



Sri Lanka Institute of Information Technology

Enterprise standards and best practices for IT infrastructure

Practical 1

Student ID: IT13146566

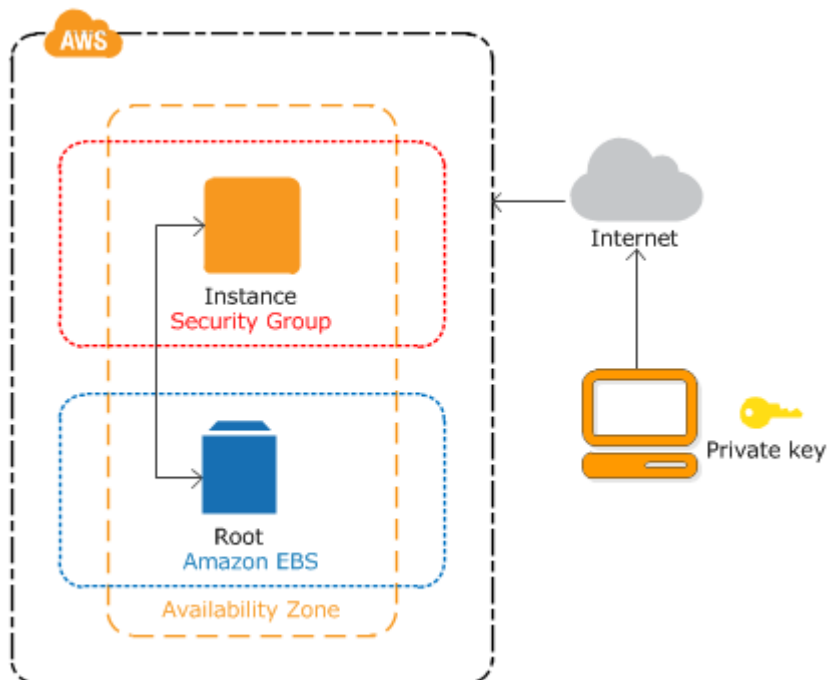
Name: W.D.A.B.Madushani

2013 June intake

Introduction

An instance is a virtual server in the AWS cloud. With Amazon EC2, can set up and configure the operating system and applications that run on an instance.

The instance is an Amazon EBS-backed instance (meaning that the root volume is an EBS volume). You can either specify the Availability Zone in which your instance runs, or let Amazon EC2 select an Availability Zone for you. When you launch your instance, you secure it by specifying a key pair and security group. When you connect to your instance, you must specify the private key of the key pair that you specified when launching your instance.



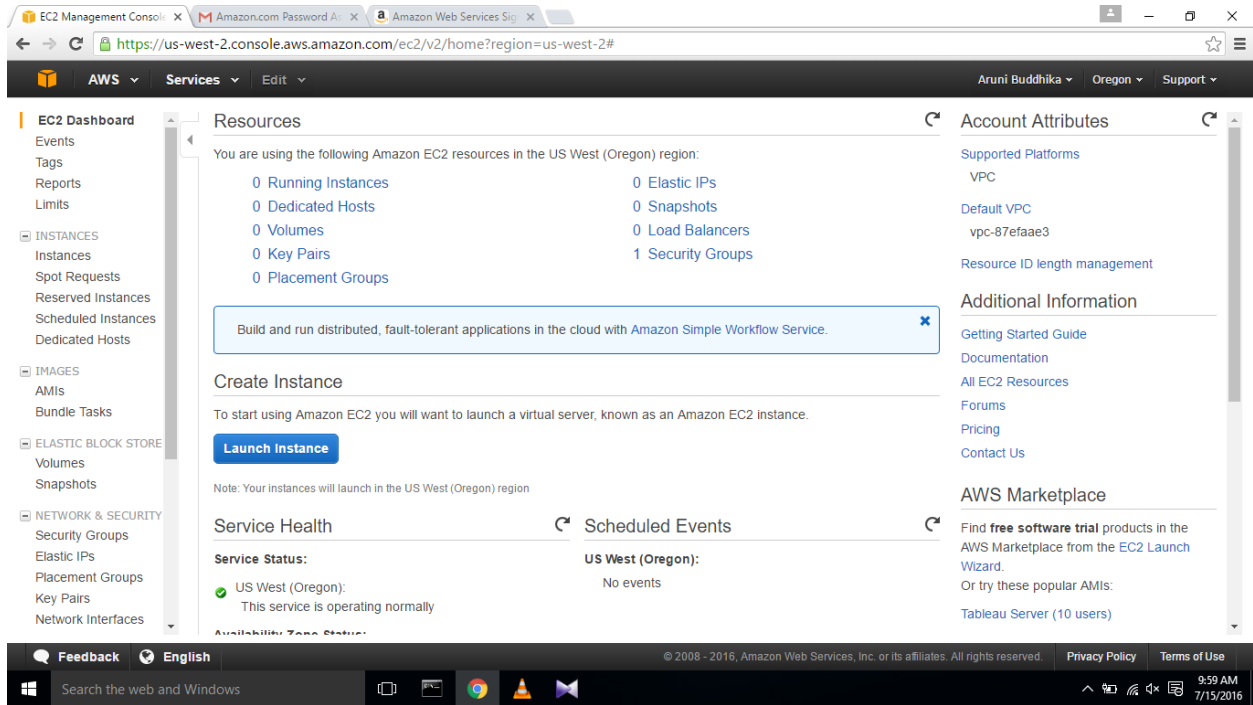
Practical 1

Create a windows instance

- **Launch an instance**

Open the Amazon EC2 console at <https://console.aws.amazon.com/ec2/> and

From the console dashboard, choose **Launch Instance**.



The **Choose an Amazon Machine Image (AMI)** page displays a list of basic configurations, called *Amazon Machine Images (AMIs)* that serve as templates for your instance. Select the AMI for Microsoft Windows Server 2012 R2 Base or Microsoft Windows Server 2008 R2 Base.

Step 1: Choose an Amazon Machine Image (AMI)

Cancel and Exit

Select

64-bit

SUSE Linux Enterprise Server 12 SP1 (HVM), SSD Volume Type - ami-92021u03

SUSE Linux

Free tier eligible

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

Ubuntu Server 14.04 LTS (HVM), SSD Volume Type - ami-9abea4fb

Ubuntu

Free tier eligible

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

Root device type: ebs Virtualization type: hvm

Microsoft Windows Server 2012 R2 Base - ami-8d0acfed

Windows

Free tier eligible

Microsoft Windows 2012 R2 Standard edition with 64-bit architecture. [English]

Root device type: ebs Virtualization type: hvm

Are you launching a database instance? Try Amazon RDS.

Amazon RDS

Hide

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](#)

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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.

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 (GiB)	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

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Choose **Review and Launch** to let the wizard complete the other configuration settings.

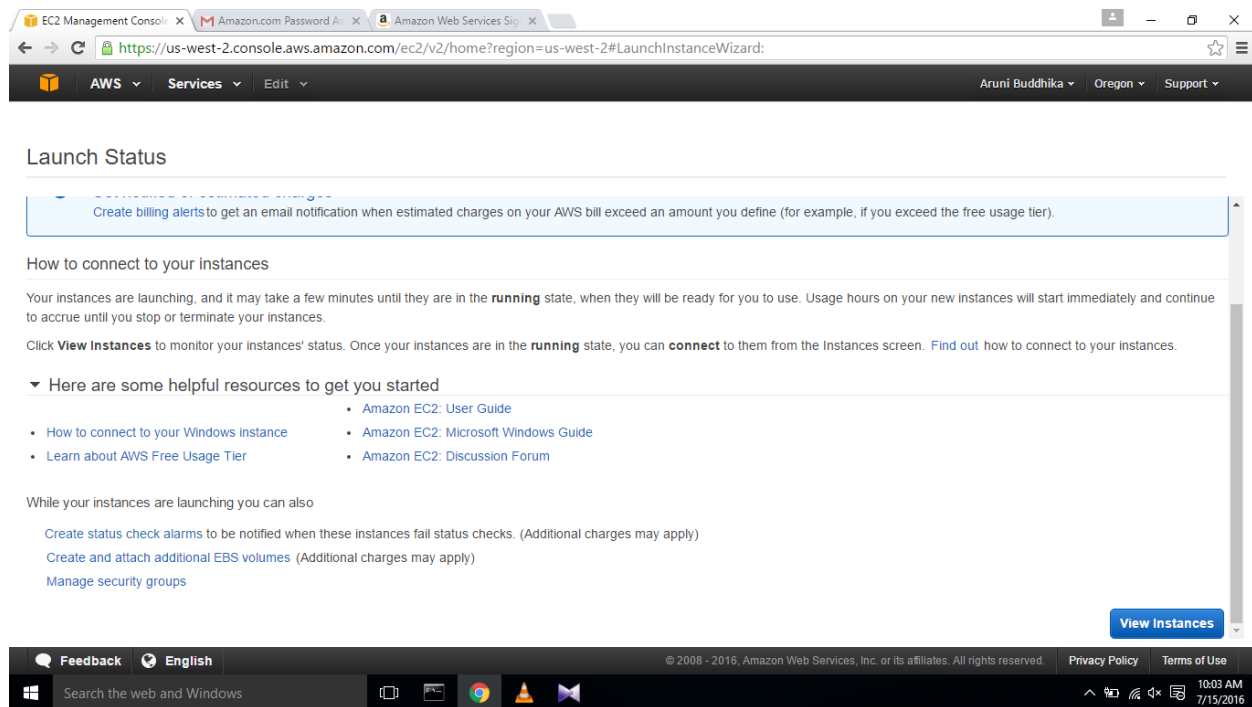
On the **Review Instance Launch** page, choose **Launch**.

The screenshot shows the AWS Management Console at the 'Step 7: Review Instance Launch' stage. The breadcrumb trail includes: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Tag Instance, 6. Configure Security Group, and 7. Review. A yellow warning box at the top states: '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'. Below this, the 'AMI Details' section shows 'Microsoft Windows Server 2012 R2 Base - ami-8d0acfcd' with a 'Free tier eligible' badge. The 'Instance Type' section displays a table with columns: Instance Type, ECUs, vCPUs, Memory (GiB), Instance Storage (GB), EBS-Optimized Available, and Network Performance. The row for 't2.micro' shows: Variable ECUs, 1 vCPU, 1 GiB Memory, EBS only storage, and Low to Moderate network performance. The 'Security Groups' section is partially visible. At the bottom right, there are 'Cancel', 'Previous', and 'Launch' buttons.

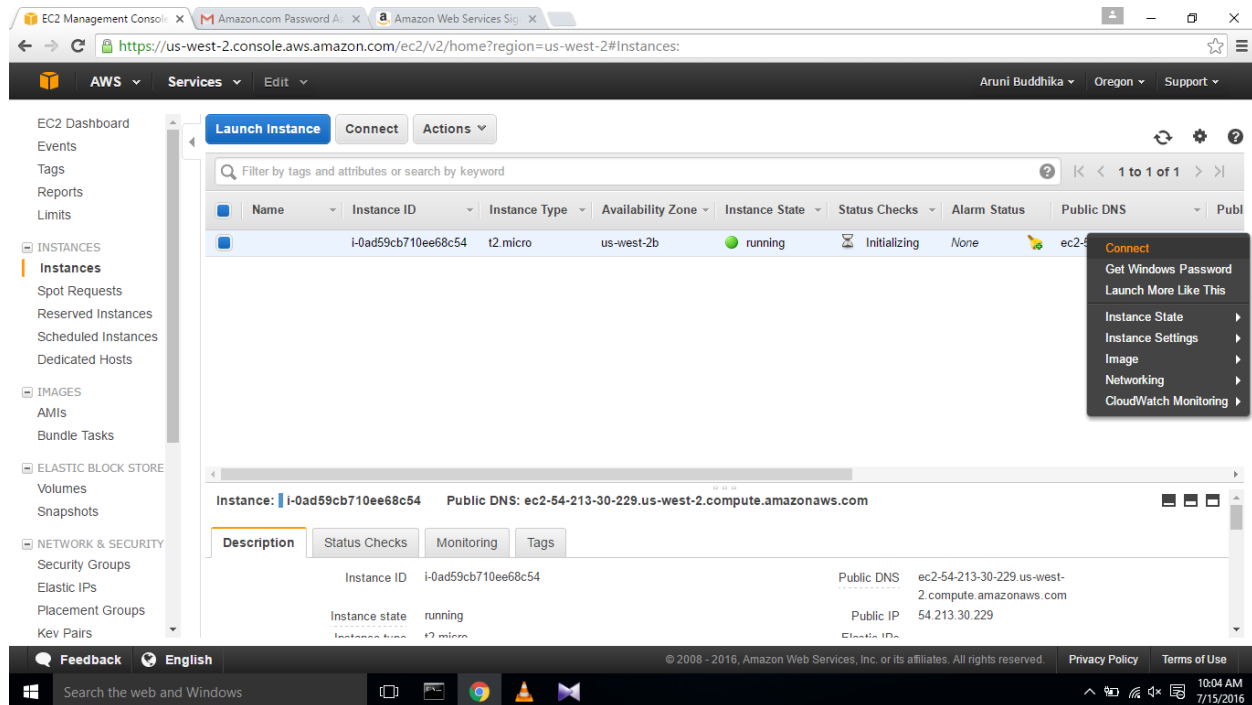
Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

When prompted for a key pair, select **Create a new key pair**, then select the key pair that you created when getting set up. When you are ready, select the acknowledgement check box, and then choose **Launch Instances**.

This screenshot shows the same AWS Management Console page as before, but with a modal dialog box open in the center. The dialog is titled 'Select an existing key pair or create a new key pair'. It contains the following text: '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.' Below this is a note: '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.' There is a dropdown menu set to 'Create a new key pair' and a text input field for 'Key pair name' containing 'test1'. A 'Download Key Pair' button is at the bottom right of the dialog. A blue information box at the bottom of the dialog states: '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.' The background page is dimmed, showing the 'Step 7: Review Instance Launch' page with the 'Launch' button visible at the bottom right.

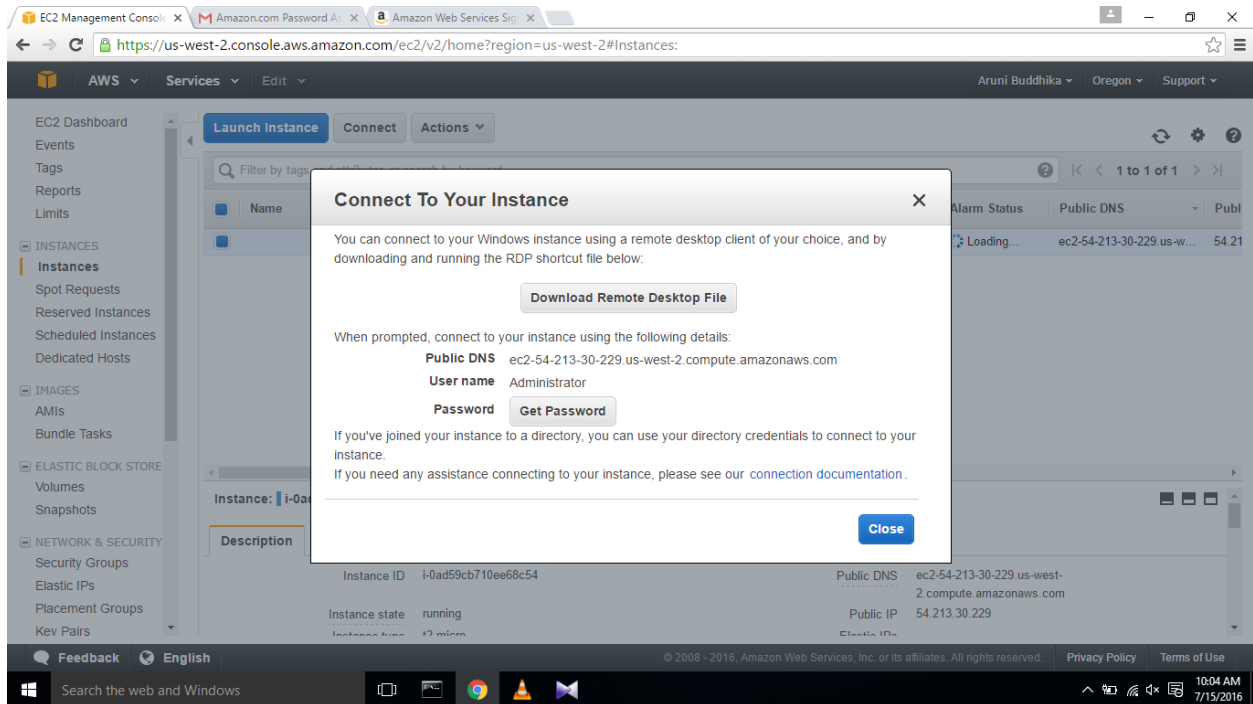


On the **Instances** screen, you can view the status of the launch. It takes a short time for an instance to launch. When you launch an instance, its initial state is pending. After the instance starts, its state changes to running and it receives a public DNS name.

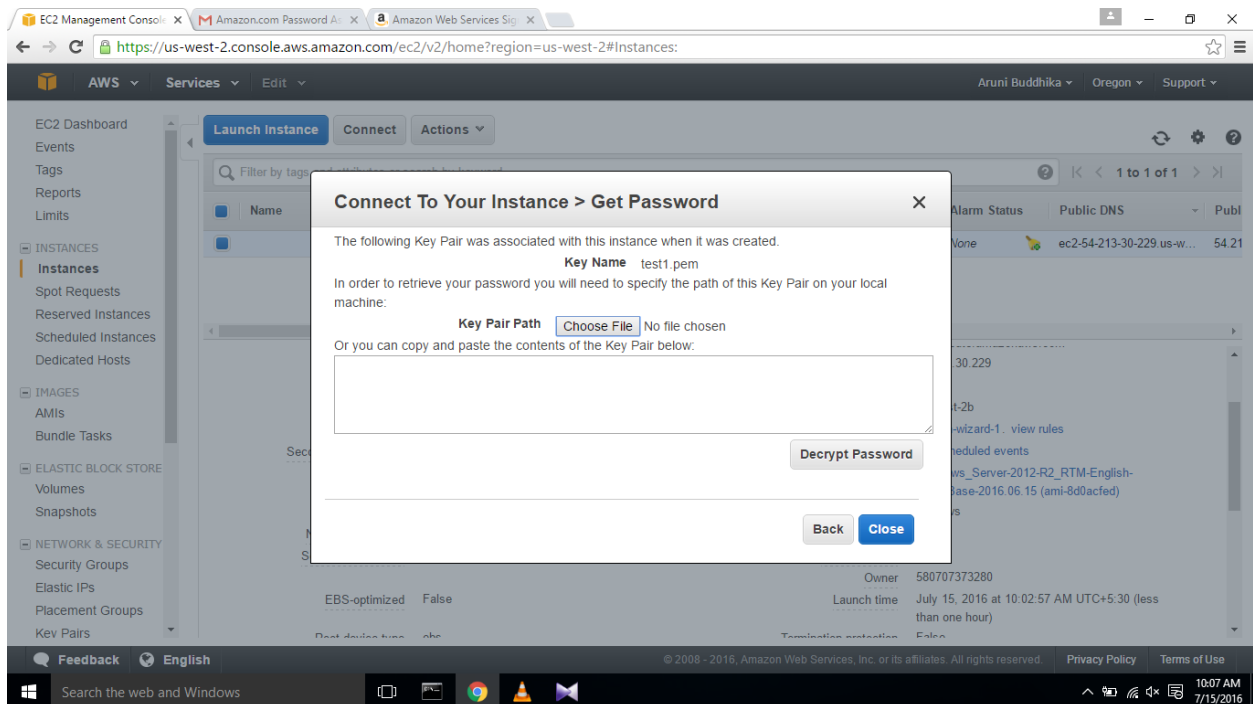


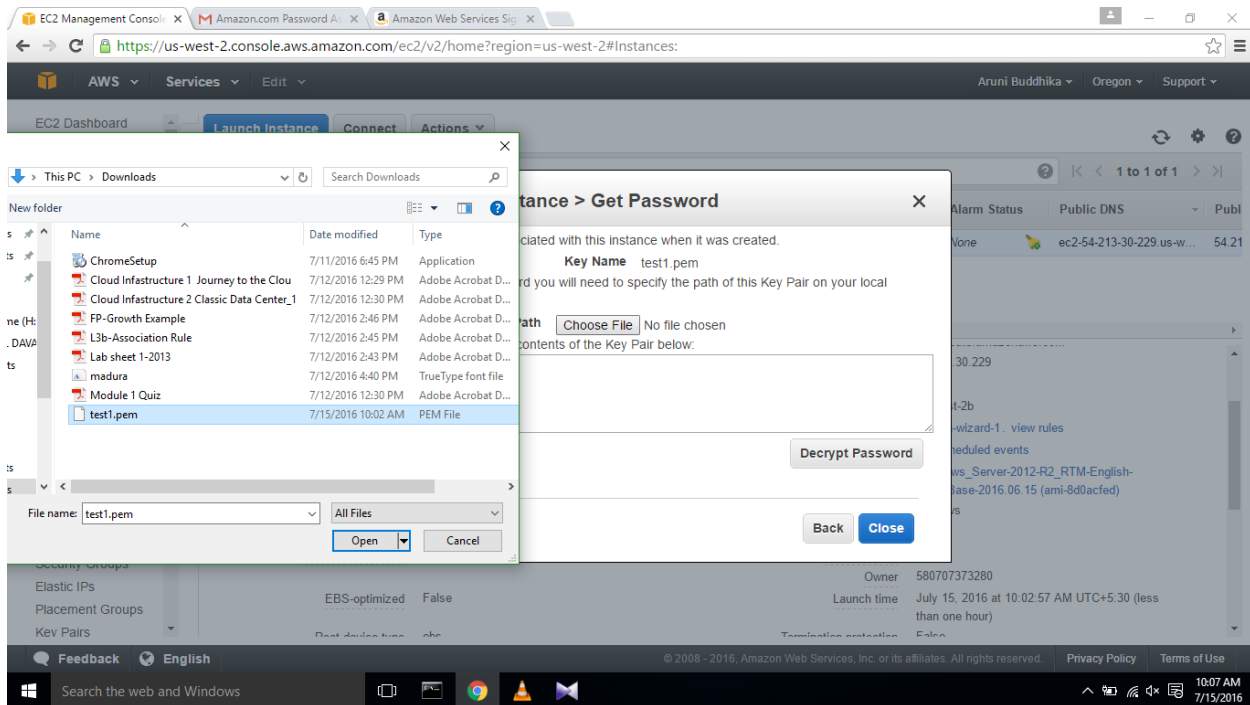
- **Connect the instance.**

In the **Connect to Your Instance** dialog box, choose **Get Password**

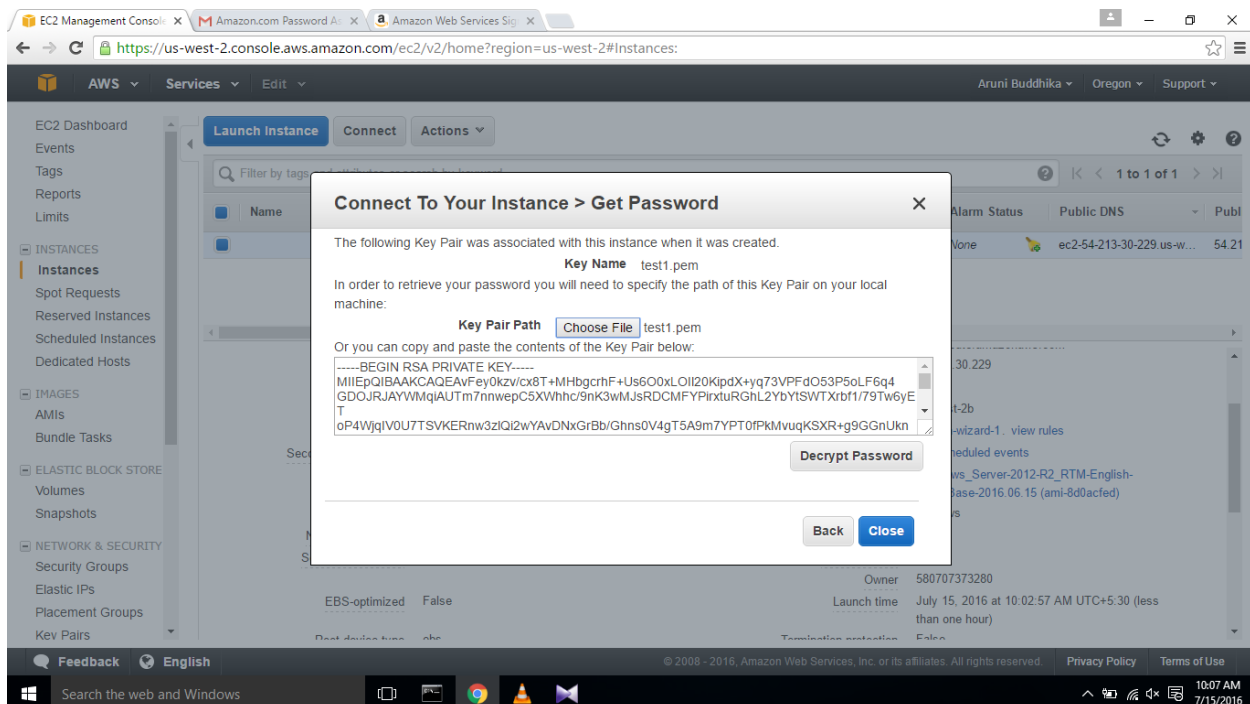


Choose **Browse** and navigate to the private key file you created when you launched the instance. Select the file and choose **Open** to copy the entire contents of the file into contents box.

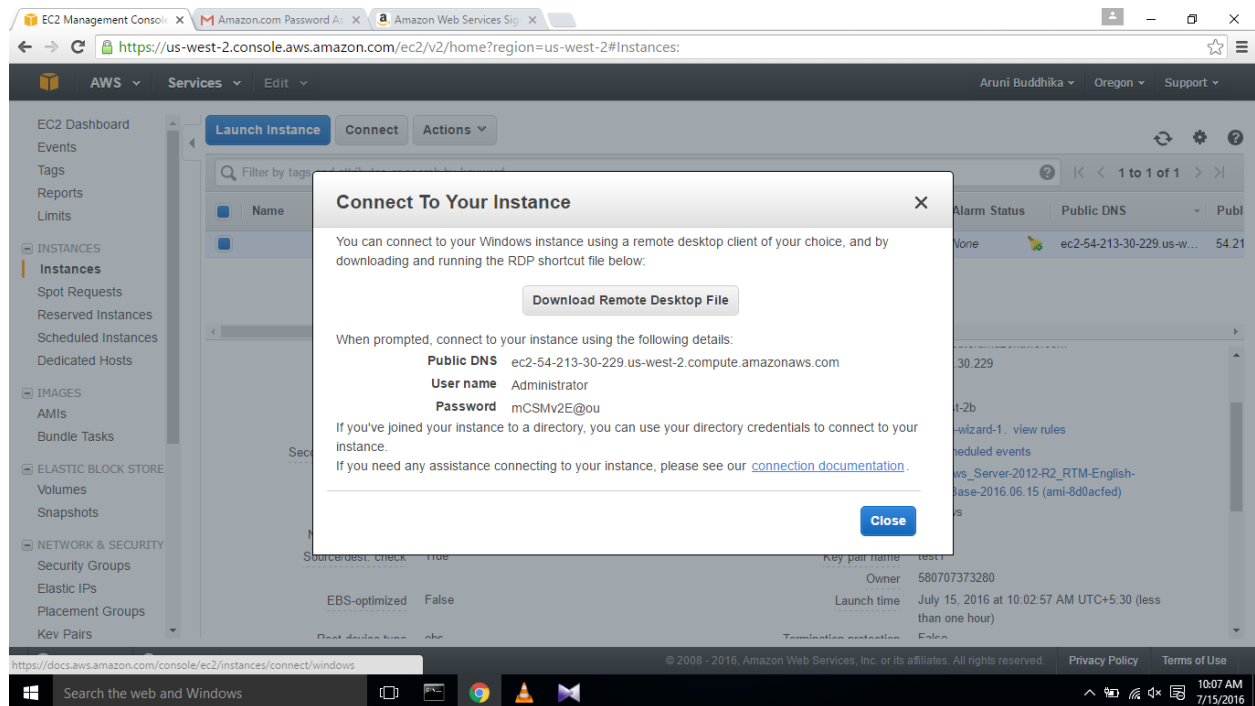




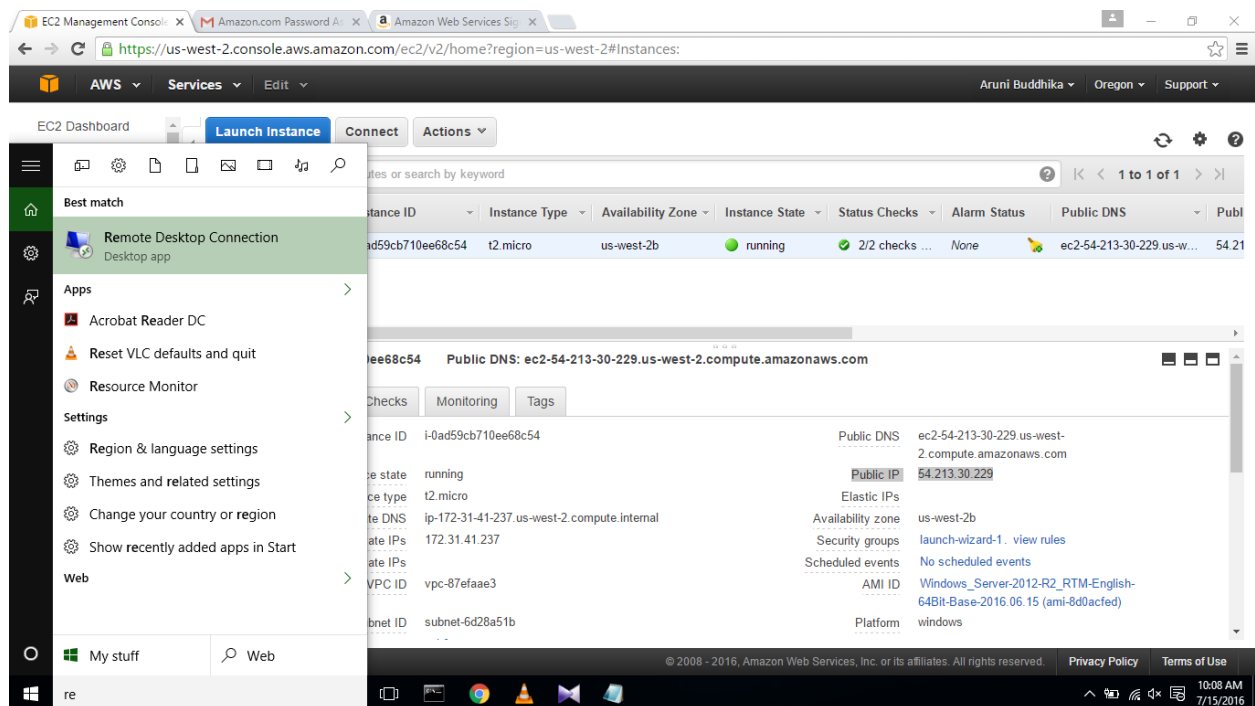
Choose **Decrypt Password**. The console displays the default administrator password for the instance in the **Connect to Your Instance** dialog box, replacing the link to **Get Password** shown previously with the actual password.



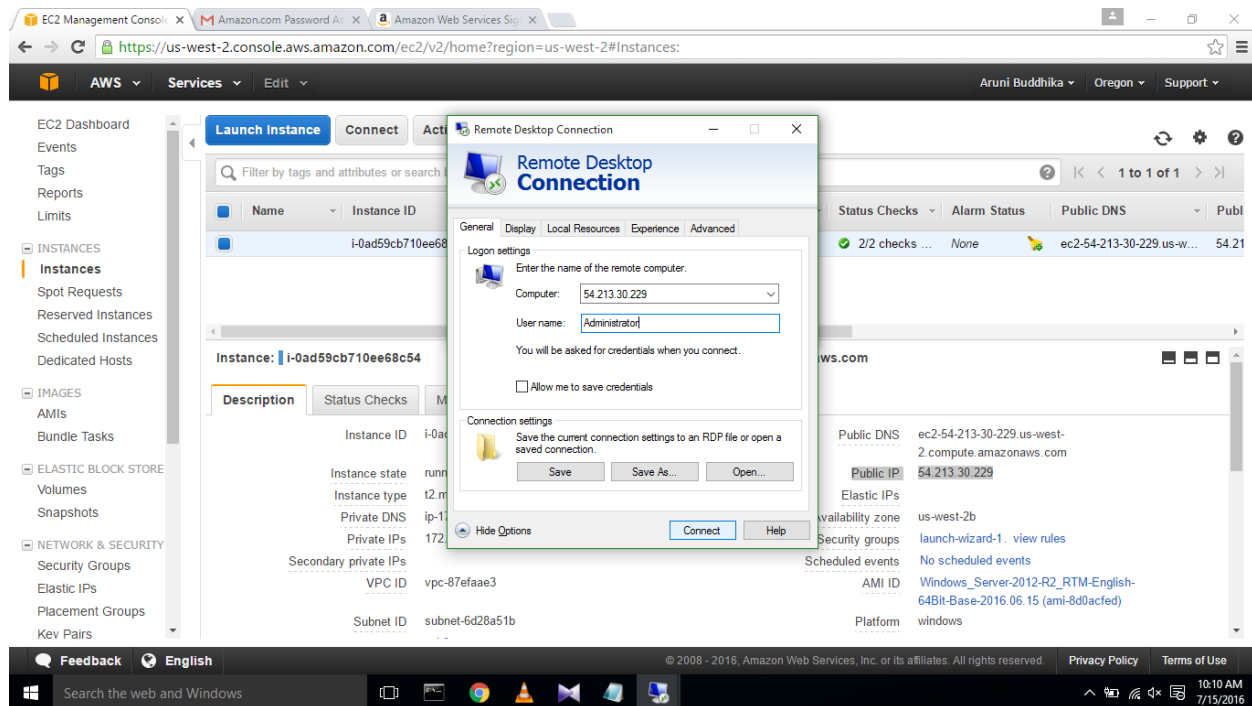
When you have finished, you can choose **Close** to dismiss the **Connect to Your Instance** dialog box.



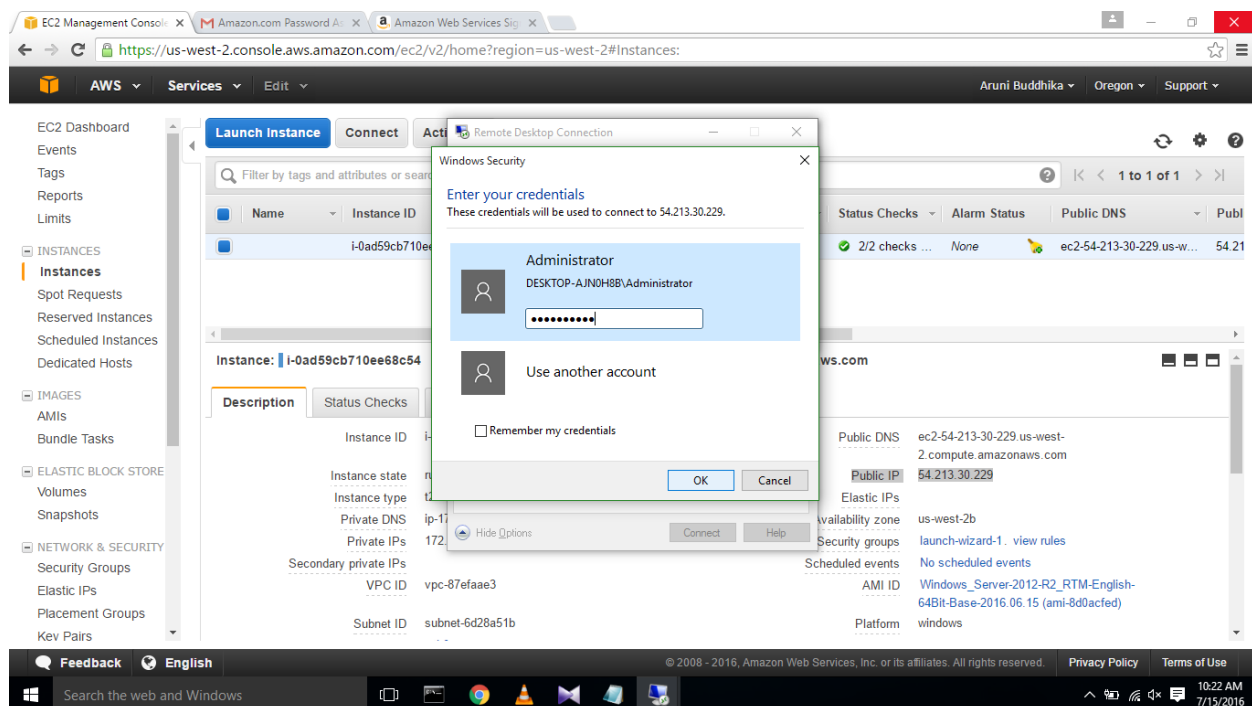
Open **Remote Desktop Connection**. And continue as following.

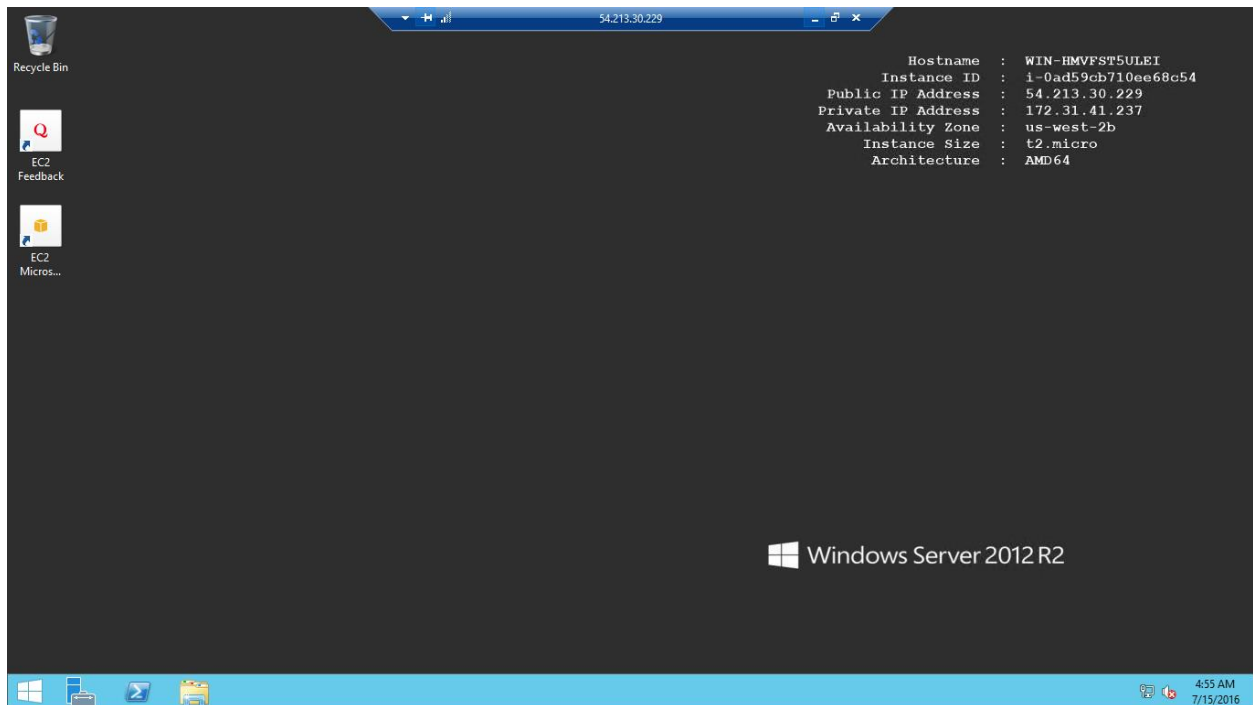
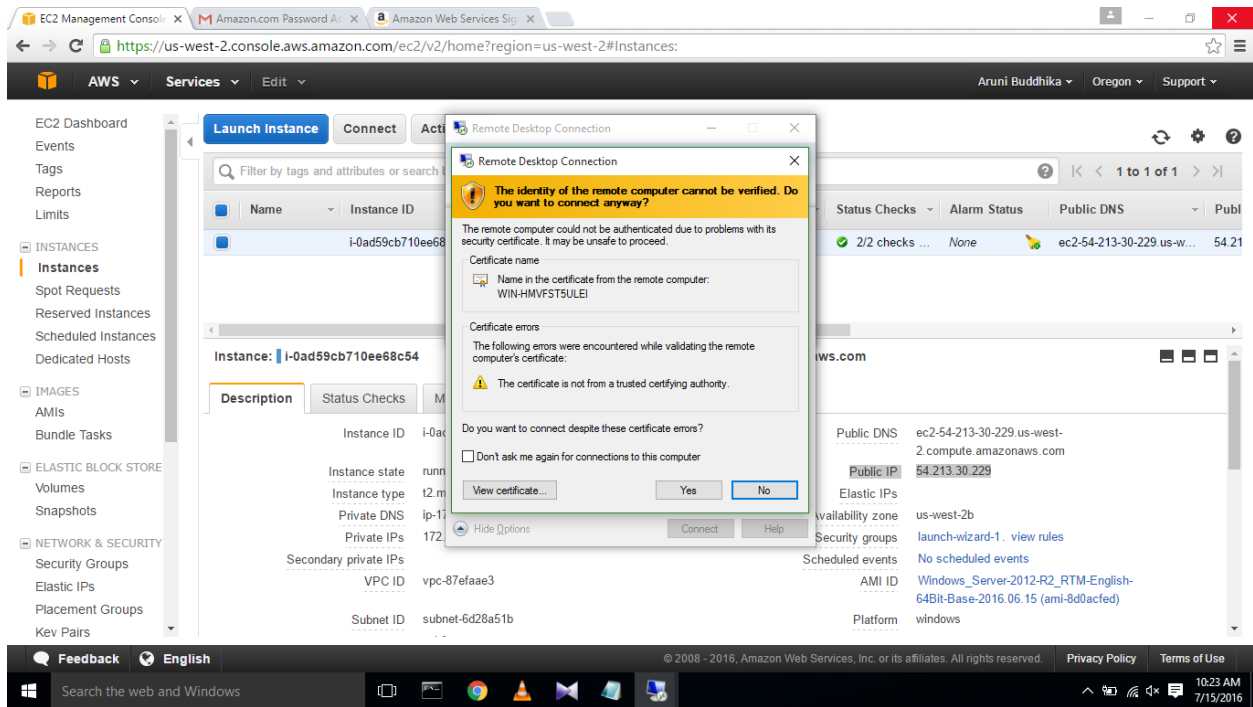


Enter the previously generated public ip address and user name in remote desktop connection dialog box and select connect.



Next prompt dialog box enter the password under administrator and click ok.





- **References:**

http://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/EC2_GetStarted.html