

Sri Lanka Institute of Information Technology



4nd Year 2st Semester 2016

Enterprise Standards and Best Practices for IT Infrastructure

**Amazon EC2 Windows Instances
Assignment Report 01**

Reg No: IT 13003210

Name: Madhumali D.P.P.K

Screenshot of the AWS EC2 Management Console (https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#) showing the main dashboard.

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
0 Volumes	0 Load Balancers
0 Key Pairs	1 Security Groups
0 Placement Groups	

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): No events
This service is operating normally

Scheduled Events

US West (Oregon): No events

Account Attributes

Supported Platforms: VPC
Default VPC: vpc-04106b60
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)

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Screenshot of the AWS EC2 Management Console (https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard) showing the Step 1: Choose an Amazon Machine Image (AMI) page.

Step 1: Choose an Amazon Machine Image (AMI)

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Free tier eligible (http://www.ubuntu.com/cloud/services). Root device type: ebs Virtualization type: hvm

Microsoft Windows Server 2012 R2 Base - ami-8d0acfcd
Microsoft Windows 2012 R2 Standard edition with 64-bit architecture. [English]
Root device type: ebs Virtualization type: hvm

Select 64-bit

Amazon RDS 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. Learn more.
Launch a database using RDS

Microsoft Windows Server 2012 R2 with SQL Server Express - ami-4817d228
Microsoft Windows Server 2012 R2 Standard edition, 64-bit architecture, Microsoft SQL Server 2016 Express edition. [English]
Root device type: ebs Virtualization type: hvm

Select 64-bit

Cancel and Exit 04-011

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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.

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)							
	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 <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

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

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.

⚠ Improve your instances' security. Your security group, launch-wizard-1, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

	Microsoft Windows Server 2012 R2 Base - ami-8d0acfed
<small>Free tier eligible</small>	Microsoft Windows 2012 R2 Standard edition with 64-bit architecture. [English]
Root Device Type: ebs Virtualization type: hvm	

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

[Cancel](#) [Previous](#) [Launch](#)

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

Microsoft Windows Server 2012 R2 Base - ami-8d0acfed
Free tier eligible
 Microsoft Windows 2012 R2 Standard edition with 64-bit architecture. [English]
 Root Device Type: ebs Virtualization type: hvm

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Network Performance
 Low to Moderate

Actions: Edit AMI, Edit instance type, Cancel, Previous, Launch

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Step 7: Review Instance Launch

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](#).

Type: Create a new key pair
 Key pair name: newKeypair
 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.

Actions: Cancel, Launch Instances, Previous, Launch

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The screenshot shows a web browser window with the URL <https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard>. The browser's address bar and tabs are visible at the top. Below the address bar is a navigation bar with links for 'AWS', 'Services', and 'Edit'. On the right side of the page, there are user profile details: 'Prabuddhi', 'Oregon', and 'Support'. The main content area is titled 'Launch Status' and contains instructions about instance launching and helpful resources like the User Guide and Discussion Forum.

Launch Status

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

- [Amazon EC2: User Guide](#)
- [How to connect to your Windows instance](#)
- [Amazon EC2: Microsoft Windows Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

[Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)

[Create and attach additional EBS volumes](#) (Additional charges may apply)

[Manage security groups](#)

[View Instances](#)

The screenshot shows a Windows desktop environment. At the top is the taskbar with various icons. A browser window for the EC2 Management Console is open, showing the same 'Launch Status' page as the previous screenshot. The bottom right corner of the screen shows system status indicators: ENG, UK, 13:05, and the date 08/07/2016.

Launch Status

>Your instances are now launching

The following instance launches have been initiated: i-0a7fb1a64190f4cb8 [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

- [Amazon EC2: User Guide](#)
- [How to connect to your Windows instance](#)
- [Amazon EC2: Microsoft Windows Guide](#)

launch: එයන් කරන්න, පැවර්වන්න,
මිත්දෙන්නවා

The screenshot shows a Windows desktop environment. At the top is the taskbar with various icons. A browser window for the EC2 Management Console is open, showing the 'Launch Status' page. A yellow callout bubble points from the word 'launch' in the text above to the Sinhala translation 'මිත්දෙන්නවා' in the bottom right corner of the page. The bottom right corner of the screen shows system status indicators: ENG, UK, 13:04, and the date 08/07/2016.

EC2 Management Console https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#instances:

AWS Services Edit Prabuddhi Oregon Support

EC2 Dashboard Events Tags Reports Limits

INSTANCES Instances Spot Requests Reserved Instances Scheduled Instances Dedicated Hosts

IMAGES AMIs Bundle Tasks

ELASTIC BLOCK STORE Volumes Snapshots

NETWORK & SECURITY Security Groups Elastic IPs Placement Groups

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

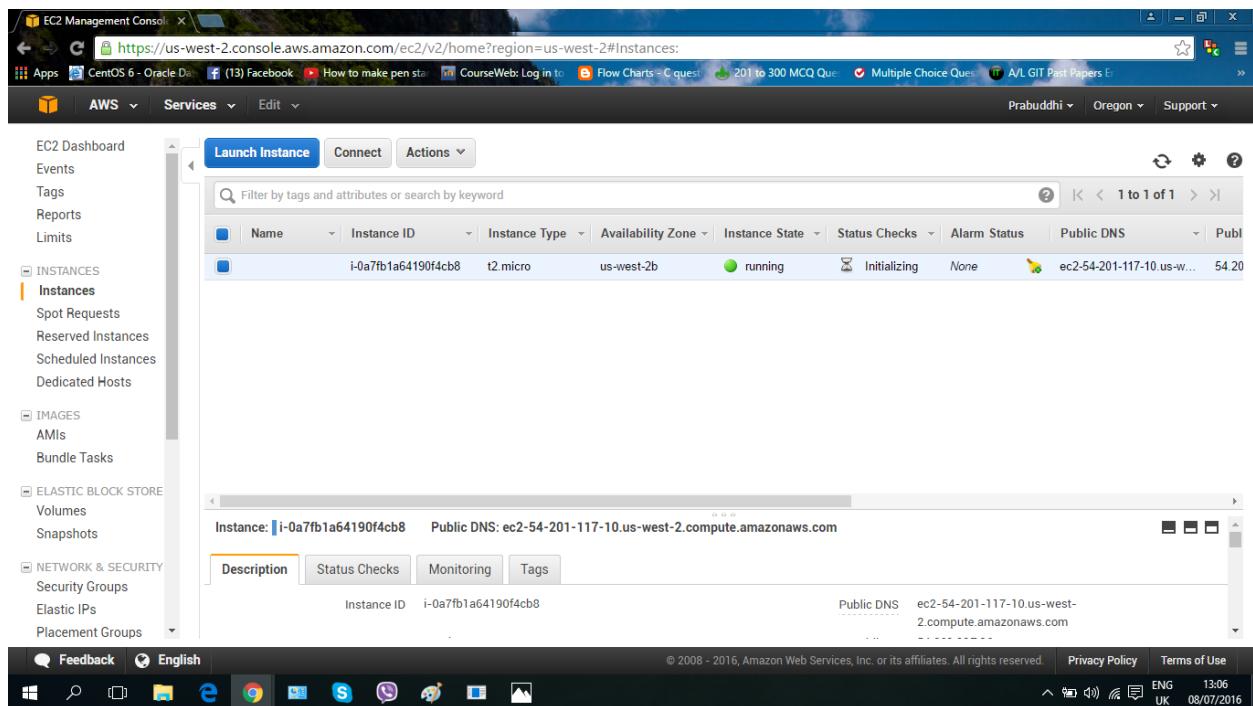
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Publ
i-0a7fb1a64190f4cb8	t2.micro	us-west-2b	running	Initializing	None		ec2-54-201-117-10.us-west-2.compute.amazonaws.com	54.20

Instance: i-0a7fb1a64190f4cb8 Public DNS: ec2-54-201-117-10.us-west-2.compute.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID: i-0a7fb1a64190f4cb8 Public DNS: ec2-54-201-117-10.us-west-2.compute.amazonaws.com

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EC2 Management Console https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#instances:sort=instancetype

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EC2 Dashboard Events Tags Reports Limits

INSTANCES Instances Spot Requests Reserved Instances Scheduled Instances Dedicated Hosts

IMAGES AMIs Bundle Tasks

ELASTIC BLOCK STORE Volumes Snapshots

NETWORK & SECURITY Security Groups Elastic IPs Placement Groups

Launch Instance Connect Actions

Filter by tags

Connect To Your Instance

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: ec2-54-201-117-10.us-west-2.compute.amazonaws.com
User name: Administrator
Password: Get Password

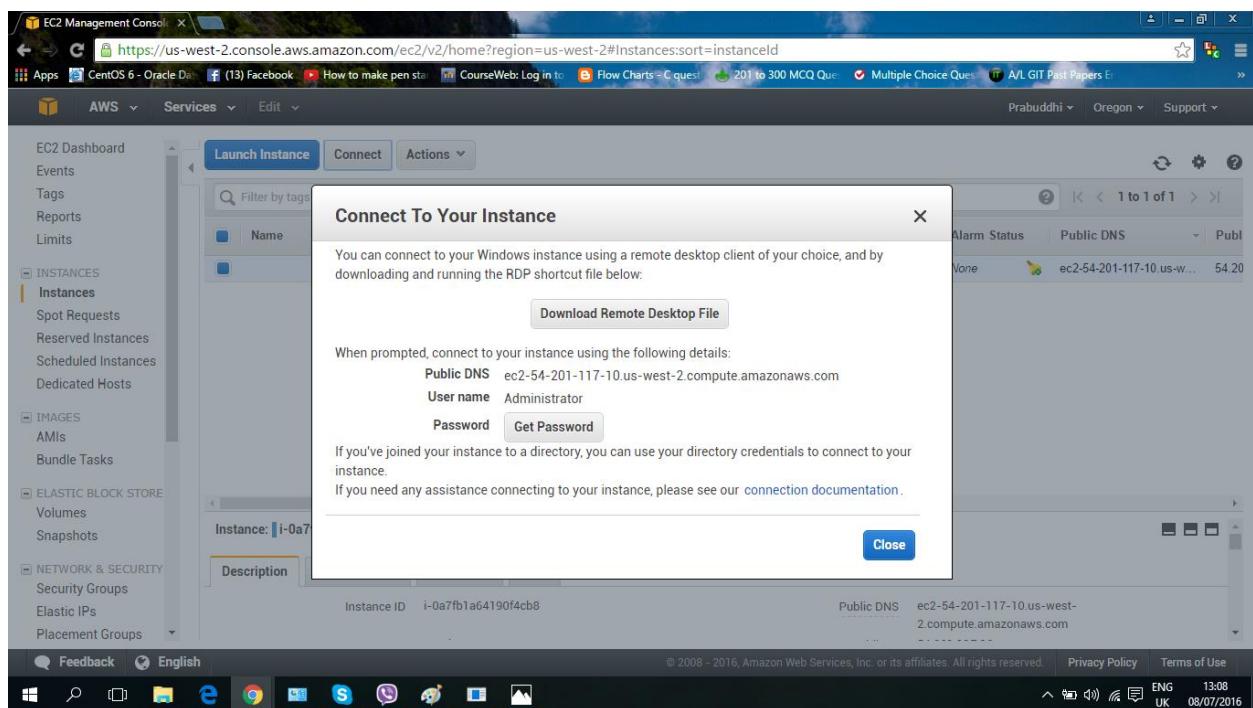
If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.
If you need any assistance connecting to your instance, please see our connection documentation.

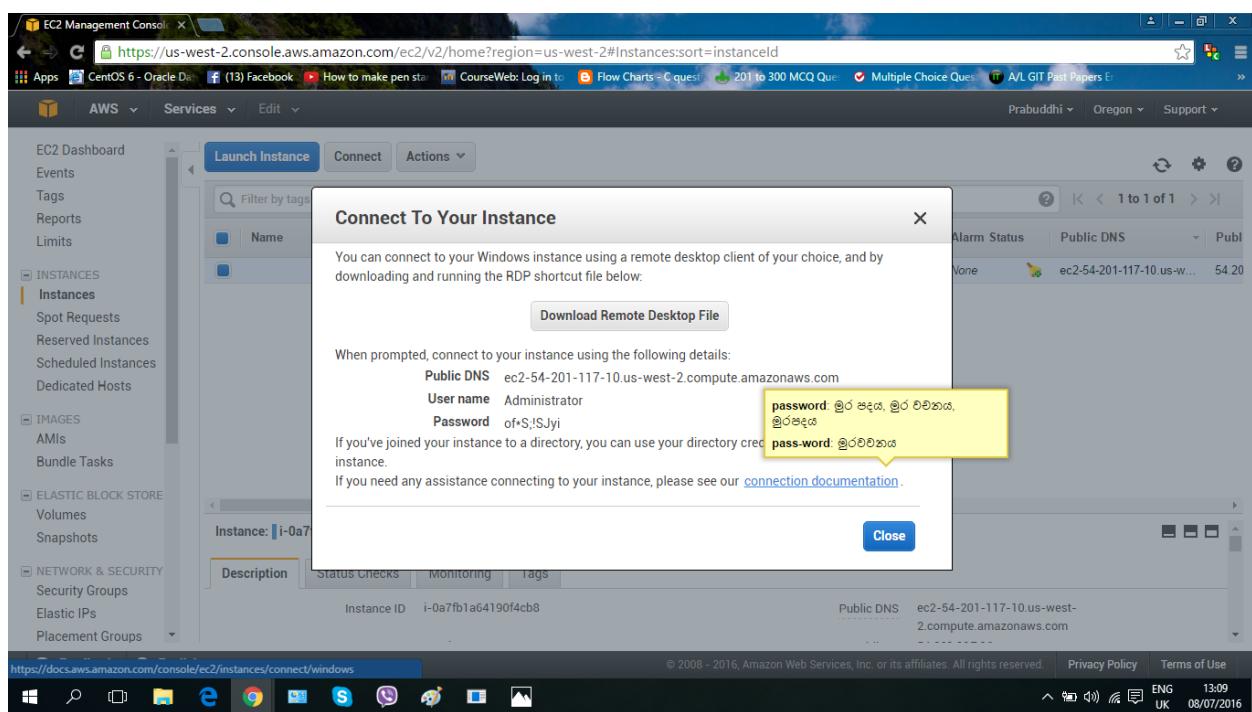
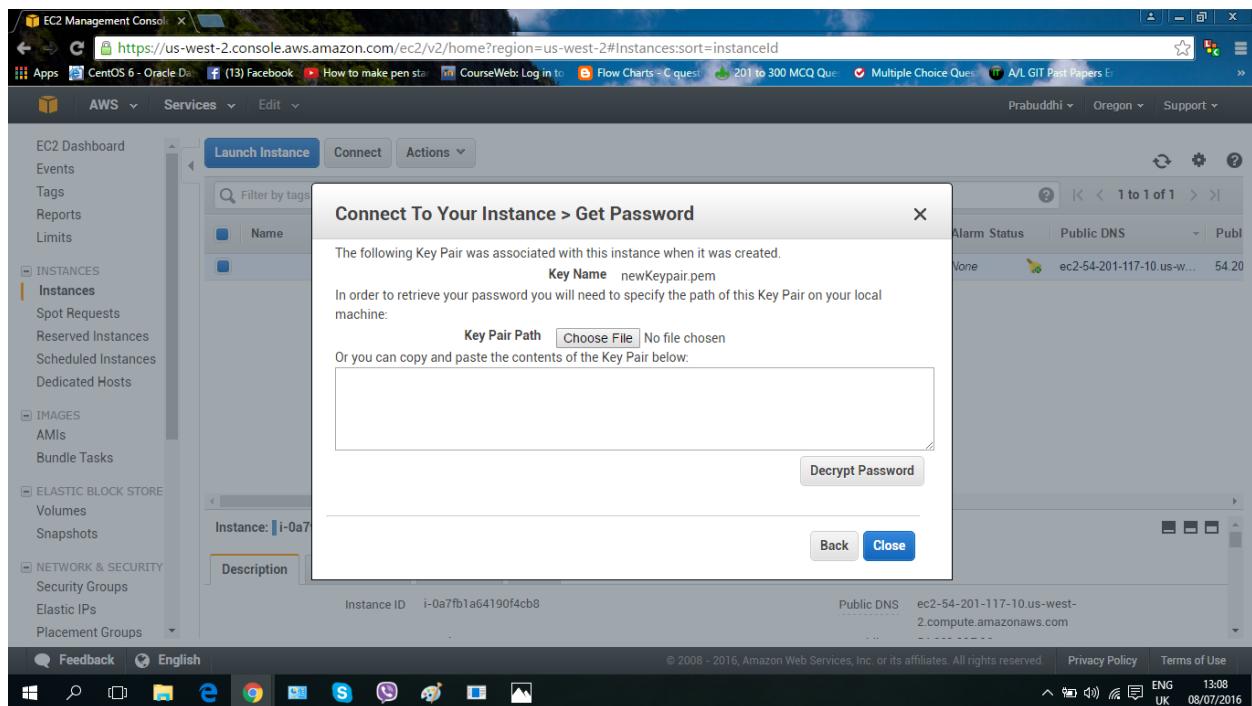
Close

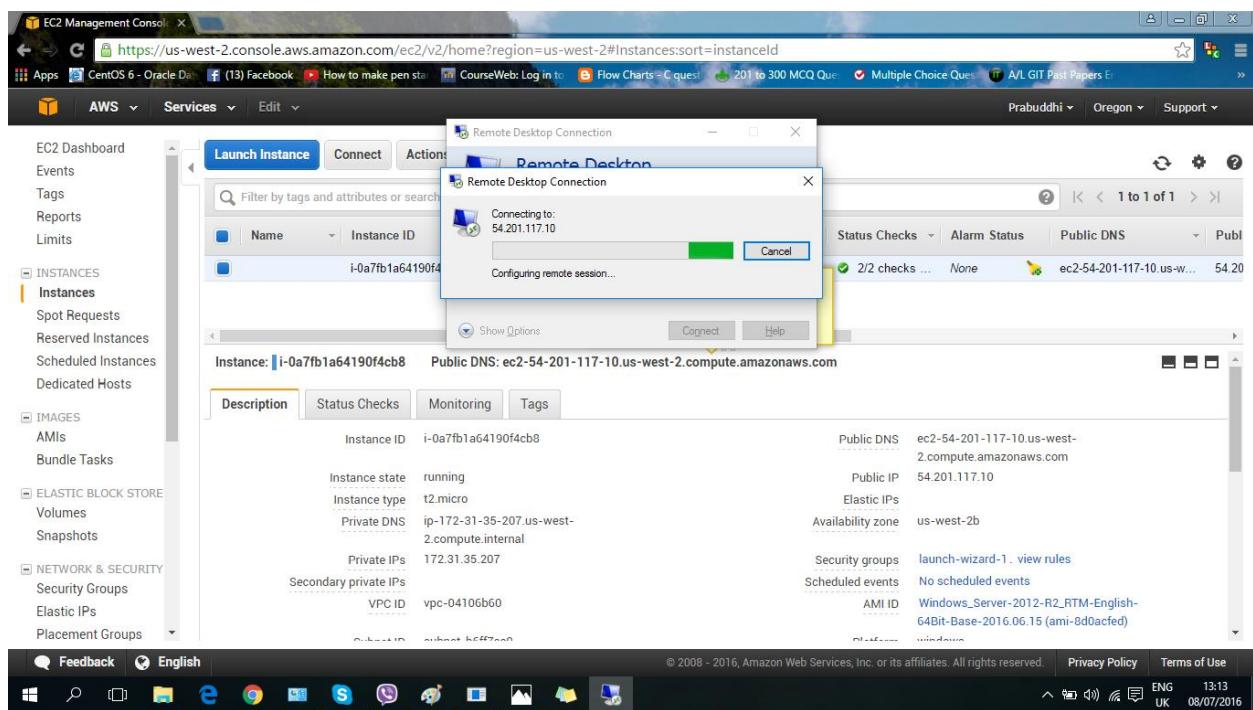
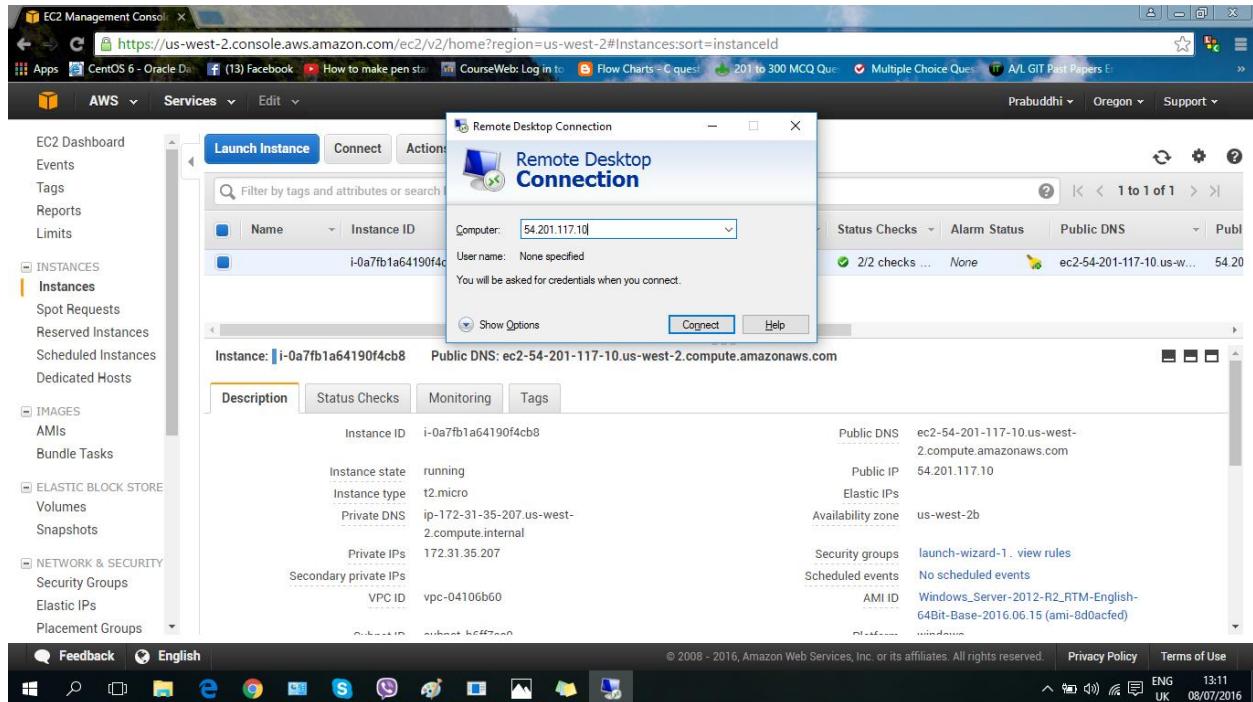
Instance: i-0a7fb1a64190f4cb8

Instance ID: i-0a7fb1a64190f4cb8 Public DNS: ec2-54-201-117-10.us-west-2.compute.amazonaws.com

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EC2 Management Console https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#instances:sort=instancetype

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Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

1 to 1 of 1

Terminate Instances

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.

Are you sure you want to terminate these instances?
i-0a7fb1a64190f4cb8 (ec2-54-201-117-10.us-west-2.compute.amazonaws.com)

Cancel Yes, Terminate

Instance ID	i-0a7fb1a64190f4cb8	Public DNS	ec2-54-201-117-10.us-west-2.compute.amazonaws.com
Instance state	running	Public IP	54.201.117.10
Instance type	t2.micro	Elastic IPs	

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15:54 ENG UK 08/07/2016

EC2 Management Console https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#instances:sort=instancetype

AWS Services Edit Prabuddhi Oregon Support

EC2 Dashboard Events Tags Reports Limits

Instances Instances Spot Requests Reserved Instances Scheduled Instances Dedicated Hosts

Images AMIs Bundle Tasks

Elastic Block Store Volumes Snapshots

Network & Security Security Groups Elastic IPs Placement Groups

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Publ
i-0a7fb1a64190f4cb8	t2.micro	us-west-2b	terminated	None				

Instance: i-0a7fb1a64190f4cb8 Public DNS: -

Description Status Checks Monitoring Tags

Instance ID	i-0a7fb1a64190f4cb8	Public DNS	-
Instance state	terminated	Public IP	
Instance type	t2.micro	Elastic IPs	
Private DNS	-	Availability zone	us-west-2b

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The screenshot shows the AWS EC2 Management Console interface. On the left, there's a navigation sidebar with links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances (selected), Images, AMIs, Bundle Tasks, Elastic Block Store, Volumes, Snapshots, Network & Security, Security Groups, Elastic IPs, and Placement Groups. The main content area has tabs for Launch Instance, Connect, and Actions. Below that is a search bar and a table listing instances. One instance is selected: i-0a7fb1a64190f4cb8, which is a t2.micro instance in us-west-2b, currently terminated. A detailed view of this instance is shown below the table, including fields for Instance ID, Instance state, Instance type, Private DNS, Public DNS, Public IP, Elastic IPs, and Availability zone. At the bottom, there are links for Feedback and English, along with copyright information and system status.

Enterprise Standards and Best Practices for IT Infrastructure

Amazon EC2 Linux Instances Assignment Report 02

**Reg NO :- IT 13003210
Name :- Madhumali D.P.P.K**

https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#

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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
0 Volumes	0 Load Balancers
4 Key Pairs	5 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

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)

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https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard:

AWS Services Edit Prabuddhi Oregon Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review Cancel and Exit

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 Free tier eligible	Select 64-bit
AWS Marketplace	Red Hat Enterprise Linux 7.2 (HVM), SSD Volume Type - ami-775e4f16 Free tier eligible	Select 64-bit
Community AMIs	SUSE Linux Enterprise Server 12 SP1 (HVM), SSD Volume Type - ami-d2627db3 Free tier eligible	Select 64-bit

1 to 25 of 25 AMIs

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation 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	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 <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

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 Launch into Auto Scaling Group

Purchasing option: Request Spot instances

Network: vpc-65115401 (172.31.0.0/16) Create new VPC

Subnet: No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP: Use subnet setting (Enable)

IAM role: None Create new IAM role

Shutdown behavior: Stop

Enable termination protection: Protect against accidental termination

Monitoring: Enable CloudWatch detailed monitoring Additional charges apply.

Tenancy: Shared - Run a shared hardware instance

Cancel Previous Review and Launch Next: Add Storage

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-d465048a	8	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Cancel Previous **Review and Launch** Next: Tag Instance

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

Step 5: Tag Instance

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.

Key	(127 characters maximum)	Value	(255 characters maximum)
Name			

Create Tag (Up to 10 tags maximum)

Cancel Previous **Review and Launch** Next: Configure Security Group

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

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.

⚠ Improve your instances' security. Your security group, launch-wizard-5, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type - ami-7172b611

Free tier eligible 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.

Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

[Edit security groups](#) [Cancel](#) [Previous](#) [Launch](#)

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review

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.

⚠ 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](#)

AMI Details [Edit AMI](#)

Amazon Linux AMI 2016.03.3 (HVM), SSD Volume Type - ami-7172b611

Free tier eligible 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.

Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs
t2.micro	Variable

[Edit security groups](#) [Cancel](#) [Launch Instances](#)

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Step 7: Review Instance Launch

Please review your instance launch details. You can always change them later.

AMI Details

Amazon Linux AMI 2016.03.3 (HVM, SSD Volume Type)

Instance Type

Instance Type	ECUs
t2.micro	Variable

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: linux
[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](#)

Launch Status

Your instances are now launching
The following instance launches have been initiated: i-027099e797ed6928f [View launch log](#)

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

How to connect to your instances
Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.
Click [View Instances](#) to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

Here are some helpful resources to get you started

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

While your instances are launching you can also

Create static check alarm to be notified when these instances fail static checks. (Additional charges may apply.)

AWS Services Edit Prabuddhi Oregon Support

EC2 Dashboard Events Tags Reports Limits

INSTANCES Instances Spot Requests Reserved Instances Scheduled Instances Dedicated Hosts

IMAGES AMIs Bundle Tasks

ELASTIC BLOCK STORE Volumes Snapshots

NETWORK & SECURITY Security Groups Elastic IPs Placement Groups Key Pairs

Feedback English

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Publ
	i-00d563efb04e4fb79	t2.micro	us-west-2b	terminated		None		
<input checked="" type="checkbox"/>	i-027099e797ed6928f	t2.micro	us-west-2b	running	Initializing	None	ec2-54-218-70-145.us-w...	54.21
	i-0eef992c654c3b2ed	t2.micro	us-west-2b	terminated		None		

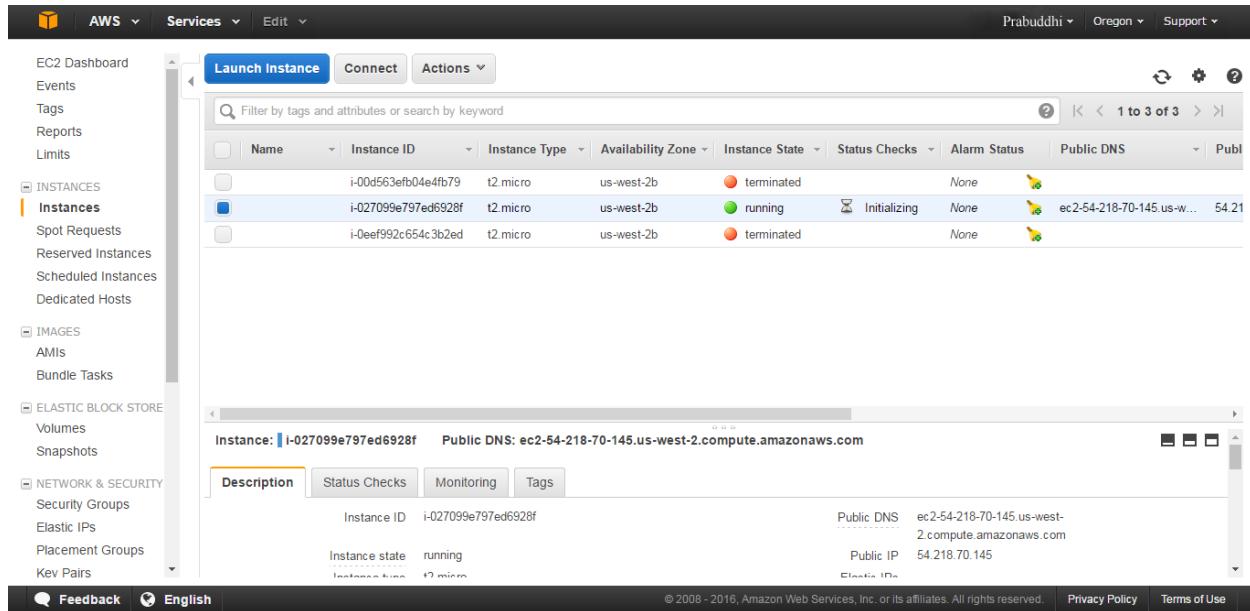
Instance: i-027099e797ed6928f Public DNS: ec2-54-218-70-145.us-west-2.compute.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID: i-027099e797ed6928f Instance state: running Instance time: 12 minutes

Public DNS: ec2-54-218-70-145.us-west-2.compute.amazonaws.com Public IP: 54.218.70.145 Elastic IP:

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AWS Services Edit Prabuddhi Oregon Support

EC2 Dashboard Events Tags Reports Limits

INSTANCES Instances Spot Requests Reserved Instances Scheduled Instances Dedicated Hosts

IMAGES AMIs Bundle Tasks

ELASTIC BLOCK STORE Volumes Snapshots

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Feedback English

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Publ
	i-00d563efb04e4fb79	t2.micro	us-west-2b	terminated		None		
<input checked="" type="checkbox"/>	i-027099e797ed6928f	t2.micro	us-west-2b	running	Initializing	None	ec2-54-218-70-145.us-w...	54.21
	i-0eef992c654c3b2ed	t2.micro	us-west-2b	terminated		None		

Instance: i-027099e797ed6928f Public DNS: ec2-54-218-70-145.us-west-2.compute.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID: i-027099e797ed6928f Instance state: running Instance time: 12 minutes

Public DNS: ec2-54-218-70-145.us-west-2.compute.amazonaws.com Public IP: 54.218.70.145 Elastic IP:

Putty Key Generator

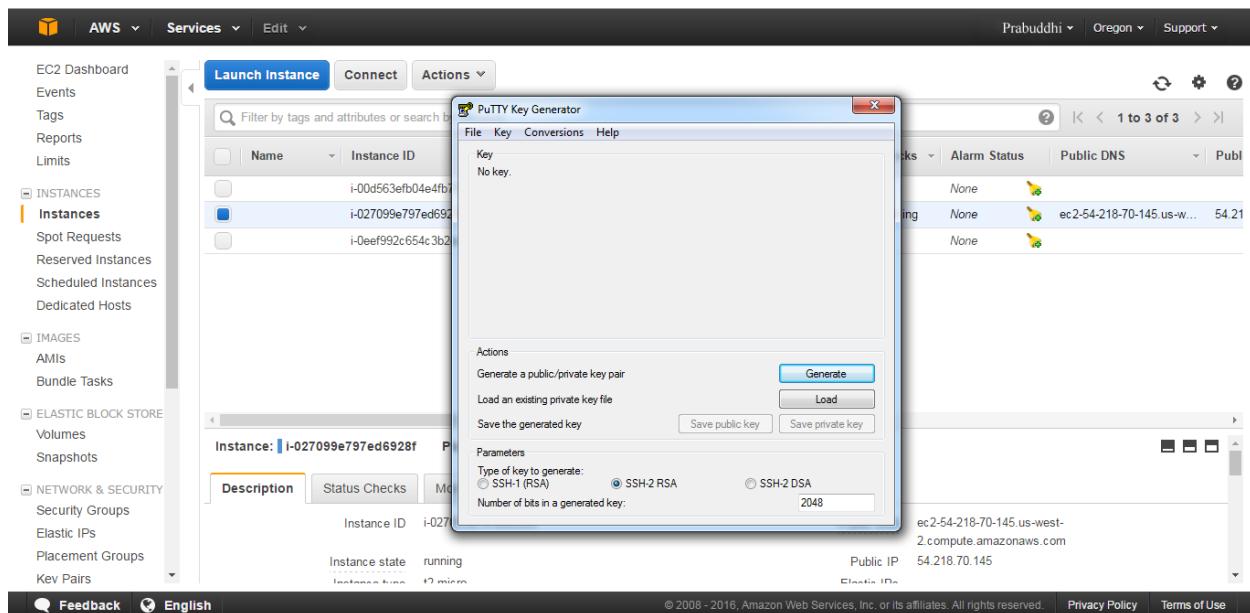
File Key Conversions Help

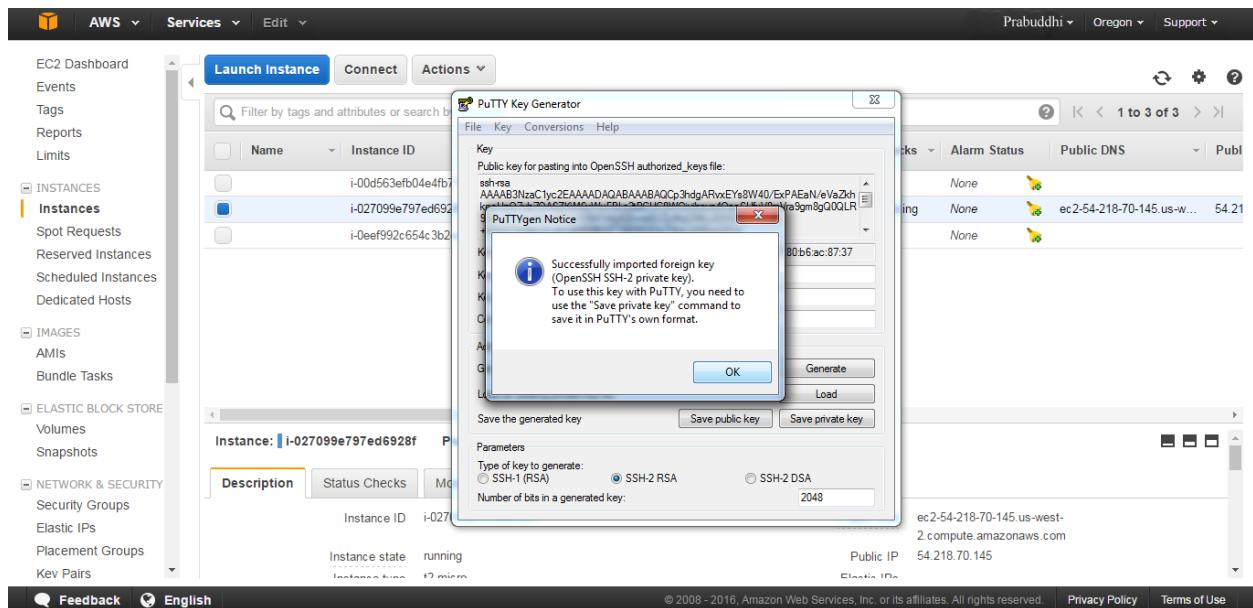
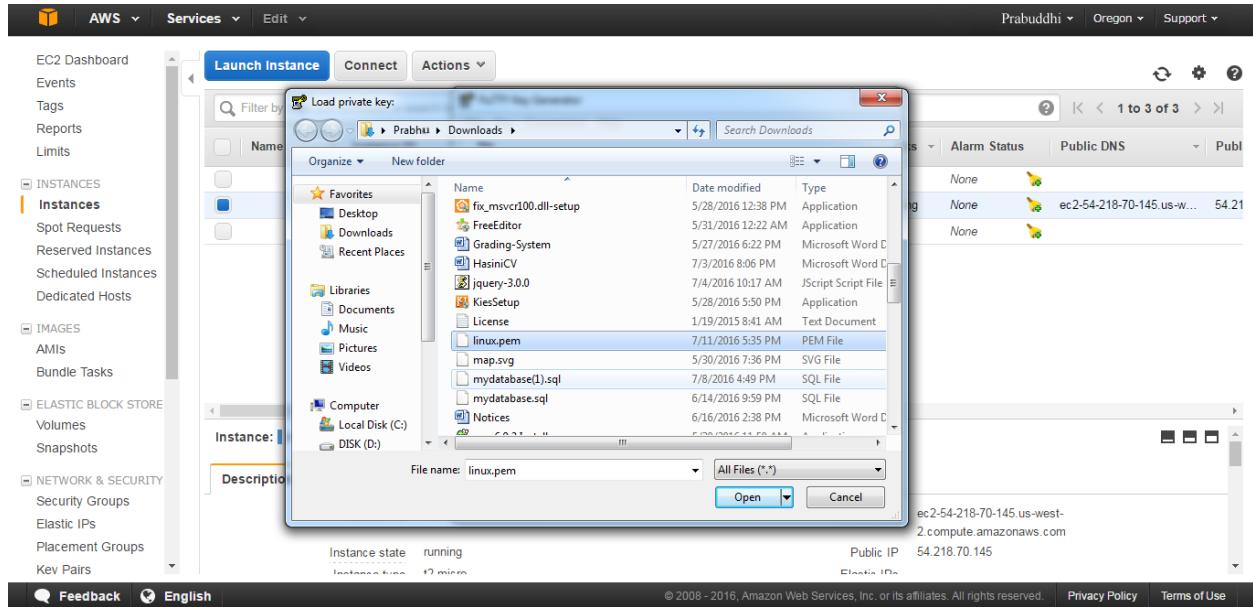
Key
No key.

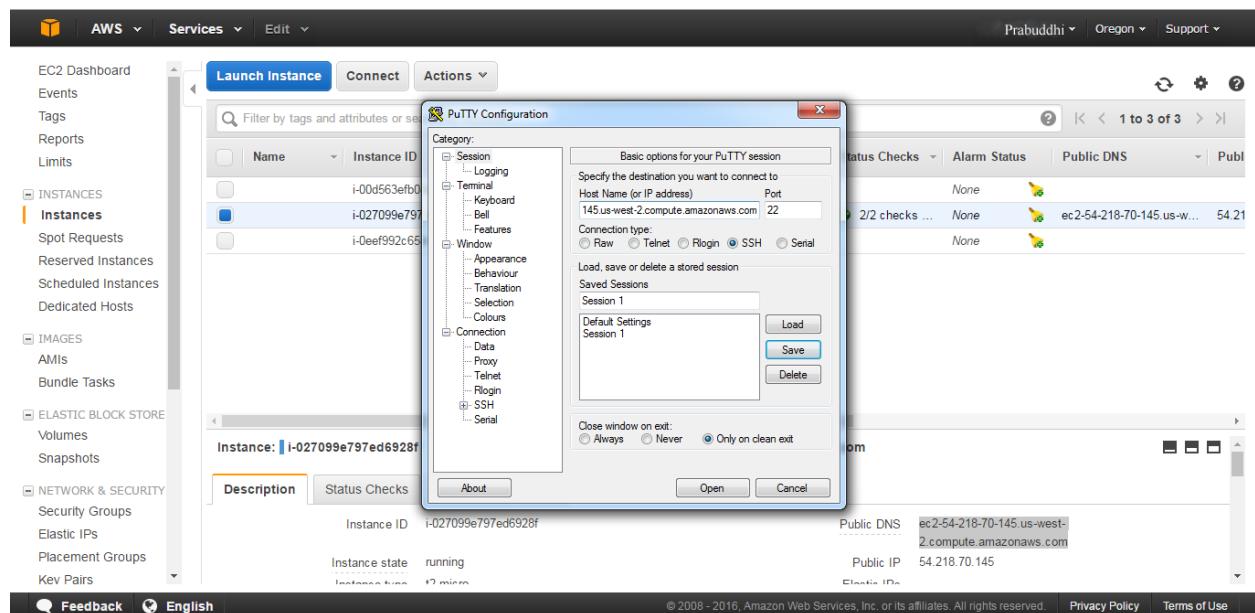
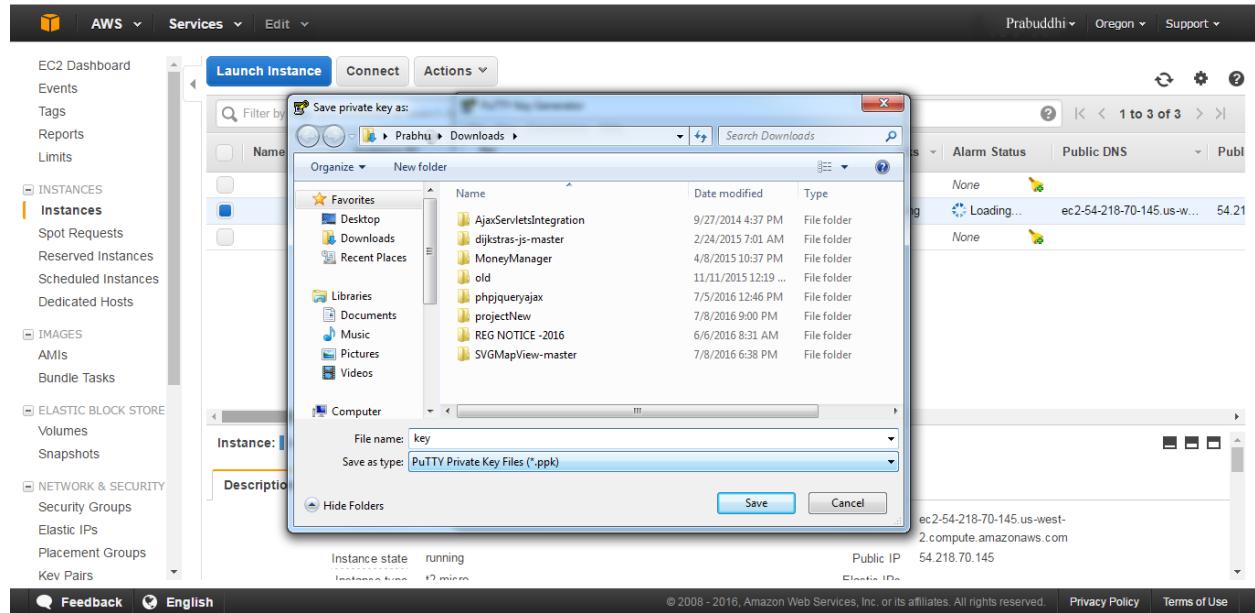
Actions
Generate a public/private key pair Generate
Load an existing private key file Load
Save the generated key Save public key Save private key

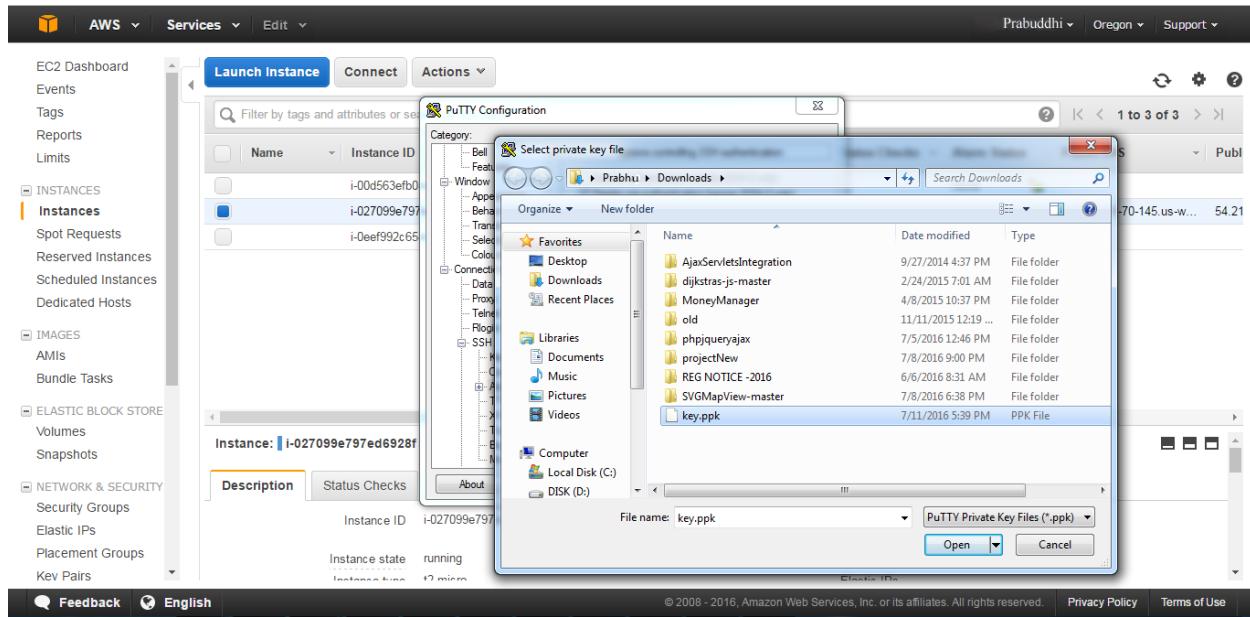
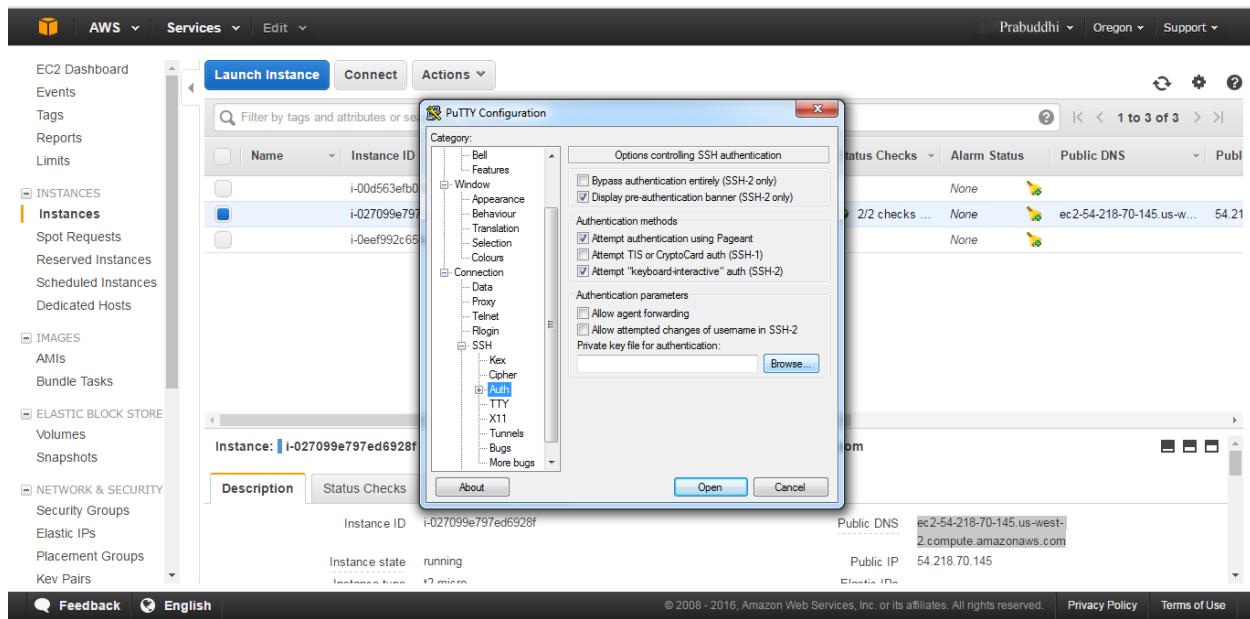
Parameters
Type of key to generate:
 SSH-1 (RSA) SSH-2 RSA SSH-2 DSA
Number of bits in a generated key: 2048

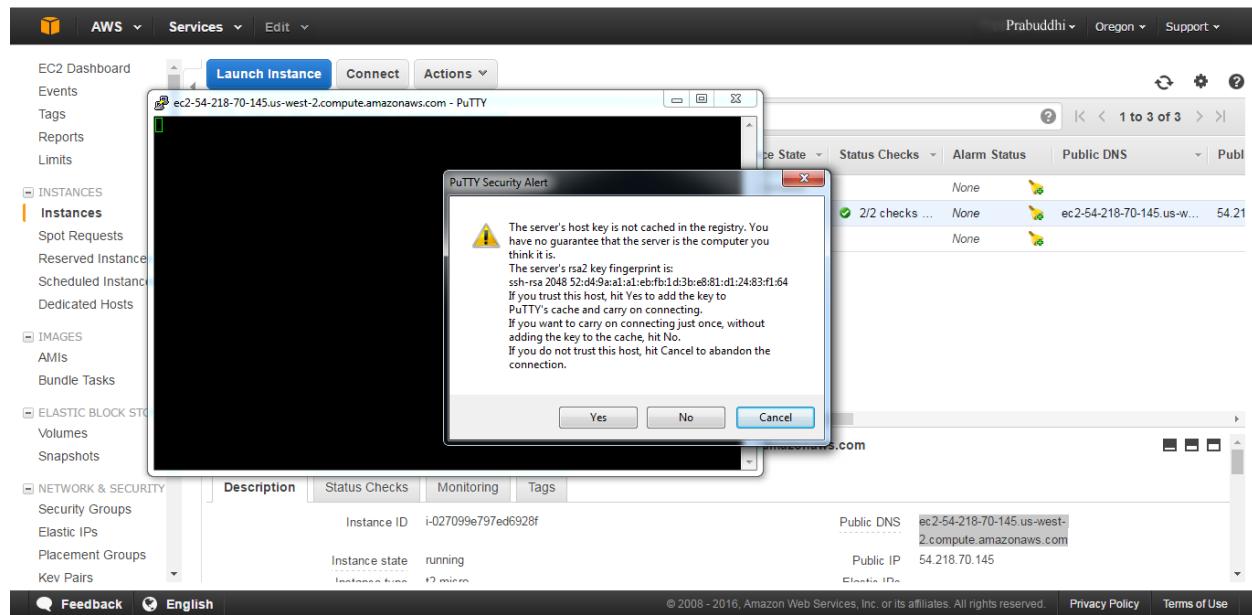
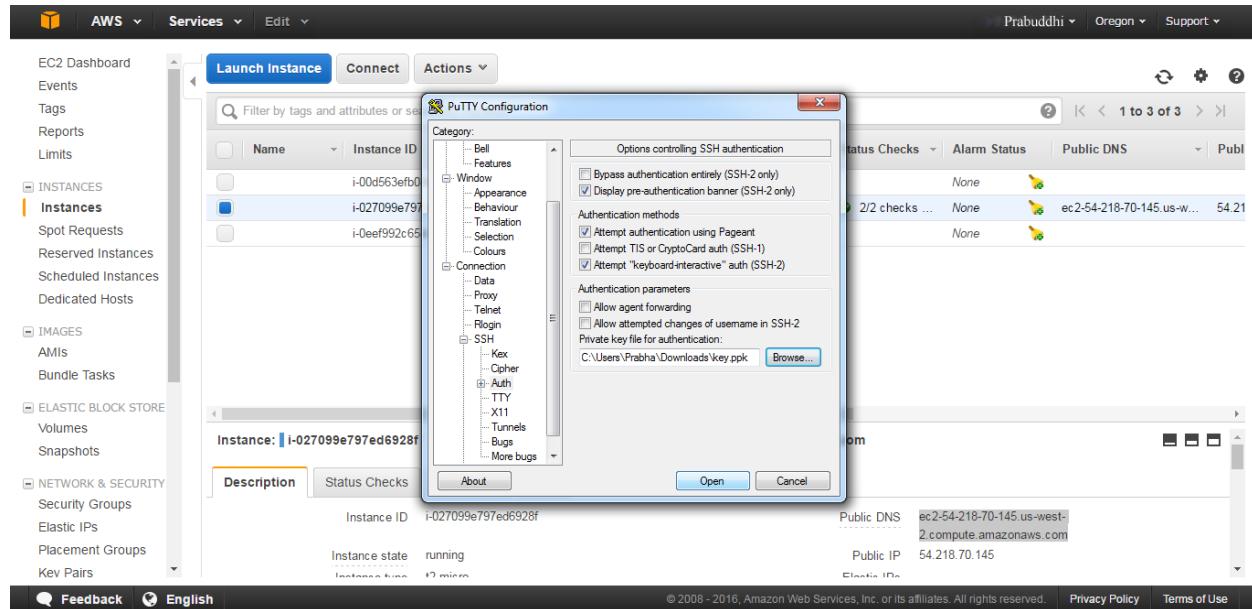
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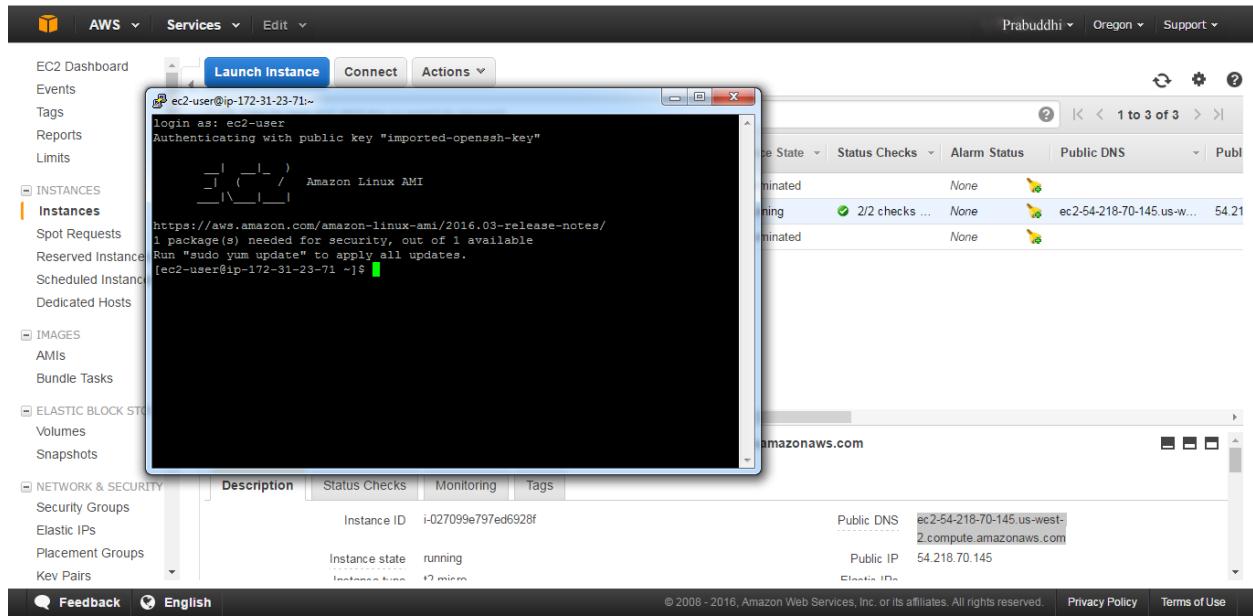
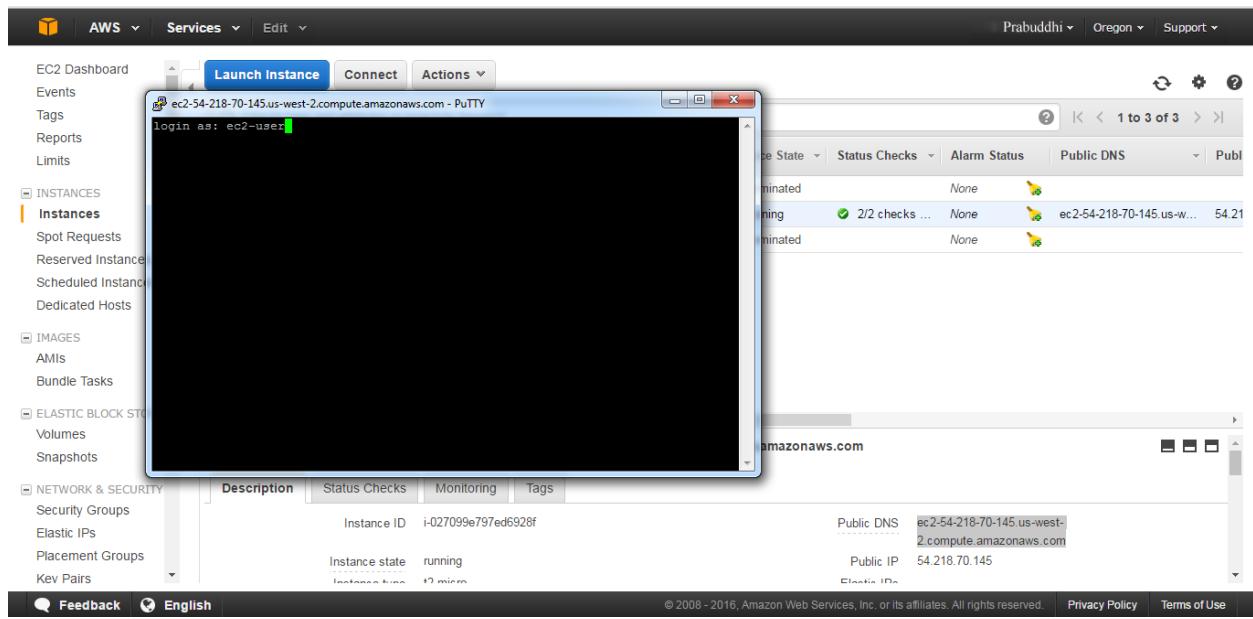












Enterprise Standards and Best Practices for IT Infrastructure

**Amazon Relational Database Services
Assignment Report 03**

Reg No – IT13003210

Name - Madhumali D.P.P.K

The screenshot shows the AWS Management Console Services page. The left sidebar lists various services: History, EC2, Console Home, Billing, Support, IAM, Compute, Storage & Content Delivery, Database, Networking, Developer Tools, Management Tools, Security & Identity, Analytics, Internet of Things, Mobile Services, Application Services, Enterprise Applications, and Game Development. The Database section is expanded, showing RDS, ElastiCache, and DMS. The RDS section is highlighted.

RDS

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale familiar relational databases in the cloud.

ElastiCache

Amazon ElastiCache improves application performance by allowing you to retrieve information from an in-memory caching system.

DMS

AWS Database Migration Service (DMS) helps you migrate databases to the cloud easily and securely while minimizing downtime.

<https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2>

The screenshot shows the RDS - AWS Console dashboard. The left sidebar is titled "RDS Dashboard" and includes sections for Instances, Clusters, Reserved Purchases, Snapshots, Security Groups, Parameter Groups, Option Groups, Subnet Groups, Events, Event Subscriptions, and Notifications. The main area has tabs for "Launch DB Instance", "Show Monitoring", and "Instance Actions". A search bar at the top right says "Search DB Instances...". Below the search bar is a filter menu with options: All Instances, Engine, DB Instance, Status, CPU, Current Activity, Maintenance, Class, VPC, Multi-AZ, Replication Role, and Encrypted. A note states: "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." A note at the bottom says: "Note: Your DB Instances will launch in the US West (Oregon) region."

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 No DB Instances

Engine DB Instance Status CPU Current Activity Maintenance Class VPC Multi-AZ Replication Role Encrypted

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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RDS - AWS Console Creating a DB Instance R... X

https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dbinstances

AWS Services Edit Prabuddhi Oregon Support

Step 1: Select Engine

Select Engine

To get started, choose a DB Engine below and click Select.

Amazon Aurora	MySQL
MariaDB	MySQL Community Edition
	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. <ul style="list-style-type: none">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.Supports cross-region read replicas.
PostgreSQL	
ORACLE	
Microsoft SQL Server	

Select

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RDS - AWS Console Creating a DB Instance R... X

https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dbinstances

AWS Services Edit Prabuddhi Oregon Support

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

Do you plan to use this database for production purposes?

Production

Amazon Aurora **Recommended**
MySQL-compatible, enterprise-class database at 1/10th the cost of commercial databases.

Dev/Test

MySQL
Use Multi-AZ Deployment and Provisioned IOPS Storage as defaults for high availability and fast, consistent performance.

This instance is intended for use outside of production or under the RDS Free Usage Tier.

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

Cancel Previous **Next Step**

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RDS - AWS Console Creating a MySQL DB Inst https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dbinstances

AWS Services Edit Prabuddhi Oregon Support

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

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: 5.6.27

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

DB Instance Class: db.m1.small — 1 vCPU, 1.7 GiB RAM
Multi-AZ Deployment: Yes
Storage Type: General Purpose (SSD)
Allocated Storage*: 5 GB

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RDS - AWS Console Creating a MySQL DB Instance

[Cost Calculator](#)

DB Instance Class: db.m1.small — 1 vCPU, 1.7 GB RAM
Multi-AZ Deployment: Yes
Storage Type: General Purpose (SSD)
Allocated Storage*: 5 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*: west2mysqlinstance1
Master Username*: ITI3003210
Master Password*:
Confirm Password*:

* Required Cancel Previous **Next Step**

Feedback English

RDS - AWS Console Creating a MySQL DB Instance

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-65115401)
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-2 (VPC)

Select the security group or groups that have rules authorizing connections from all of the EC2 instances and devices that need to access the data stored in the DB instance. By default, security groups do not authorize any connections; you must specify rules for all instances and devices that will connect to the DB instance. [Learn More](#).

Database Options

Database Name: ITI3003210
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

Connection Information

Security Group Rules:
A security group allowing your current IP address (61.245.163.228) to connect to your instance will be created. This will make it easier for you.

RDS - AWS Console Creating a MySQL DB Inst. https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dbinstances

AWS Services Edit Prabuddhi Oregon Support

Database Options

Database Name: IT13003210

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

Copy Tags To Snapshots:

Enable Encryption: No

Backup

Please note that automated backups are currently supported for InnoDB storage engine only. If you are using MyISAM, refer to detail [here](#).

Backup Retention Period: 7 days

Backup Window: No Preference

Maintenance

devices that need to access the data stored in the DB instance. By default, security groups do not authorize any connections; you must specify rules for all instances and devices that will connect to the DB instance. [Learn More](#).

Connection Information

Security Group Rules: A security group allowing your current IP address (61.245.163.228) to connect to your instance will be created. This will make it easier for you to connect to the instance and configure it.

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RDS - AWS Console Creating a MySQL DB Inst. https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dbinstances

AWS Services Edit Prabuddhi Oregon Support

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

Copy Tags To Snapshots:

Enable Encryption: No

Backup

Please note that automated backups are currently supported for InnoDB storage engine only. If you are using MyISAM, refer to detail [here](#).

Backup Retention Period: 7 days

Backup Window: No Preference

Maintenance

Auto Minor Version Upgrade: Yes

Maintenance Window: No Preference

The daily time range (in UTC) during which automated backups are created if automated backups are enabled.

* Required Cancel Previous Launch DB Instance

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RDS - AWS Console Creating a MySQL DB Inst.

https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#launch-dbinstance:ct=dbinstances

AWS Services Edit Prabuddhi Oregon Support

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

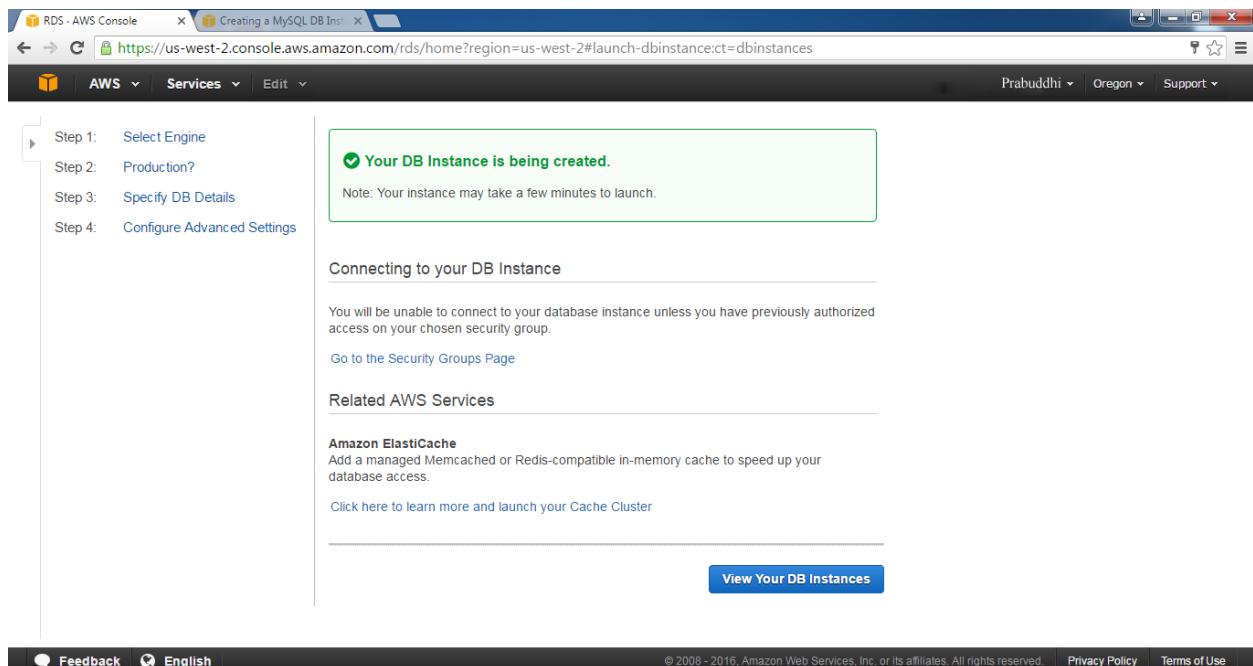
Your DB Instance is being created.
Note: Your instance may take a few minutes to launch.

Connecting to your DB Instance
You will be unable to connect to your database instance unless you have previously authorized access on your chosen security group.
[Go to the Security Groups Page](#)

Related AWS Services
Amazon ElastiCache
Add a managed Memcached or Redis-compatible in-memory cache to speed up your database access.
[Click here to learn more and launch your Cache Cluster](#)

[View Your DB Instances](#)

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RDS - AWS Console Creating a MySQL DB Inst.

https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances:id=west2mysqlinstance1;sf=all

AWS Services Edit Prabuddhi Oregon Support

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

Engine	DB Instance	Status	CPU	Current Activity	Maintenance	Class	VPC	Multi-AZ	Replication
MySQL	west2mysqlinstance1	creating	None	db.m1.small	vpc-65115401	Yes			

Endpoint: Not available yet

Alarms and Recent Events

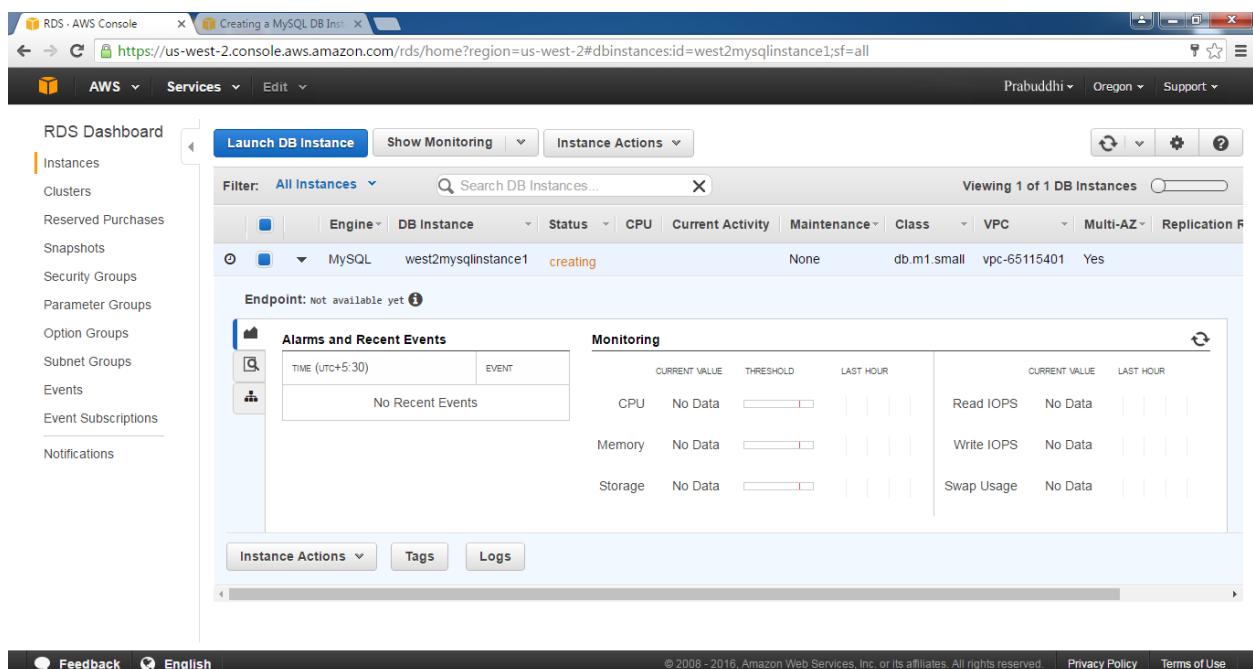
TIME (utc+5:30)	EVENT
	No Recent Events

Monitoring

CURRENT VALUE	THRESHOLD	LAST HOUR
CPU	No Data	
Memory	No Data	
Storage	No Data	
Read IOPS	No Data	
Write IOPS	No Data	
Swap Usage	No Data	

Instance Actions Tags Logs

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RDS - AWS Console Creating a MySQL DB Inst...

https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances:id=west2mysqlinstance1;sf=all

AWS Services Edit

Prabuddhi Oregon Support

RDS Dashboard

- Instances
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- 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

Engine	DB Instance	Status	CPU	Current Activity	Maintenance	Class	VPC	Multi-AZ	Replica
MySQL	west2mysqlinstance1	modifying	0 Connections	None	db.m1.small	vpc-65115401	No		

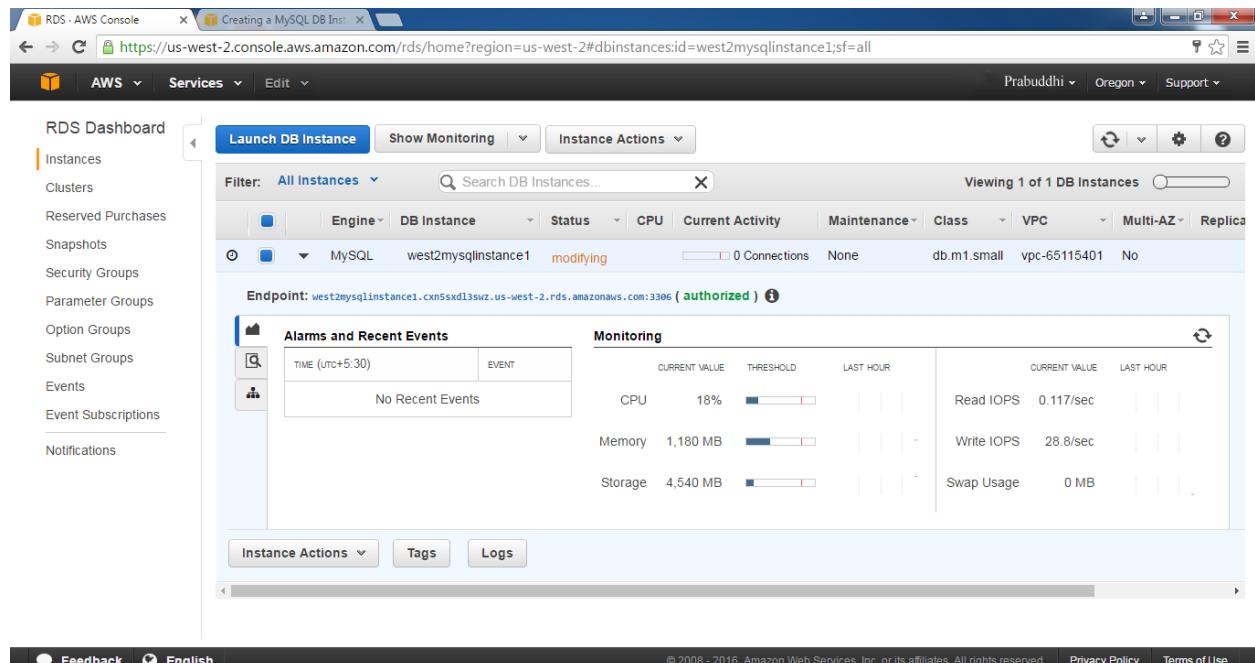
Endpoint: west2mysqlinstance1.cxn5sxdl3swz.us-west-2.rds.amazonaws.com:3306 (authorized)

Alarms and Recent Events Monitoring

TIME (UTC+5:30)	EVENT	CURRENT VALUE	THRESHOLD	LAST HOUR	CURRENT VALUE	LAST HOUR
	No Recent Events	CPU	18%		Read IOPS	0.117/sec
		Memory	1,180 MB		Write IOPS	28.8/sec
		Storage	4,540 MB		Swap Usage	0 MB

Instance Actions Tags Logs

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RDS - AWS Console Creating a MySQL DB Inst...

https://us-west-2.console.aws.amazon.com/rds/home?region=us-west-2#dbinstances:id=west2mysqlinstance1;sf=all

AWS Services Edit

Prabuddhi Oregon Support

RDS Dashboard

- Instances
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- Snapshots
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- 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

Engine	DB Instance	Status	CPU	Current Activity	Maintenance	Class	VPC	Multi-AZ	Replica
MySQL	west2mysqlinstance1	available	5.42%	0 Connections	None	db.m1.small	vpc-65115401	Yes	

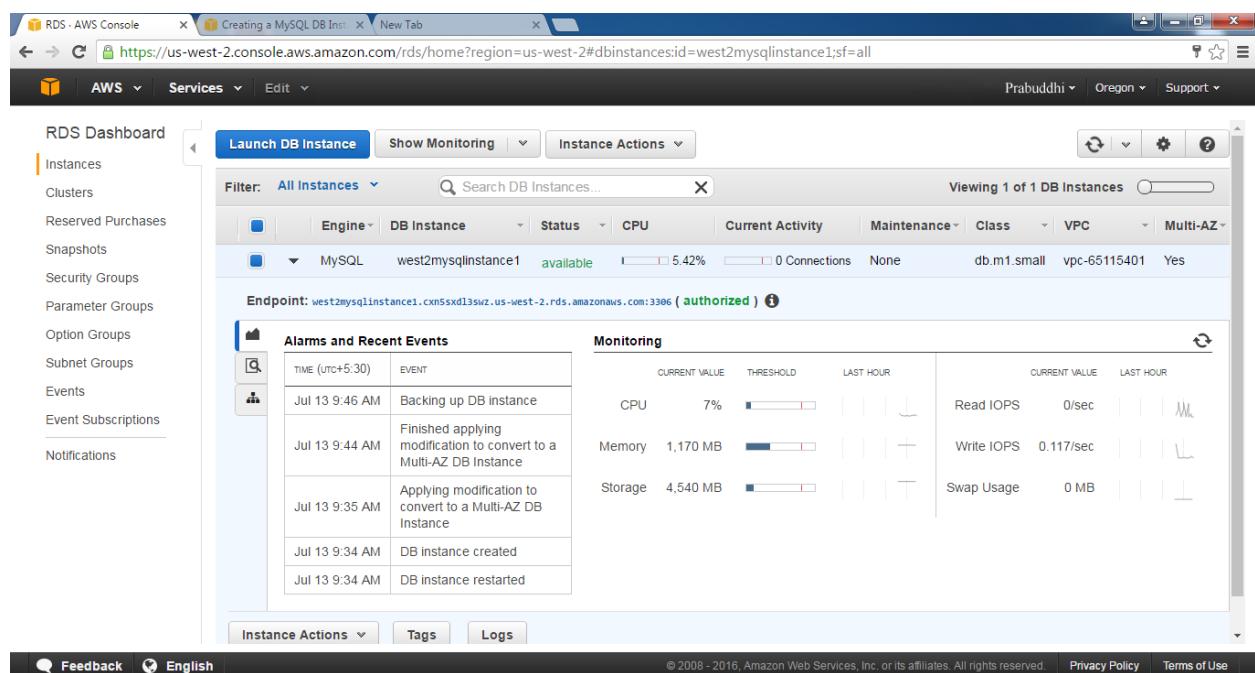
Endpoint: west2mysqlinstance1.cxn5sxdl3swz.us-west-2.rds.amazonaws.com:3306 (authorized)

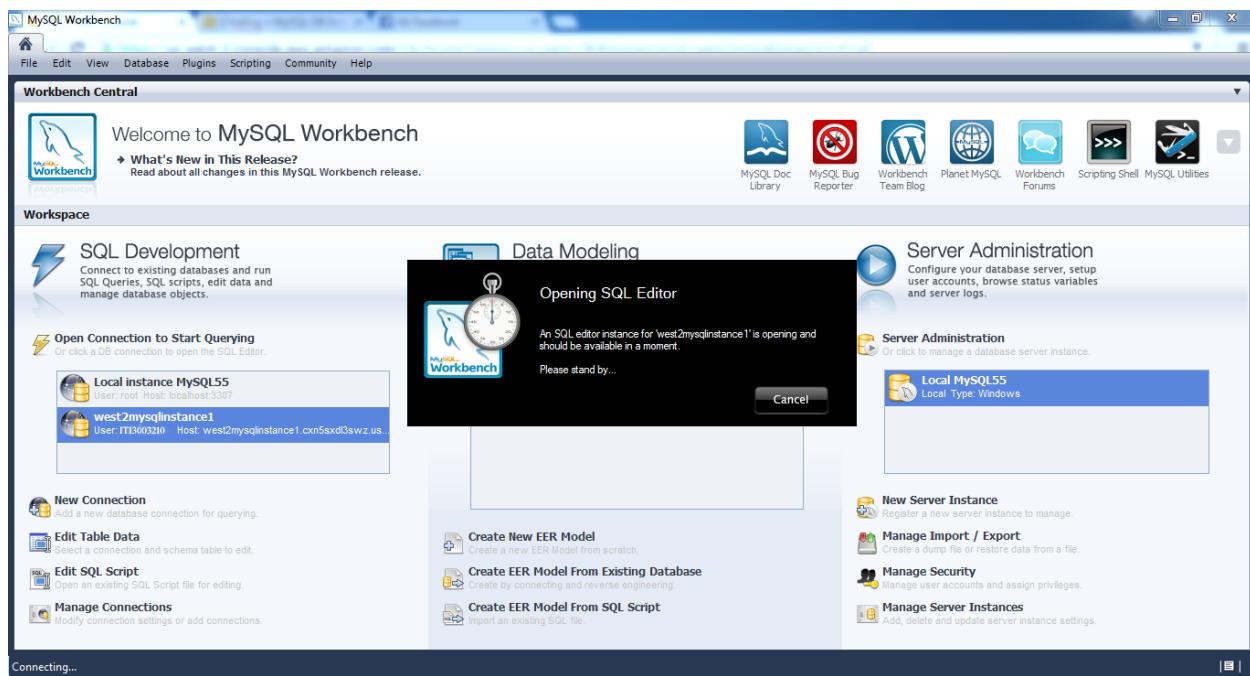
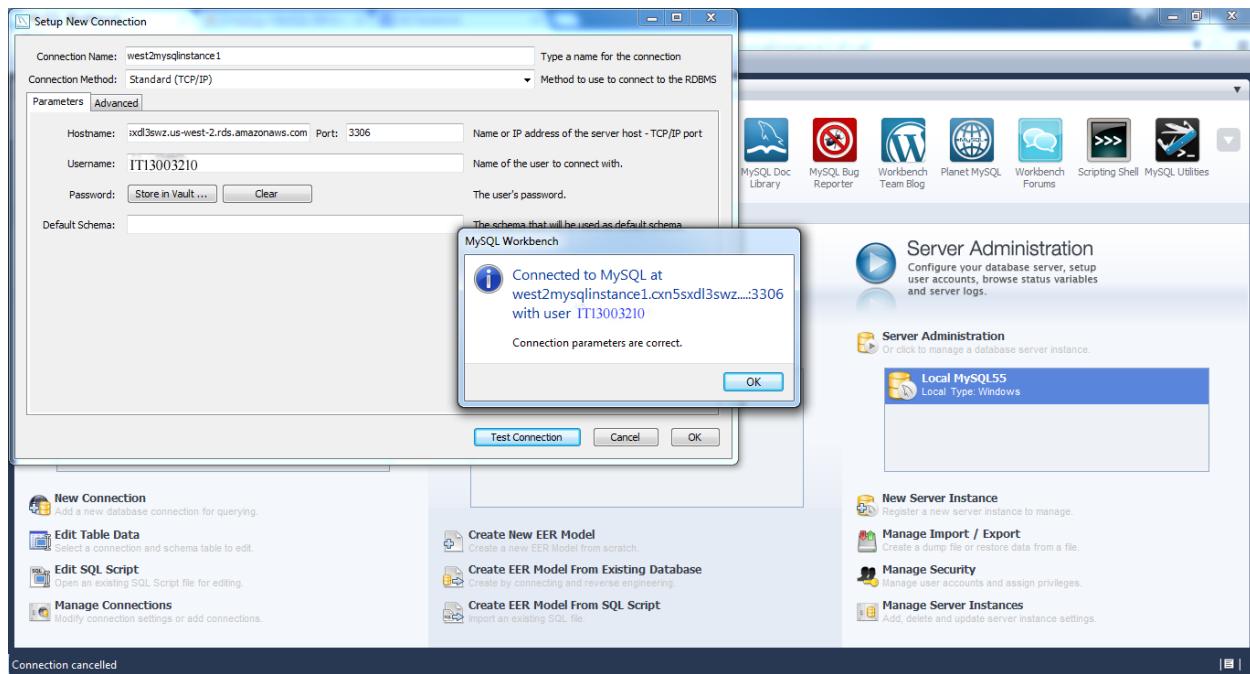
Alarms and Recent Events Monitoring

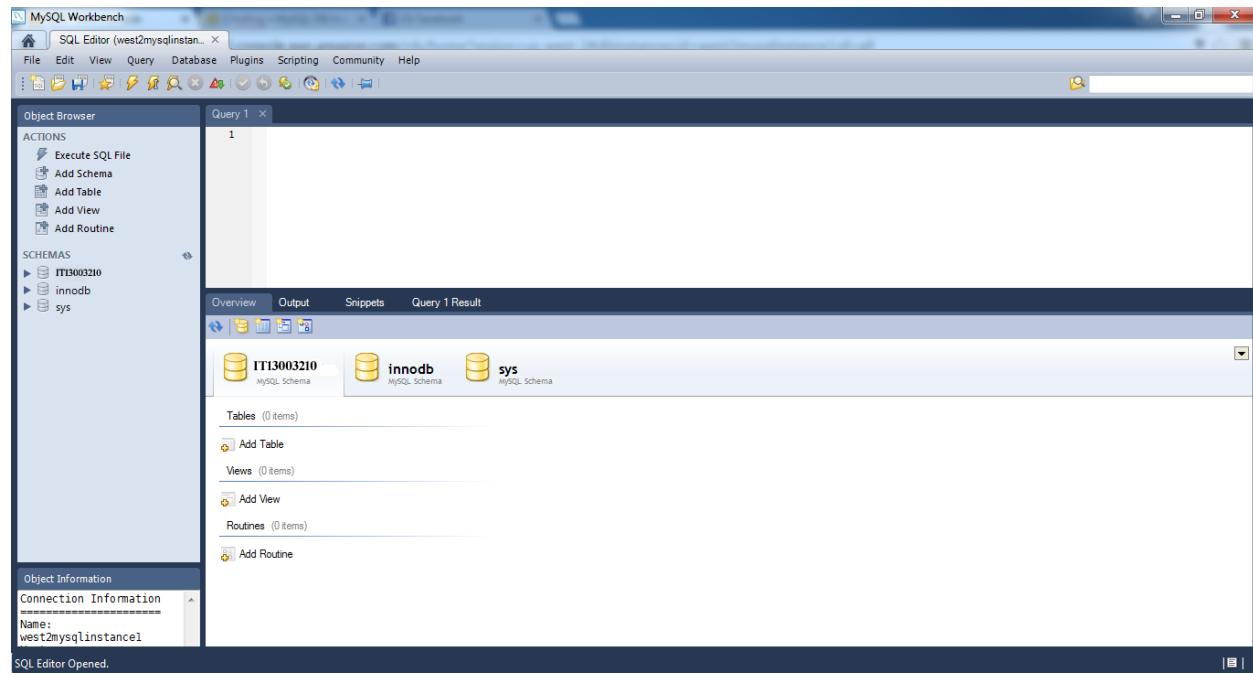
TIME (UTC+5:30)	EVENT	CURRENT VALUE	THRESHOLD	LAST HOUR	CURRENT VALUE	LAST HOUR
Jul 13 9:46 AM	Backing up DB instance	CPU	7%		Read IOPS	0/sec
Jul 13 9:44 AM	Finished applying modification to convert to a Multi-AZ DB Instance	Memory	1,170 MB		Write IOPS	0.117/sec
Jul 13 9:35 AM	Applying modification to convert to a Multi-AZ DB Instance	Storage	4,540 MB		Swap Usage	0 MB
Jul 13 9:34 AM	DB instance created					
Jul 13 9:34 AM	DB instance restarted					

Instance Actions Tags Logs

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End