows the AWS RDS Dashboard. On the left sidebar, under the 'Instances' section, the 'Launch a DB Instance' button is highlighted. The main content area displays various RDS resources: DB Instances (2/40), Parameter Groups (1), Reserved DB Purchases (0/40), Option Groups (1), Snapshots (54), Subnet Groups (2/50), Recent Events (7), and Event Subscriptions (0/20). Below this, there's a 'Create Instance' section with a sub-section titled 'Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.' It includes a 'Launch a DB Instance' button and a note: 'Note: Your DB Instances will launch in the US West (Oregon) region.' To the right, there are 'Related Services' like Amazon ElastiCache and 'Service Messages' about new RDS Feature Announcements.

Step 04- On the Select Engine page, choose the MySQL icon and click on "Select" button.

The screenshot shows the 'Select Engine' page. On the left, a sidebar lists 'Step 1: Select Engine'. The main content area has a heading 'Select Engine' with the instruction 'To get started, choose a DB Engine below and click Select.' A vertical list on the left shows icons for Amazon Aurora, MySQL (selected), MariaDB, PostgreSQL, Oracle, and Microsoft SQL Server. The MySQL section is detailed with the text: 'MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.' It also lists several bullet points: '• Supports database size up to 6 TB.', '• Instances offer up to 32 vCPUs and 244 GiB Memory.', '• Supports automated backup and point-in-time recovery.', and '• Supports cross-region read replicas.' A 'Select' button is located next to the MySQL entry.

Step 05- Click on the radio button which is relevant to MySQL under Dev/Test in production page. Next click on "Next Step" button.

Step 1: Select Engine

Step 2: Production?

Step 3: Specify DB Details

Step 4: Configure Advanced Settings

Billing is based on [RDS pricing](#).

Cancel Previous **Next Step**

Step 06- On the Specify DB Details page, select relevant DB instance information as follows.

Step 1: Select Engine

Step 2: Production?

Step 3: Specify DB Details

Step 4: Configure Advanced Settings

Your current selection is eligible for the free tier.
[Learn More](#).

Estimate your monthly costs for the DB Instance using the [RDS Instance Cost Calculator](#).

Specify DB Details

Free Tier

The Amazon RDS Free Tier provides a single db.t2.micro instance as well as up to 20 GB of storage, allowing new AWS customers to gain hands-on experience with Amazon RDS. Learn more about the RDS Free Tier and the instance restrictions [here](#).

Only show options that are eligible for RDS Free Tier

Instance Specifications

DB Engine: mysql
License Model: general-public-license
DB Engine Version: 5.6.19a

Review the [Known Issues/Limitations](#) to learn about potential compatibility issues with specific database versions.

DB Instance Class: db.t2.micro — 1 vCPU, 1 GiB RAM
Multi-AZ Deployment: No
Storage Type: General Purpose (SSD)
Allocated Storage*: 15 GB

(Minimum: 5 GB, Maximum: 6144 GB) Higher allocated storage may improve IOPS performance.

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RDS - AWS Console Feedback English

<https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dashboard;s3-import=false>

Achini | Oregon | Support

DB Instance Class: db.t2.micro — 1 vCPU, 1 GiB RAM
 Multi-AZ Deployment: No
 Storage Type: General Purpose (SSD)
 Allocated Storage*: 15 GB

Warning: Provisioning less than 100 GB of General Purpose (SSD) storage for high throughput workloads could result in higher latencies upon exhaustion of the initial General Purpose (SSD) IO credit balance. [Click here](#) for more details.

Settings

DB Instance Identifier*: dbAchini ⚠ Must contain only letters, digits, or hyphens

Master Username*: newdb_1

Master Password*:
Retype the value you specified for Master Password.

Confirm Password*:

* Required Cancel Previous Next Step



Step 07- On the Configure Advanced Settings page, provide relevant information which are needed to launch the MySQL DB instance.

RDS - AWS Console Feedback English

<https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dashboard;s3-import=false>

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Step 1: Select Engine
 Step 2: Production?
 Step 3: Specify DB Details
Step 4: Configure Advanced Settings

Configure Advanced Settings

Network & Security

VPC*: Default VPC (vpc-99a9dbfd)
 Subnet Group: default
 Publicly Accessible: Yes
 Availability Zone: No Preference
 VPC Security Group(s): Create new Security Group
 default (VPC)
 launch-wizard-1 (VPC)
 launch-wizard-10 (VPC)

Database Options

Database Name: db_IT13019600
 Note: If no database name is specified then no initial MySQL database will be created on the DB Instance.

Database Port: 3306
 DB Parameter Group: default.mysql5.6
 Option Group: default:mysql-5.6

Specify a string of up to 64 alpha-numeric characters that define the name given to a database that Amazon RDS creates when it creates the DB instance, as in "mydb". If you do not specify a database name, Amazon RDS does not create a database when it creates the DB instance.



Step 08- After providing additional details click on "Launch DB Instance" button.

The screenshot shows the AWS RDS console with the URL <https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dashboard;s3-import=false>. The page is titled 'Launch DB Instance' and contains several configuration sections:

- Database Port:** 3306
- DB Parameter Group:** default.mysql5.6
- Option Group:** default:mysql-5.6
- Copy Tags To Snapshots:**
- Enable Encryption:** No
- Backup:** A note states that automated backups are supported for InnoDB storage engine only. It includes fields for **Backup Retention Period** (7 days) and **Backup Window** (No Preference).
- Monitoring:** A note says 'Please note that enhanced monitoring is currently available for MySQL and Oracle DB instances only.' It includes a field for **Enable Enhanced Monitoring** (No).
- Maintenance:** Includes fields for **Auto Minor Version Upgrade** (Yes) and **Maintenance Window** (No Preference).

At the bottom, there are buttons for *** Required**, **Cancel**, **Previous**, and a large blue **Launch DB Instance** button.

Step 09- To view successfully created DB instance, click on "View Your DB Instance" button.

The screenshot shows the AWS RDS console with the URL <https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dashboard;s3-import=false>. On the left, a sidebar lists steps: Step 1: Select Engine, Step 2: Production?, Step 3: Specify DB Details, Step 4: Configure Advanced Settings. The main area displays a green box with a checkmark and the text **Your DB Instance is being created.** Below it, a note says 'Note: Your instance may take a few minutes to launch.'

Below this, under 'Connecting to your DB Instance', it says 'You will be unable to connect to your database instance unless you have previously authorized access on your chosen security group.' A link 'Go to the Security Groups Page' is provided.

A section titled 'Related AWS Services' features 'Amazon ElastiCache' with a note 'Add a managed Memcached or Redis-compatible in-memory cache to speed up your database access.' A link 'Click here to learn more and launch your Cache Cluster' is shown.

At the bottom right is a blue button labeled **View Your DB Instances**.



Step 10- The new DB instance has to pass "creating" and "backing-up" states until the DB instance is created. Endpoint appears from now onward.

The screenshot shows the AWS RDS Dashboard. On the left sidebar, under the 'Instances' section, 'dbachini' is listed. The main content area displays a table with one row. The columns include Engine (MySQL), DB Instance (dbachini), Status (creating), Current Activity (None), Maintenance (None), Class (db.t2.micro), VPC (vpc-99a9dbfd), Multi-AZ (No), and Replication Role (None). Below the table, it says 'Endpoint: Not available yet'. The top navigation bar shows the URL as https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances: and the top right shows 'Achini' and 'Oregon'.

This screenshot is from the same session as the previous one, showing the AWS RDS Dashboard. The MySQL instance 'dbachini' is now in the 'backing-up' state, indicated by the status bar at the bottom of the table. The rest of the table and interface remain the same, including the 'Endpoint' information and the monitoring section below. The URL and user information in the top bar are identical to the first screenshot.

Step 11- When it becomes ready to use (it takes several minutes to change the state) the state is changed to "available" and now connecting to a database on the DB instance is possible.

RDS Dashboard

Instances Clusters Reserved Purchases Snapshots Security Groups Parameter Groups Option Groups Subnet Groups Events Event Subscriptions Notifications

Launch DB Instance Show Monitoring Instance Actions

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

Endpoint: dbachini.cegrkuvfso42.us-west-2.rds.amazonaws.com:3306 (authorized)

TIME (utc+5:30)	EVENT
Jul 28 8:28 PM	Backing up DB instance
Jul 28 8:26 PM	DB instance created
Jul 28 8:26 PM	DB instance restarted

CURRENT VALUE	THRESHOLD	LAST HOUR	CURRENT VALUE	LAST HOUR
CPU 1.18%			Read IOPS 0.741/sec	
Memory 556 MB			Write IOPS 0.48/sec	
Storage 14,500 MB			Swap Usage 0 MB	

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Step 12- Once the Amazon RDS is available, want to use any standard SQL client application in order to connect to a database on a MySQL DB instance.

For example MySQL Workbench or XAMPP control panel can be used.

Step 13- In here XAMPP control panel is used. Open up the XAMPP control panel, click on

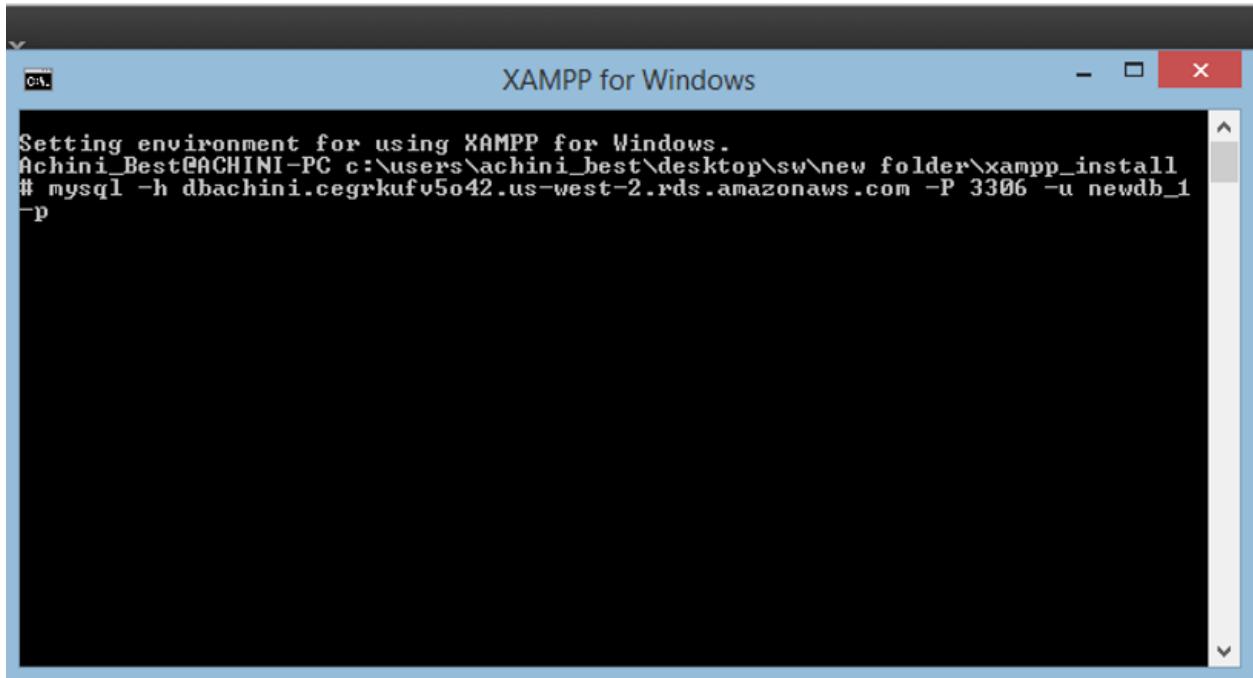
MySQL -> Start -> Shell

The screenshot shows a dual-monitor setup. The left monitor displays the AWS RDS - AWS Console interface at <https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances>. It features a sidebar with options like Instances, Clusters, Reserved Purchases, Snapshots, Security Groups, Parameter Groups, Option Groups, Subnet Groups, Events, Event Subscriptions, and Notifications. The main area shows an RDS Dashboard with a Launch DB Instance button and a list of MySQL engines. An 'Alarms and Reports' section is also visible. The right monitor displays the XAMPP Control Panel v3.2.1 window, which lists services: Apache, MySQL, FileZilla, Mercury, and Tomcat. The MySQL service has a red warning icon. The Actions column includes Start, Admin, Config, and Logs buttons. A log window below shows errors related to MySQL port conflicts. The XAMPP window has a toolbar with Config, Netstat, Shell, Explorer, Services, Help, and Quit buttons. The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

Step 14- Type the following command at the command prompt/shell on client computer to connect to a database on a MySQL DB instance.

Substitute Endpoint mentioned in step 10 and step 11 for "endpoint" and Master Username which provided in step 06 for "masterusername".

```
PROMPT> mysql -h "endpoint" -P 3306 -u "masterusername" -p
```



```
Setting environment for using XAMPP for Windows.  
Achini_Best@ACHINI-PC c:\users\achini_best\desktop\sw\new_folder\xampp_install  
# mysql -h dbachini.cegrkufv5o42.us-west-2.rds.amazonaws.com -P 3306 -u newdb_1  
-p
```

Step 15- After pressing Enter key it'll appear a space to type the password, type the Master Password used in step 06.

It'll display the following output.

```
Welcome to the MySQL monitor. Commands end with ; or \g.  
Your MySQL connection id is 21  
Server version: 5.6.19-log MySQL Community Server (GPL)  
  
Copyright (c) 2000, 2013, Oracle and/or its affiliates. All rights reserved.  
  
Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql>
```

```
mysql -h dbachini.cegrkufv5o42.us-west-2.rds.amazonaws.com -P 3306 -u new... -
```

```
Setting environment for using XAMPP for Windows.
Achini_Best@ACHINI-PC c:\users\achini_best\desktop\sw\new folder\xampp_install
# mysql -h dbachini.cegrkufv5o42.us-west-2.rds.amazonaws.com -P 3306 -u newdb_1
-p
Enter password: *****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 21
Server version: 5.6.19-log MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

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

mysql>
```

Step 16- Now create a database by typing below command at shell as shown below. Substitute any database name for "databasename".

```
mysql> create database "databasename";
```

Step 17- Then create a table by typing following command,

```
mysql> create table "tablename" ("columnname" "datatype"(length));
```

Substitute relevant names for "tablename", "columnname", "datatype" and provide suitable length.

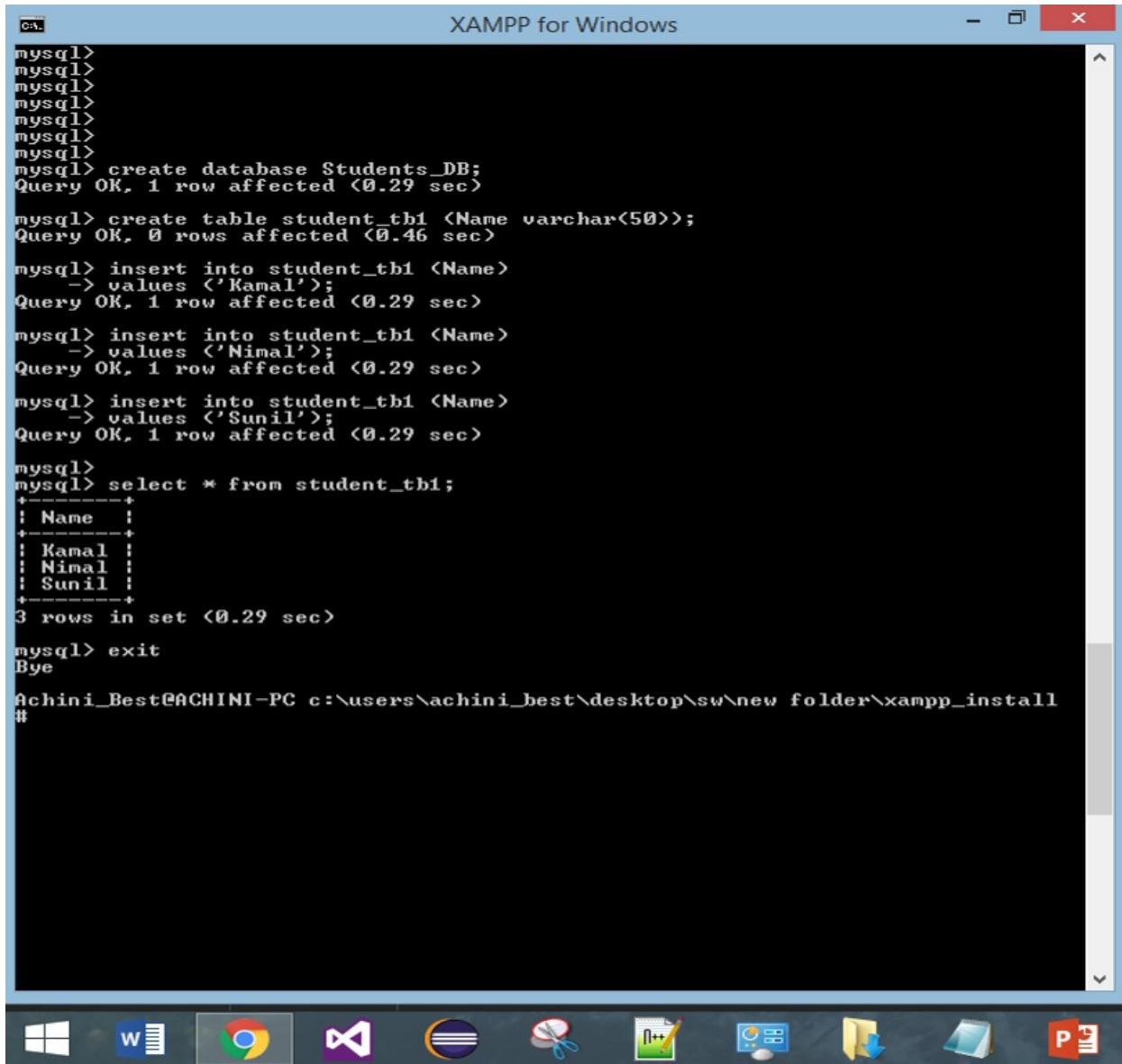
Step 18- After that insert several values to the created table. Command is shown below.

```
mysql> insert into "tablename" ("columnname")
-> values (value);
```

Step 19- Now it is possible to view the table with inserted values. Type below command at shell.

```
mysql> select * from "tablename";
```

It'll display the same as following output according to your input details.



The screenshot shows a terminal window titled "XAMPP for Windows" running MySQL commands. The session starts with several blank MySQL prompts. Then, it creates a database named "Students_DB" and a table named "student_tb1" with a single column "Name". Three rows are inserted into the table: "Kamal", "Nimal", and "Sunil". Finally, a SELECT query is run to display all rows from the table, which are returned in a tabular format:

Name
Kamal
Nimal
Sunil

After the query results, the user exits the MySQL shell. The command line prompt shows the path "c:\users\achini_best\desktop\sw\new folder\xampp_install #".

```
mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql> create database Students_DB;
Query OK, 1 row affected (0.29 sec)

mysql> create table student_tb1 (Name varchar(50));
Query OK, 0 rows affected (0.46 sec)

mysql> insert into student_tb1 (Name)
-> values ('Kamal');
Query OK, 1 row affected (0.29 sec)

mysql> insert into student_tb1 (Name)
-> values ('Nimal');
Query OK, 1 row affected (0.29 sec)

mysql> insert into student_tb1 (Name)
-> values ('Sunil');
Query OK, 1 row affected (0.29 sec)

mysql>
mysql> select * from student_tb1;
+-----+
| Name |
+-----+
| Kamal |
| Nimal |
| Sunil |
+-----+
3 rows in set (0.29 sec)

mysql> exit
Bye
Achini_Best@ACHINI-PC c:\users\achini_best\desktop\sw\new folder\xampp_install #
#
```

Step 20- Exit from the shell by typing command as,

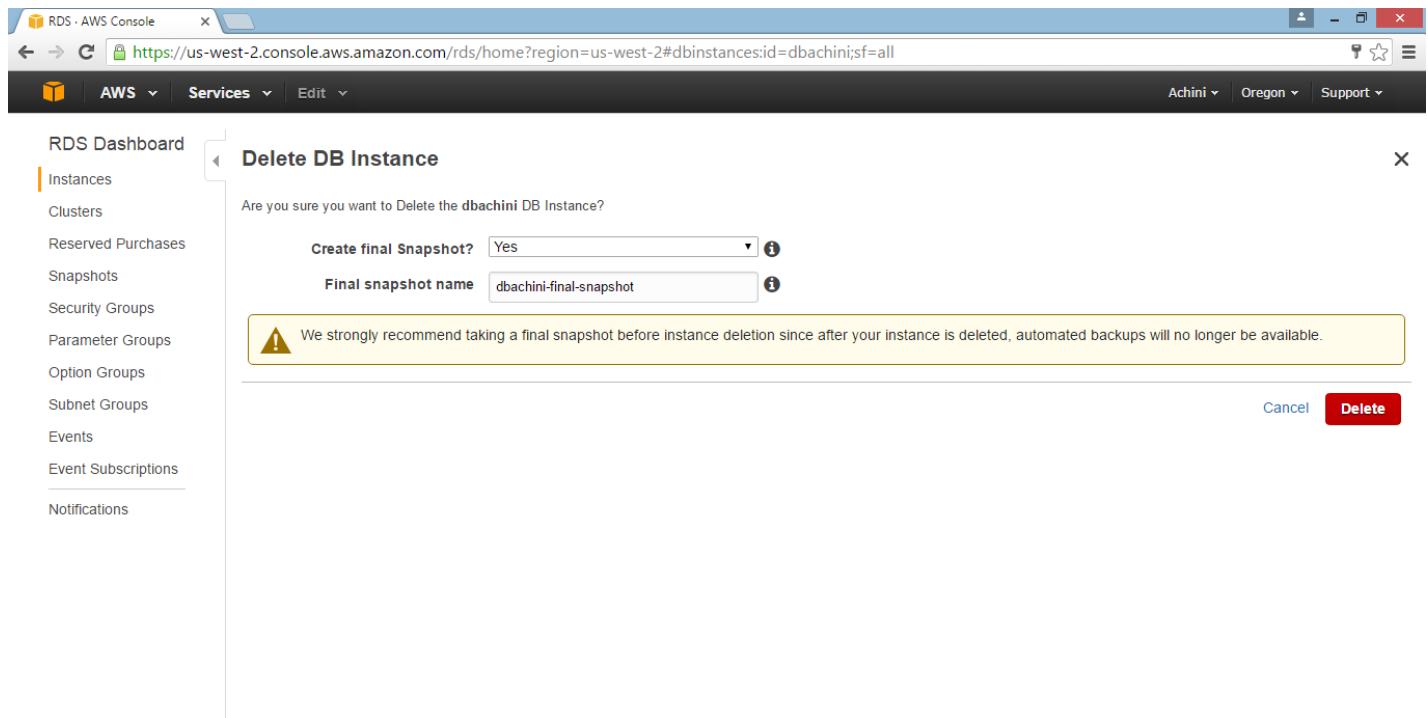
```
mysql> exit
```

Step 21- In order to delete the instance,

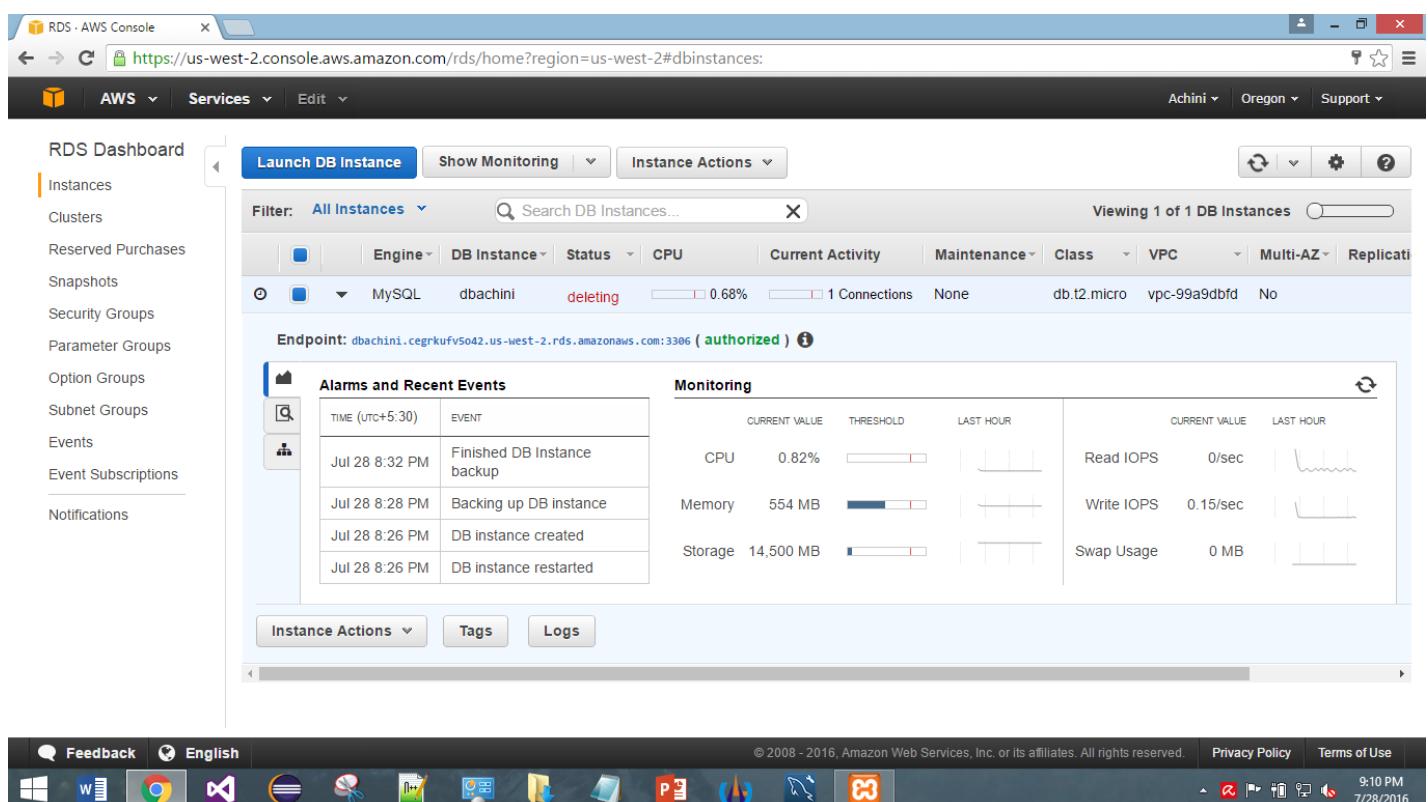
Right click on the instance -> Delete

The screenshot shows the AWS RDS Dashboard. On the left, there's a sidebar with links like Instances, Clusters, Reserved Purchases, Snapshots, Security Groups, Parameter Groups, Option Groups, Subnet Groups, Events, Event Subscriptions, and Notifications. The main area displays a table of DB instances. One instance, 'dbachini', is selected and has a context menu open over it. The menu contains several options: 'See Details', 'Create Read Replica', 'Promote Read Replica', 'Take Snapshot', 'Restore to Point in Time', 'Migrate Latest Snapshot', 'Modify', 'Reboot', and 'Delete'. The 'Delete' option is highlighted with a yellow background. The top of the page shows the AWS logo, the RDS icon, and the URL 'https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances:id=dbachini;sf=all'. The top right corner shows the user 'Achini', the region 'Oregon', and support links.

Step 22- It'll redirect to Delete DB Instance page. Press "Delete" button.



Step 23- The DB instance will be deleted shortly.



RDS - AWS Console https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances:sf=all Achini | Oregon | Support

AWS Services Edit

RDS Dashboard

Instances Clusters Reserved Purchases Snapshots Security Groups Parameter Groups Option Groups Subnet Groups Events Event Subscriptions Notifications

Launch DB Instance Show Monitoring Instance Actions

Filter: All Instances Search DB Instances... X 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.

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Step 24- Inside the shell it is needed to provide SQL syntax which are relevant to our MySQL server version. Otherwise it'll give syntax errors as follows.

```
mysql> create table tb_new <Name varchar<15>>;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near '<Name
varchar<15>>' at line 1
mysql>
```