

# **Enterprise Standards and Best Practices for IT Infrastructure**

**Amazon EC2 Windows Instances**

**Assignment Report 01**

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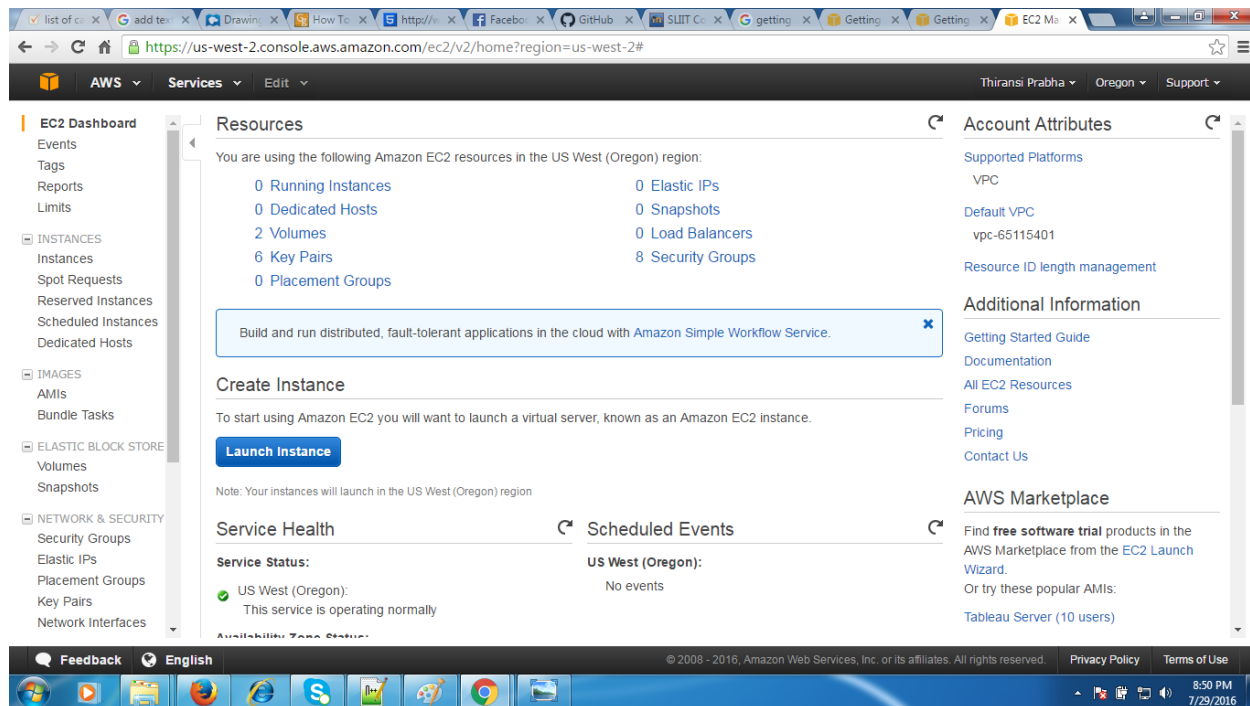
## Tasks

To complete this tutorial, performed the following tasks:

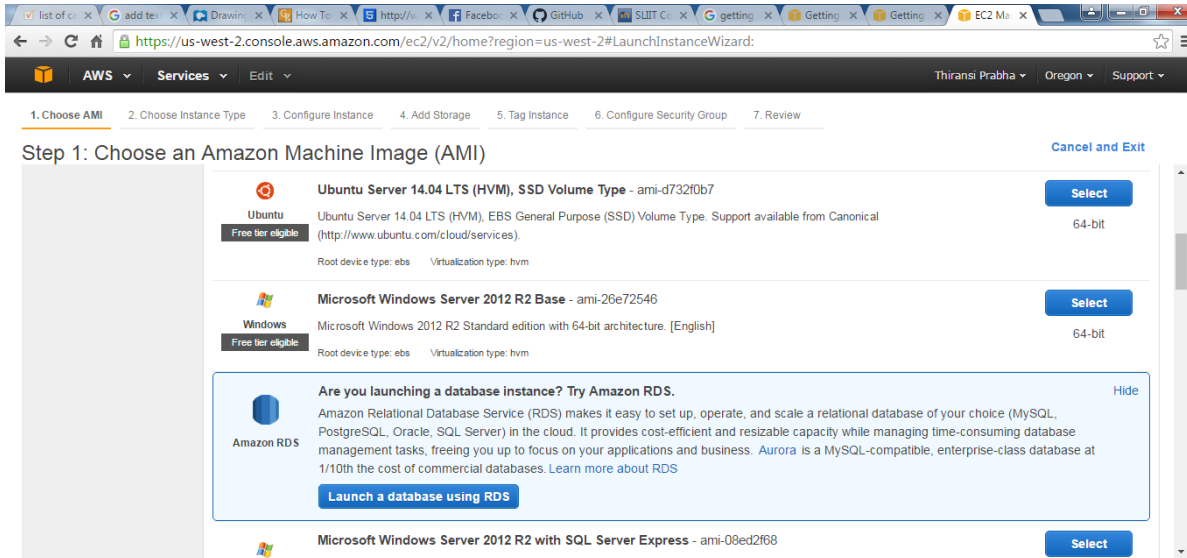
1. Launch an Instance
2. Connect to Your Instance

## To launch an instance

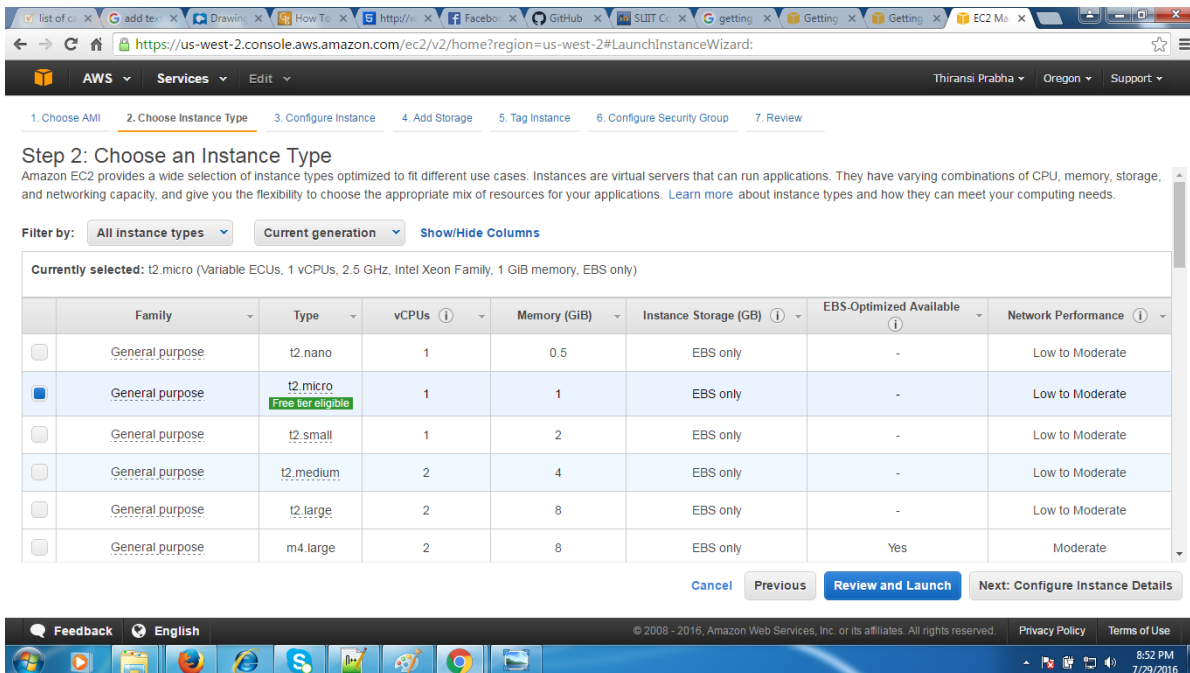
1. Open the Amazon EC2 console at <https://console.aws.amazon.com/ec2/>.
2. From the console dashboard, choose **Launch Instance**.



3. 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. Notice that these AMIs are marked "Free tier eligible."



- On the **Choose an Instance Type** page, you can select the hardware configuration of your instance. Select the t2.micro type, which is selected by default. Notice that this instance type is eligible for the free tier.



5. Then click the Configure Instance Details and keep the default values as it is.

The screenshot shows the 'Configure Instance Details' step in the AWS Management Console. The breadcrumb trail at the top indicates the sequence: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance (highlighted), 4. Add Storage, 5. Tag Instance, 6. Configure Security Group, 7. Review. The page title is 'Step 3: Configure Instance Details'. Below the title, a brief instruction states: '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.'

The configuration form includes the following fields and options:

- Number of instances:** A text input field containing the value '1'. A link 'Launch into Auto Scaling Group' is provided.
- Purchasing option:** A checkbox labeled 'Request Spot Instances' is currently unchecked.
- Network:** A dropdown menu showing 'vpc-65115401 (172.31.0.0/16) (default)'. A 'Create new VPC' link is available.
- Subnet:** A dropdown menu showing 'No preference (default subnet in any Availability Zone)'. A 'Create new subnet' link is available.
- Auto-assign Public IP:** A dropdown menu showing 'Use subnet setting (Enable)'.
- Domain join directory:** A dropdown menu showing 'None'. A 'Create new directory' link is available.
- IAM role:** A dropdown menu showing 'None'. A 'Create new IAM role' link is available.
- Shutdown behavior:** A dropdown menu showing 'Stop'.
- Enable termination protection:** A checkbox labeled 'Protect against accidental termination' is unchecked.
- Monitoring:** A checkbox labeled 'Enable CloudWatch detailed monitoring' is unchecked.

At the bottom of the form, there are four buttons: 'Cancel', 'Previous', 'Review and Launch' (highlighted in blue), and 'Next: Add Storage'.

The footer of the console shows a 'Feedback' link, 'English' language selection, copyright information '© 2008 - 2016, Amazon Web Services, Inc. or its affiliates. All rights reserved.', 'Privacy Policy', and 'Terms of Use' links. The system clock indicates '8:52 PM 7/29/2016'.

6. Under **Add Storage** give the size as 30GB

The screenshot shows the 'Add Storage' step in the AWS Management Console. The breadcrumb trail at the top indicates the sequence: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage (highlighted), 5. Tag Instance, 6. Configure Security Group, 7. Review. The page title is 'Step 4: Add Storage'. Below the title, a brief instruction states: '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.'

The storage configuration table is as follows:

| Volume Type | Device    | Snapshot      | Size (GiB) | Volume Type               | IOPS       | Throughput (MB/s) | Delete on Termination               | Encrypted     |
|-------------|-----------|---------------|------------|---------------------------|------------|-------------------|-------------------------------------|---------------|
| Root        | /dev/sda1 | snap-432bd8be | 30         | General Purpose SSD (GP2) | 100 / 3000 | N/A               | <input checked="" type="checkbox"/> | Not Encrypted |

Below the table, there is an 'Add New Volume' button. A blue informational box contains the text: '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.'

At the bottom of the form, there are four buttons: 'Cancel', 'Previous', 'Review and Launch' (highlighted in blue), and 'Next: Tag Instance'.

The footer of the console shows a 'Feedback' link, 'English' language selection, copyright information '© 2008 - 2016, Amazon Web Services, Inc. or its affiliates. All rights reserved.', 'Privacy Policy', and 'Terms of Use' links. The system clock indicates '8:52 PM 7/29/2016'.

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

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

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

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-7, 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-26e72546

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

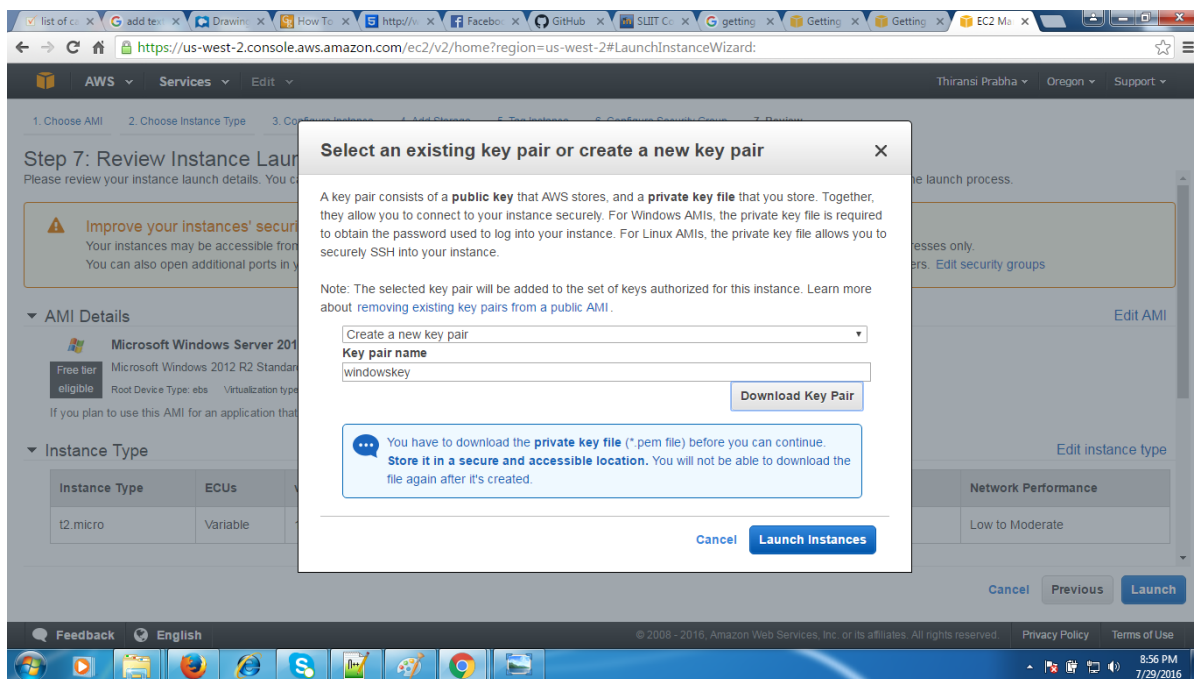
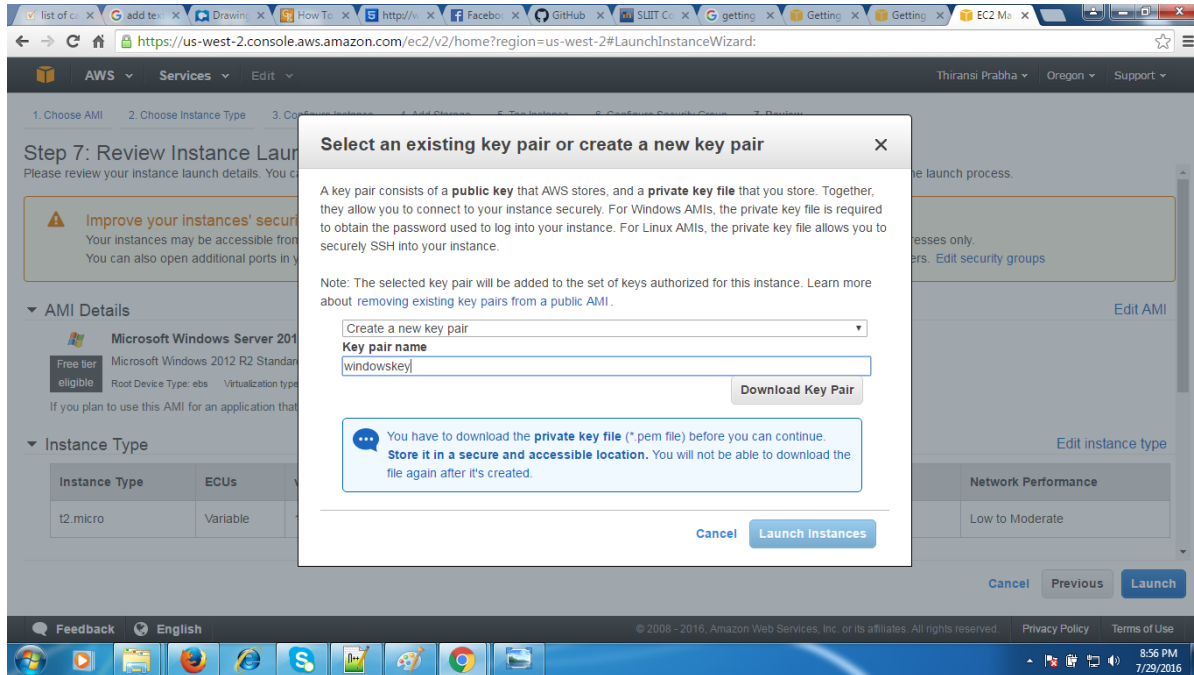
If you plan to use this AMI for an application that benefits from Microsoft License Mobility, fill out the [License Mobility Form](#). [Don't show me this again](#)

Instance Type [Edit instance type](#)

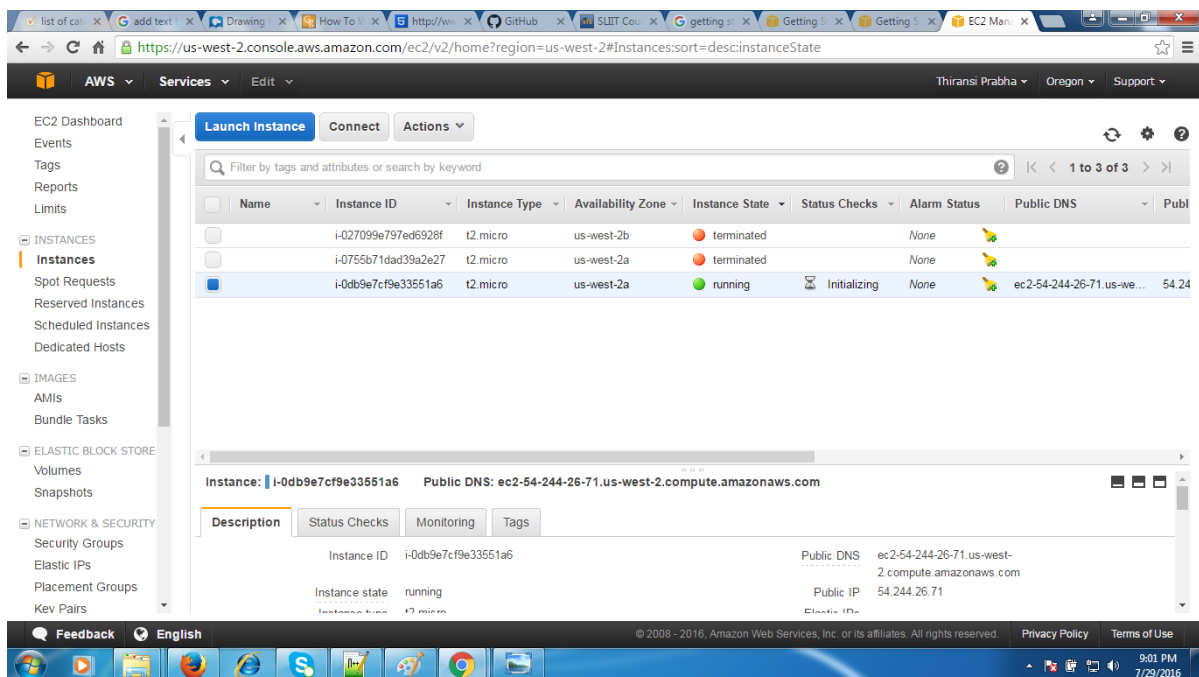
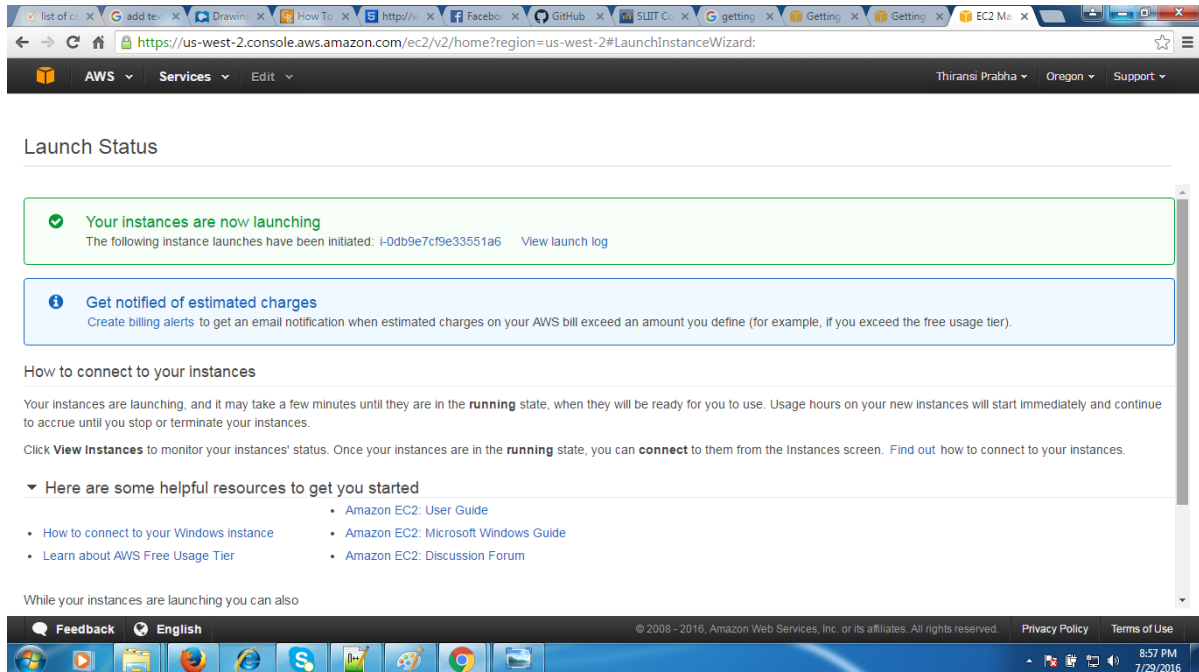
| Instance Type | ECUs     | vCPUs | Memory (GiB) | Instance Storage (GB) | EBS-Optimized Available | Network Performance |
|---------------|----------|-------|--------------|-----------------------|-------------------------|---------------------|
| t2.micro      | Variable | 1     | 1            | EBS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

Cancel Previous Launch

9. When prompted for a key pair, you can create a new key pair. Select **Create a new key pair**, enter a name for the key pair, and then choose **Download Key Pair**. After select Launch Instances.



10. A confirmation page lets you know that your instance is launching. Choose **View Instances** to close the confirmation page and return to the console.

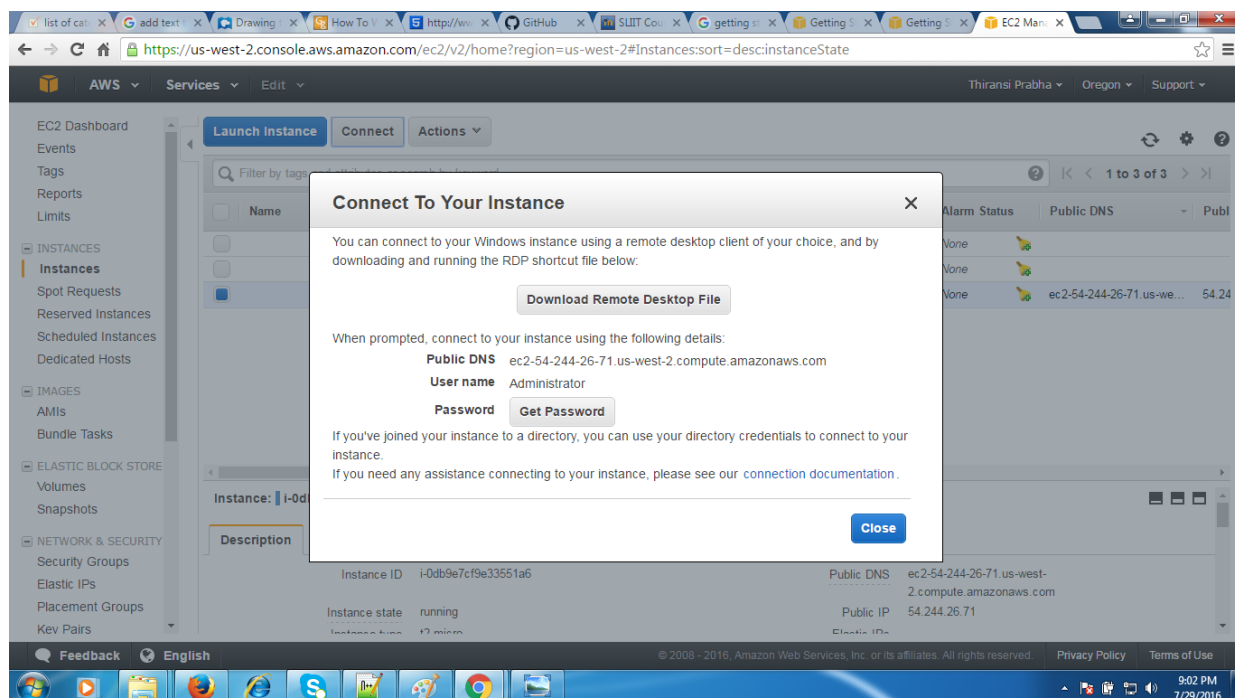


On the **Instances** screen, you can view the status of the launch. It takes a short time for an instance to launch. When you launch an instance, its initial state is pending. After the instance starts, its state changes to running and it receives a public DNS name.

## Step 2: Connect to Your Instance

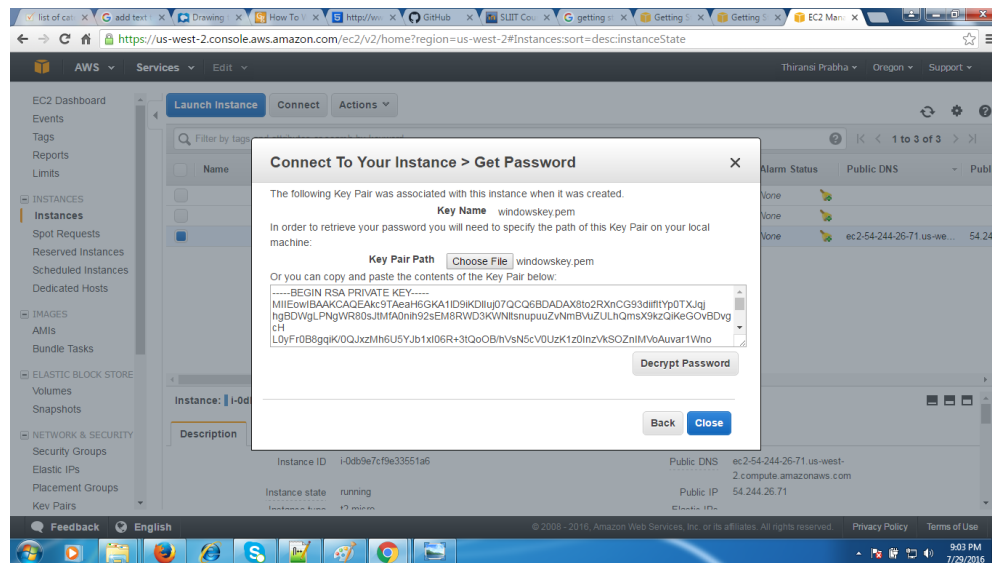
To connect to a Windows instance, you must retrieve the initial administrator password and then specify this password when you connect to your instance using Remote Desktop.

1. In the Amazon EC2 console, select the instance, and then choose **Connect**.



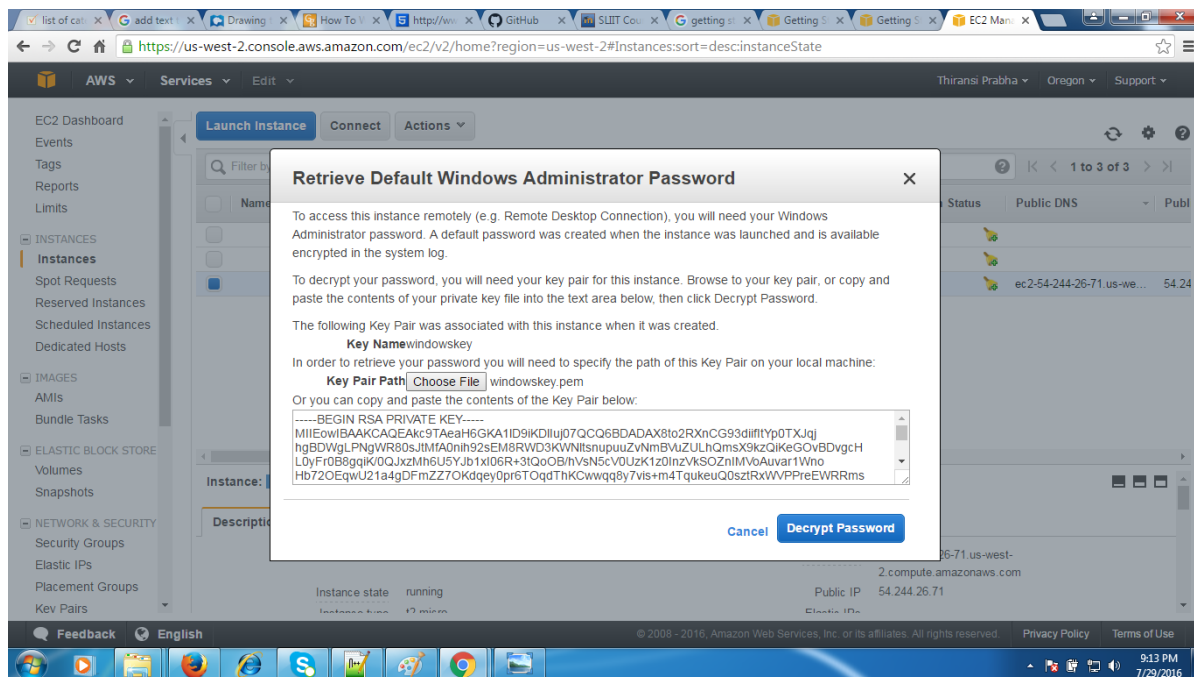


2. In the **Connect To Your Instance** dialog box, choose **Get Password** and browse the key pair have been downloaded.

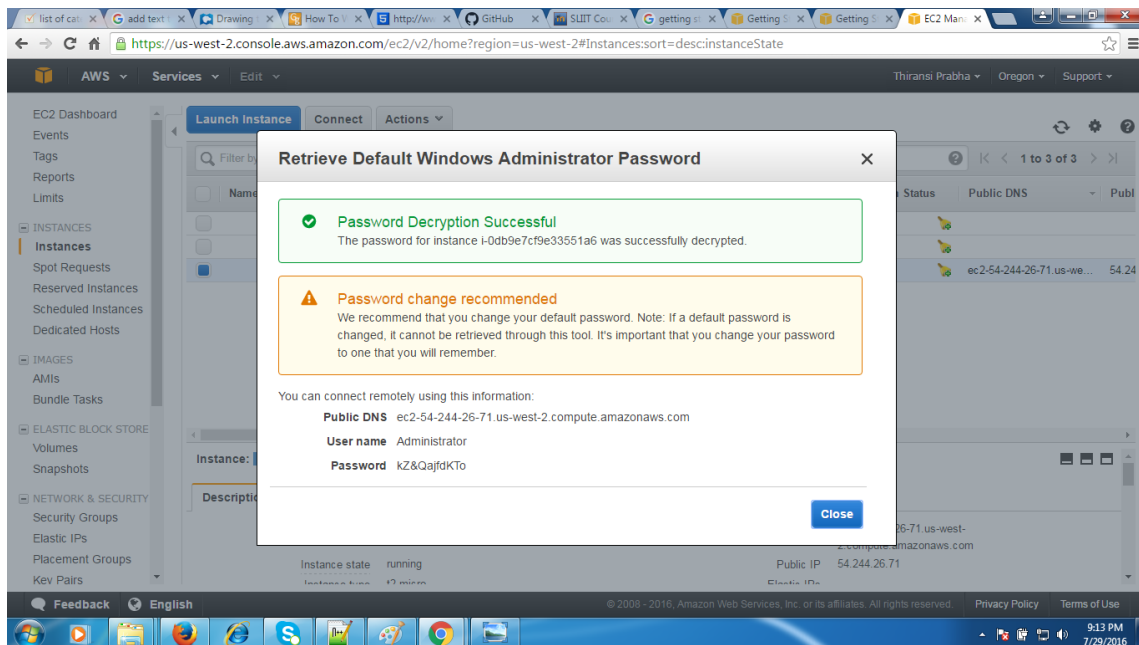


3.

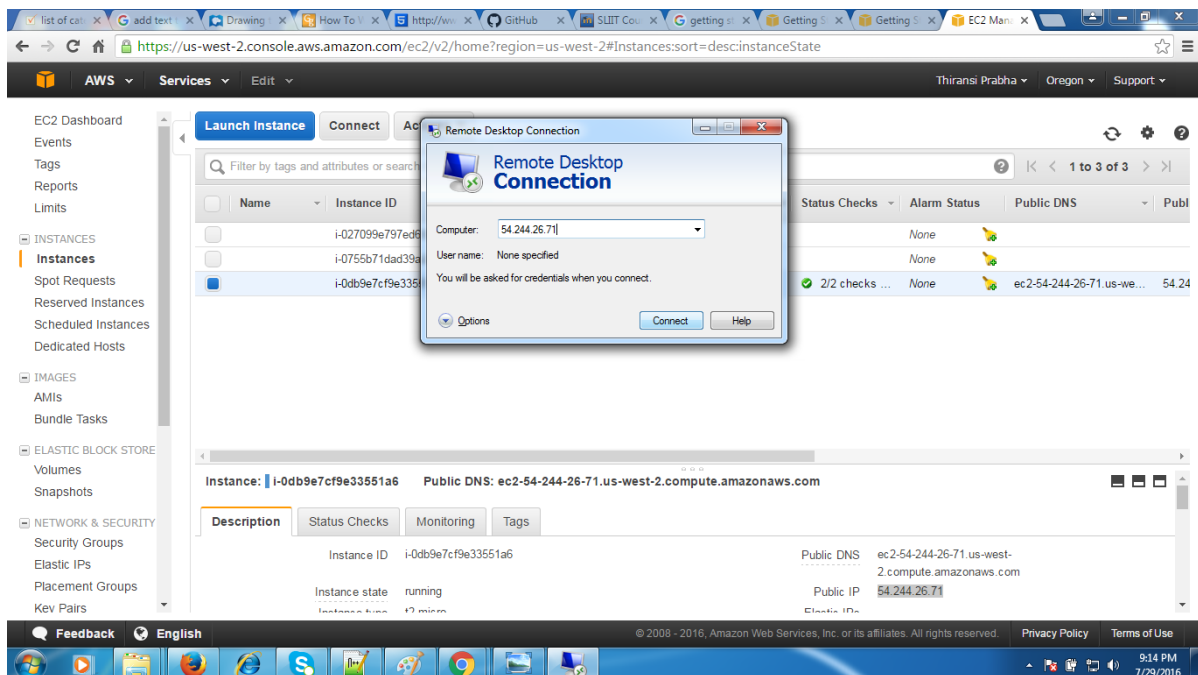
Choose **Decrypt Password**.



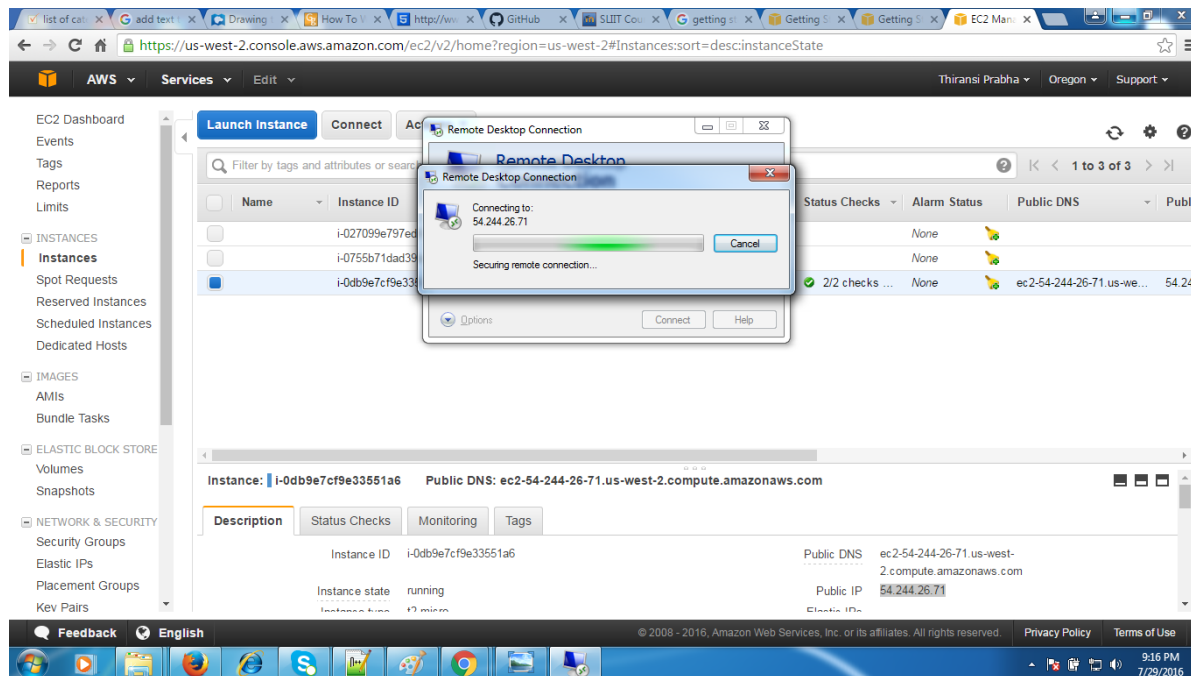
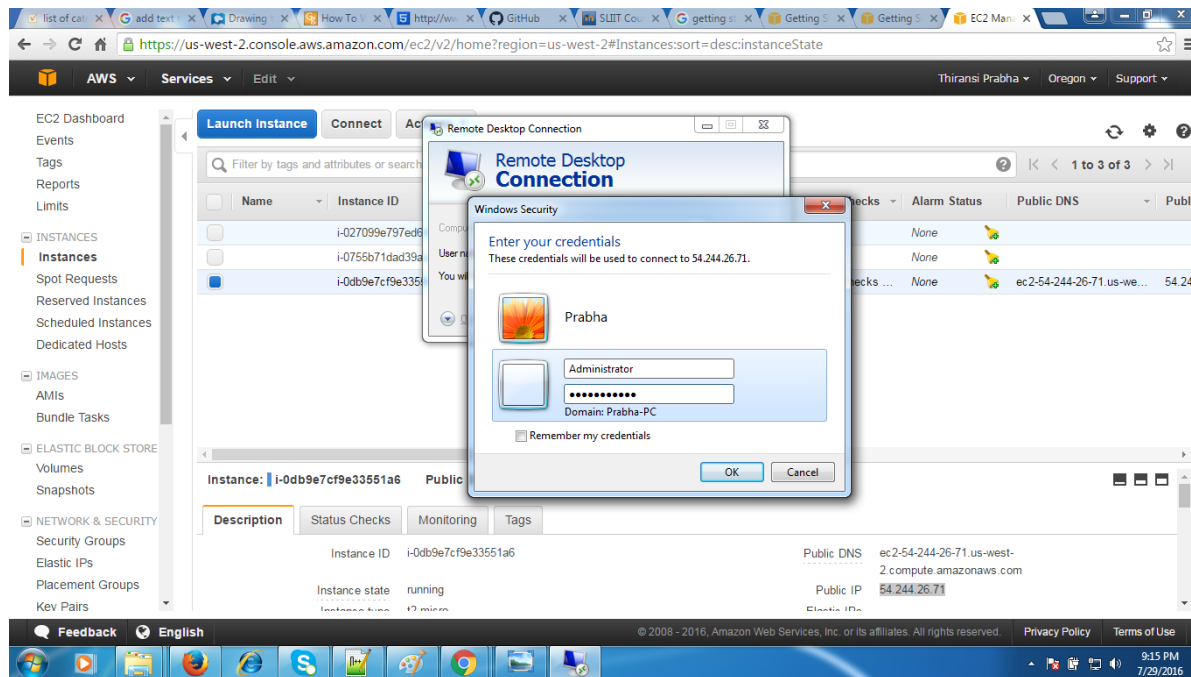
- Record the default administrator password, or copy it to the clipboard. You need this password to connect to the instance.



- Run Remote Windows Connection from your PC and give the Public DNS of Instances and connect.



## 6. Give the Credentials and OK



7. choose **Yes** in the **Remote Desktop Connection** window to connect to your instance

