



SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

Enterprise Standards and Best Practices for IT Infrastructure

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Group Number:

Practical Session: WD

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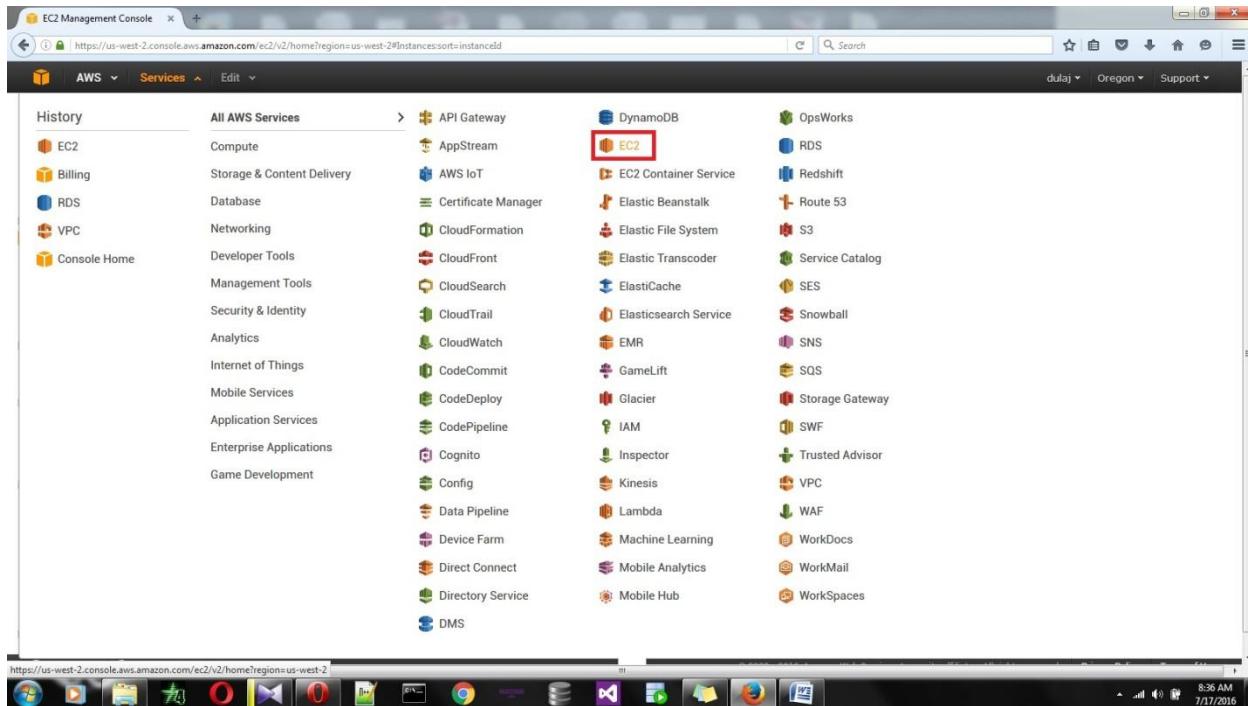
Date of Submission: 28-07-2016

Date of Evaluation : _____

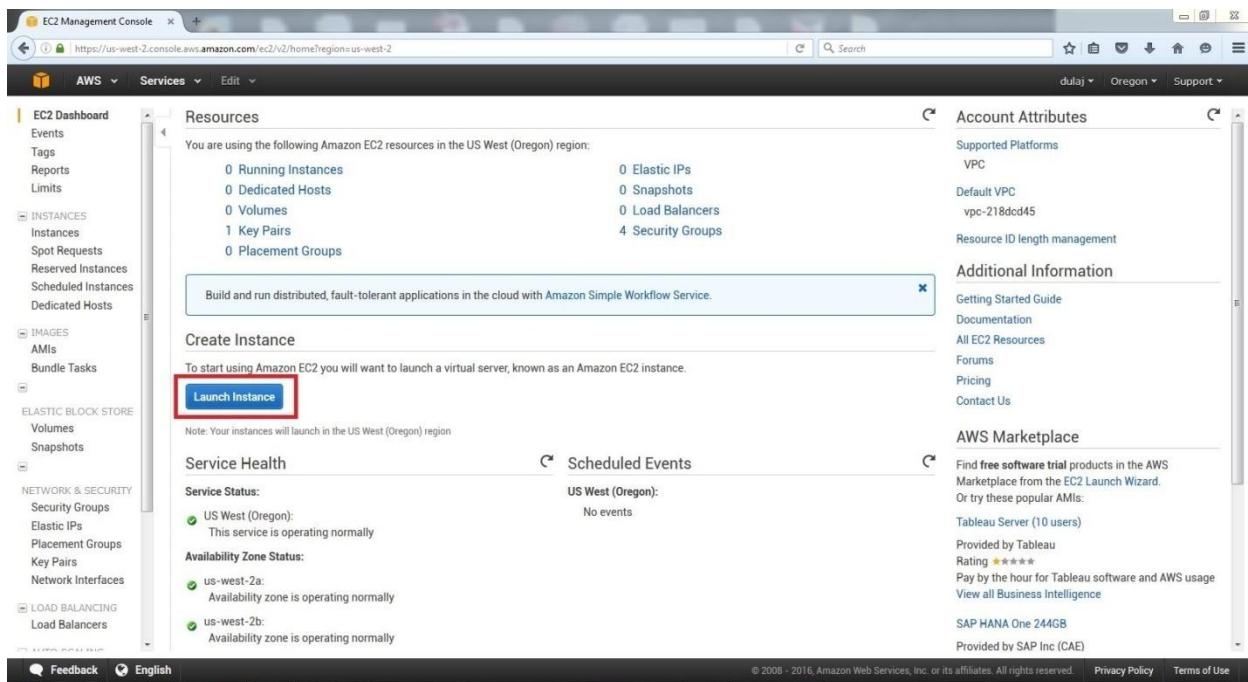
Evaluators Signature : _____

Step 1

To launch a windows instance, go to “EC2” from the Services.



On the EC2 page, click “Launch Instance”.



On the resulting page which shows the available AMIs (Amazon Machine Images), click “Select” of “Microsoft Windows Server 2012R2 Base”.

The screenshot shows the AWS EC2 Management Console with the URL <https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard>. The page is titled "Step 1: Choose an Amazon Machine Image (AMI)". It lists several AMIs under "Community AMIs", including Red Hat Enterprise Linux 7.2 (HVM), SUSE Linux Enterprise Server 12 SP1 (HVM), Ubuntu Server 14.04 LTS (HVM), and Microsoft Windows Server 2012 R2 Base (HVM). The Microsoft Windows Server 2012 R2 Base AMI is highlighted with a red box around its "Select" button and the entire row. The "Select" button for this AMI is also highlighted with a red box.

Step 2

Select the type of the instance. Here I choose “t2.micro” because is eligible for the free tier since this is for tutorial purposes. Click “Next: Configure Instance Details”.

The screenshot shows the AWS EC2 Management Console with the URL <https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard>. The page is titled "Step 2: Choose an Instance Type". It displays a table of instance types, with "t2.micro" selected and highlighted with a red box. The "Review and Launch" button at the bottom right is also highlighted with a red box.

Family	Type	vCPUs	Memory (GB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate
General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate
General purpose	t2.small	1	2	EBS only	-	Low to Moderate
General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
General purpose	t2.large	2	8	EBS only	-	Low to Moderate
General purpose	m4.large	2	8	EBS only	Yes	Moderate
General purpose	m4.xlarge	4	16	EBS only	Yes	High
General purpose	m4.2xlarge	8	32	EBS only	Yes	High
General purpose	m4.4xlarge	16	64	EBS only	Yes	High

Step 3

On the “Configure Instance Details”, select the “Network” and “Subnet” and click “Add Storage”.

The screenshot shows the AWS EC2 Management Console interface. The user is on Step 3: Configure Instance Details. In the Network section, the VPC is set to 'vpc-218dc045 (172.31.0.0/16) (default)' and the Subnet is set to 'subnet-43b7c627(172.31.16.0/20) | Default in us-west-2'. Other settings like Auto-assign Public IP, Domain join directory, IAM role, Shutdown behavior, and Tenancy are also visible. At the bottom, there's a 'Network interfaces' section and a row of buttons: Cancel, Previous, Review and Launch (which is highlighted with a red box), and Next: Add Storage.

Step 4

On “Add Storage” page, leave the default values (Size as 30GB). Click “Review and Launch”.

The screenshot shows the AWS EC2 Management Console interface on the Step 4: Add Storage page. A new volume is listed under the 'Volume Type' section: 'Root' device '/dev/sda1' with a 'Size (GiB)' of 30, using 'General Purpose SSD (GP2)' with 'IOPS' of 100 / 3000 and 'Throughput (MB/s)' of N/A. The 'Delete on Termination' and 'Encrypted' options are both unchecked. Below the table, a note states: "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, there are buttons for Cancel, Previous, Review and Launch (highlighted with a red box), and Next: Tag Instance.

Step 5

Click “Launch” to launch the instance.

The screenshot shows the AWS EC2 Management Console. The URL is https://us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#LaunchInstanceWizard. The page is titled "Step 7: Review Instance Launch". It displays the following sections:

- AMI Details:** Shows Microsoft Windows Server 2012 R2 Base - ami-8d0acf6. Status: Free tier eligible. Root Device Type: ebs. Virtualization type: hvm.
- Instance Type:** Shows t2.micro selected. Configuration: ECUs: Variable, vCPUs: 1, Memory (GiB): 1, Instance Storage (GB): EBS only, EBS-Optimized Available: -, Network Performance: Low to Moderate.
- Security Groups:** Shows launch-wizard-2 selected. Description: launch-wizard-2 created 2016-07-17T08:49:07.053+05:30.

At the bottom right, there are "Cancel", "Previous", and a large blue "Launch" button, which is highlighted with a red box.

Step 6

You will be asked to choose a key pair on the resulting dialog box. Select “Create a new key pair” and enter a name for the Key pair. Here I enter as “shanakaWinKey”. Click “Download Key Pair”. Store the downloaded key pair file in a secure location. Click “Launch Instance”.

The screenshot shows the same AWS EC2 Management Console interface as above, but with a modal dialog box overlaid. The dialog is titled "Select an existing key pair or create a new key pair". It contains the following information:

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.

Options:
Create a new key pair
Key pair name: shanakaWinKey

A message box 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 right of the dialog, there are "Cancel" and a large blue "Launch Instances" button, which is highlighted with a red box.

Step 7

On the resulting confirmation page, we can see a message saying that the instance had been initiated.

Your instances are now launching
The following instance launches have been initiated: i-0e419b238c142b6e9 [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
- 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](#)

After a few seconds we can see that the instance is running state.

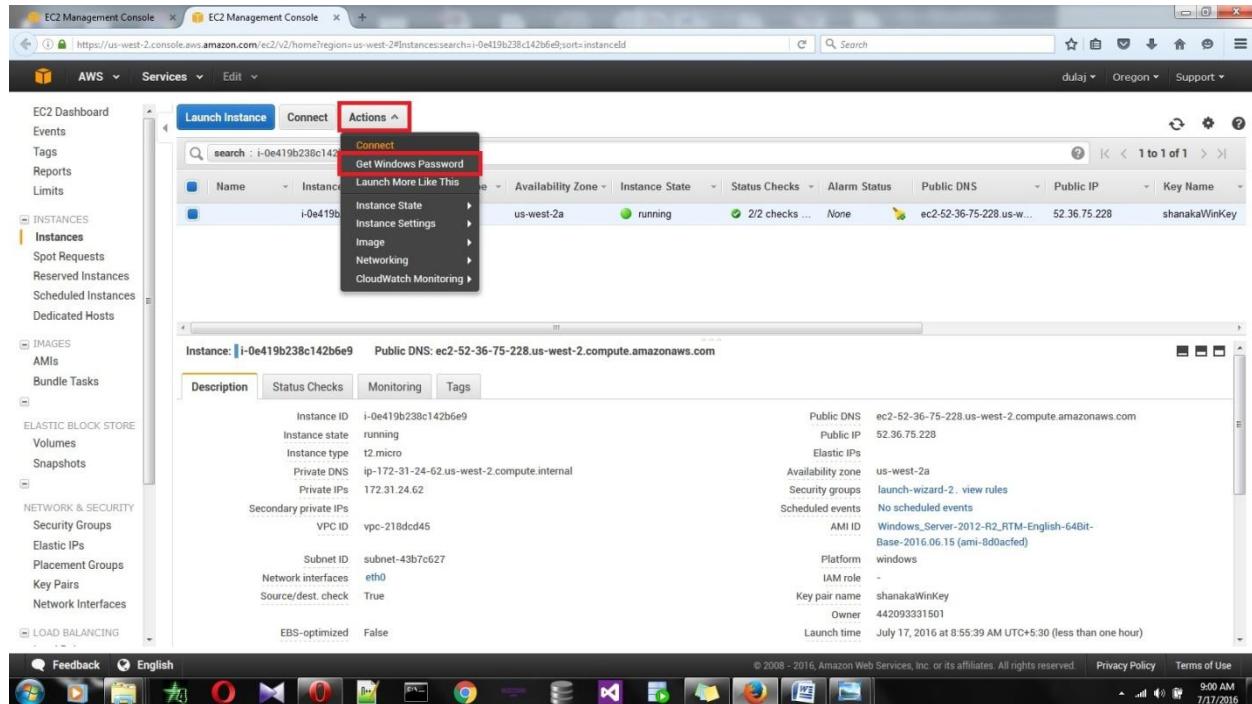
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP	Key Name
i-0e419b238c142b6e9	t2.micro	us-west-2a	running	Initializing	Loading...	ec2-52-36-75-228.us-west-2...	52.36.75.228	shanakaWinKey	

Instance: i-0e419b238c142b6e9 Public DNS: ec2-52-36-75-228.us-west-2.compute.amazonaws.com

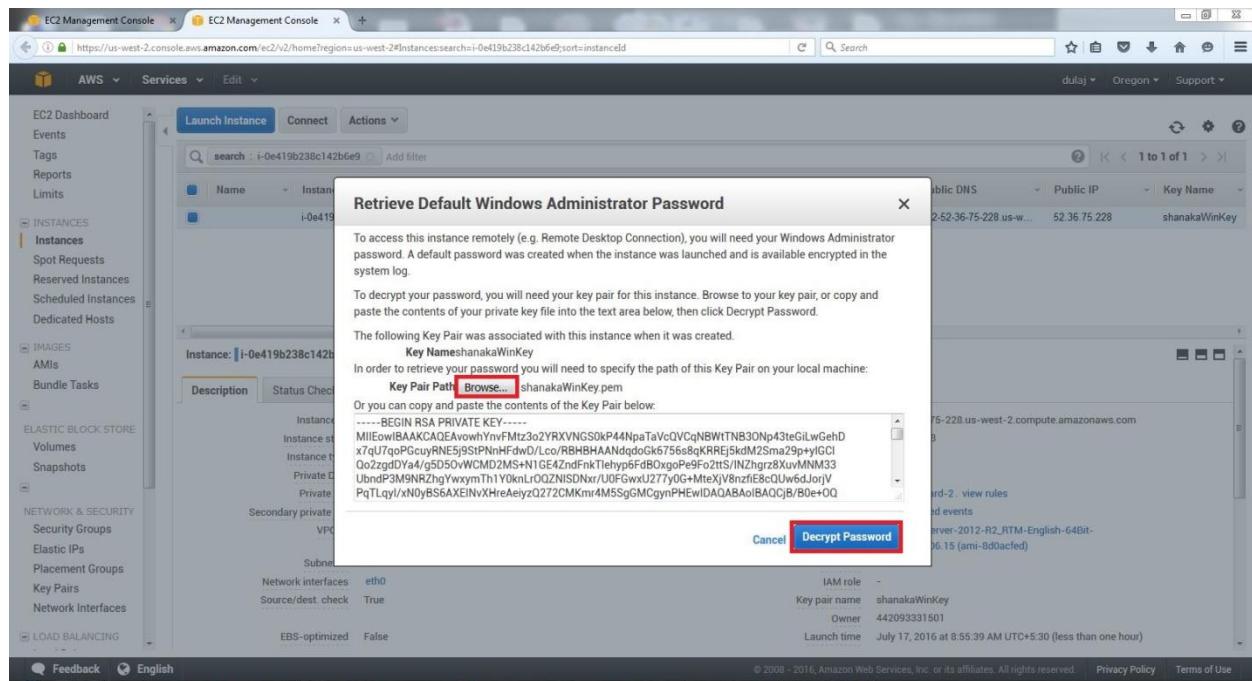
Description	Status Checks	Monitoring	Tags
Instance ID: i-0e419b238c142b6e9	Instance state: running	Instance type: t2.micro	Private DNS: ip-172-31-24-62.us-west-2.compute.internal
Secondary private IPs:	VPC ID: vpc-218ddcd45	Subnet ID: subnet-43b7c627	Network interfaces: eth0
Source/dest. check: True	EBS-optimized: False	AMI ID: Windows_Server-2012-R2_RTM-English-64Bit-Base-2016.06.15 (ami-8d0acfed)	Platform: windows
		IAM role: -	Owner: 442093331501
		Key pair name: shanakaWinKey	Launch time: July 17, 2016 at 8:55:39 AM UTC+5:30 (less than one hour)

Step 8

Select the instance that we have created and click “Actions”. Click “Get Windows Password” to get the password of the created instance.

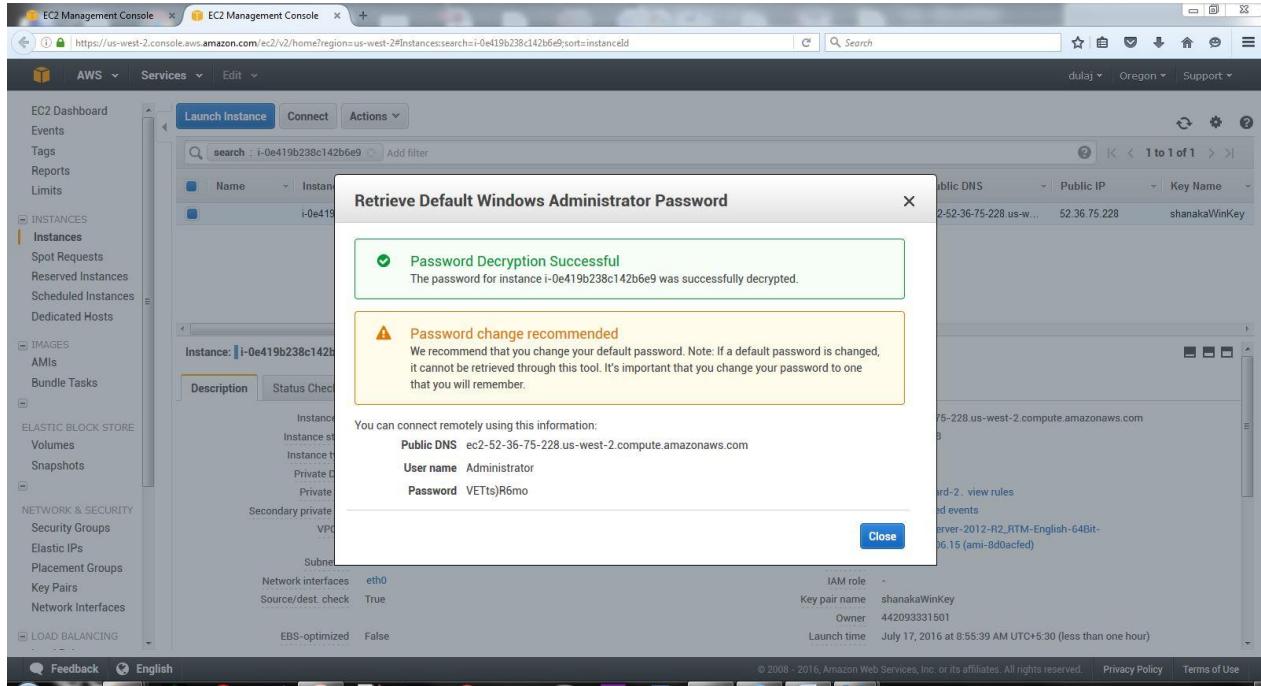


On the resulting dialog box which asks about the Key Pair file, choose the key pair file we downloaded and click “Decrypt Password”.



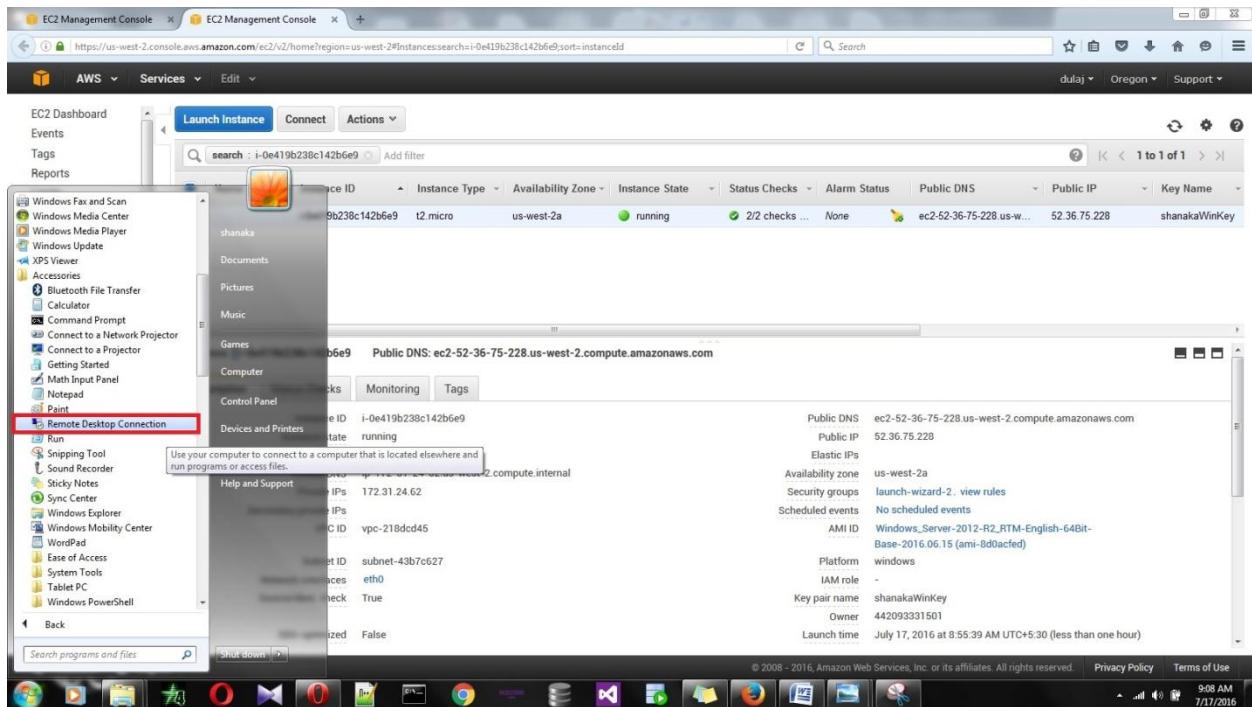
Step 9

On the resulting dialog box, we can see the username and the password for the server that we have created. It is recommended that we change the default created password in a production environment. Click "Close".



Step 10

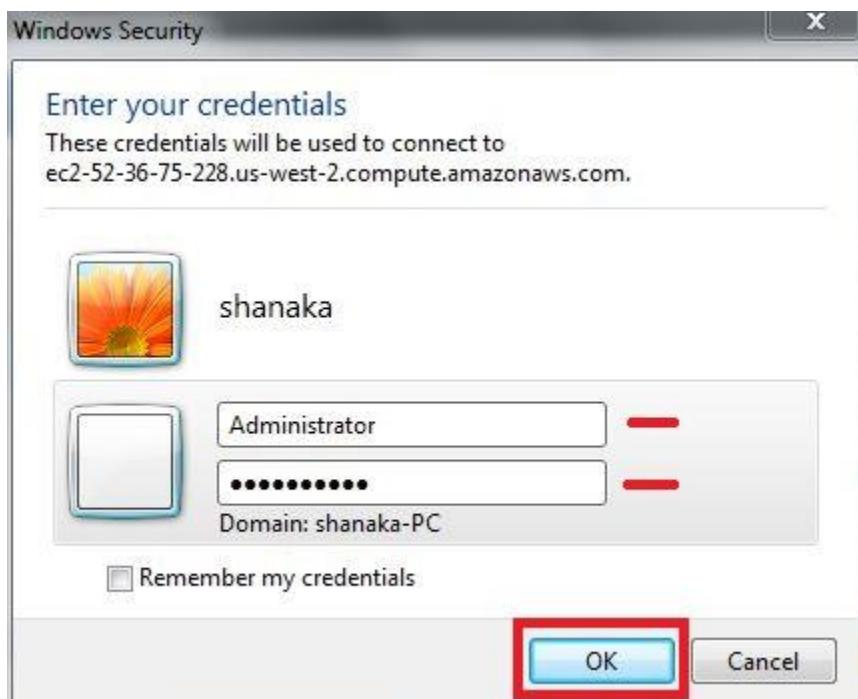
To connect to the windows server we have created, from the taskbar of the windows, open “Remote Desktop Connection”.



Enter the “computer” with the “Public DNS” that we were provided after creating the instance. Click “Connect”.



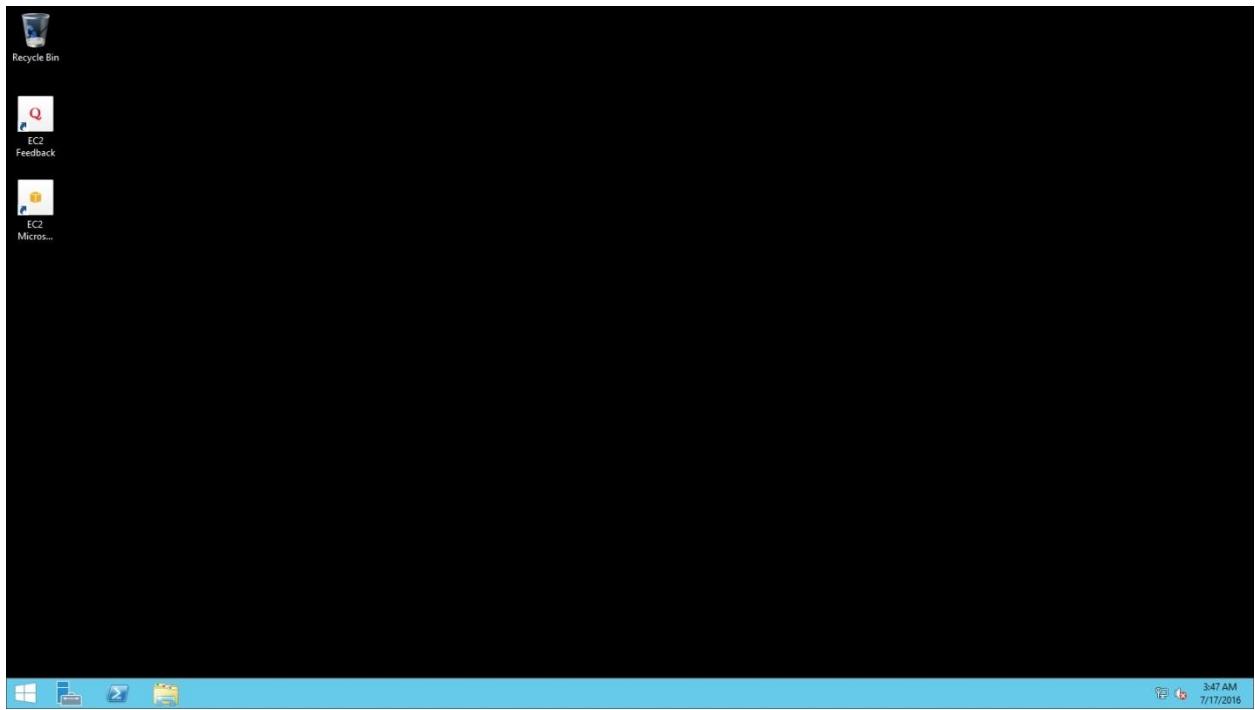
You will then be asked to enter the username and the password. Enter the username and password we got from Step 9. Click “Ok”.



You will be asked about the certification issues. Click “Yes”.



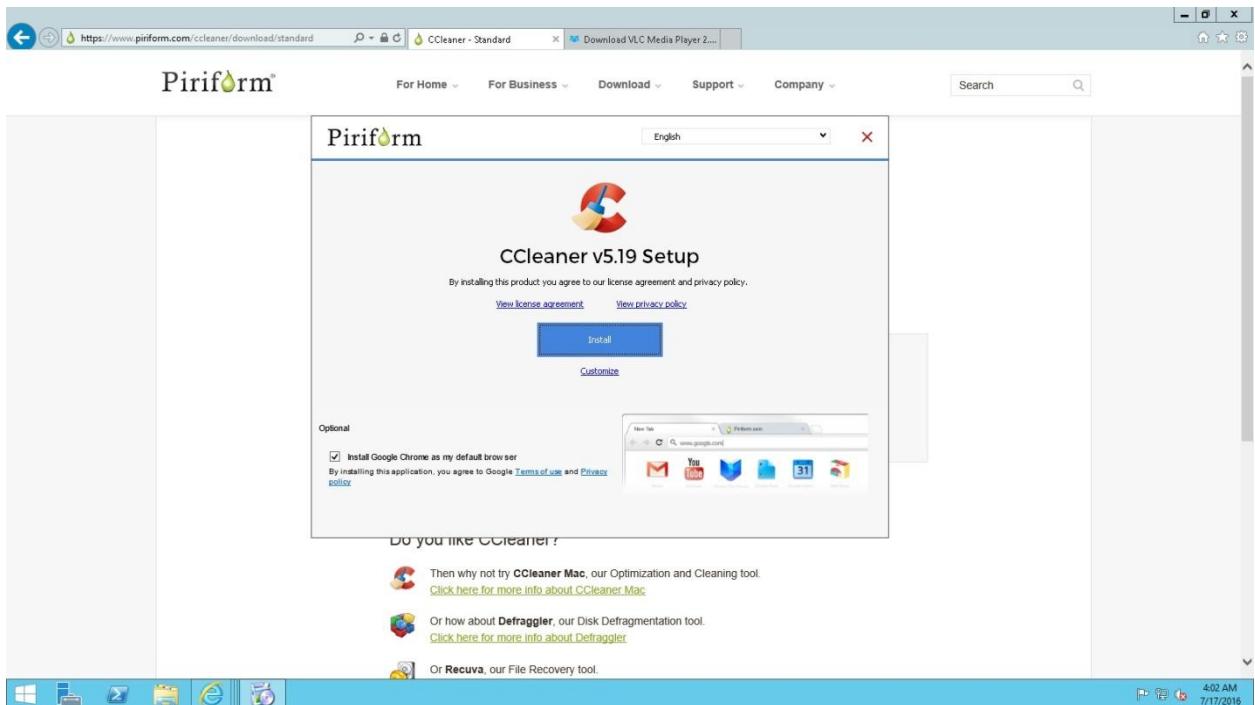
After a few seconds we would be able to work with the windows server we created.

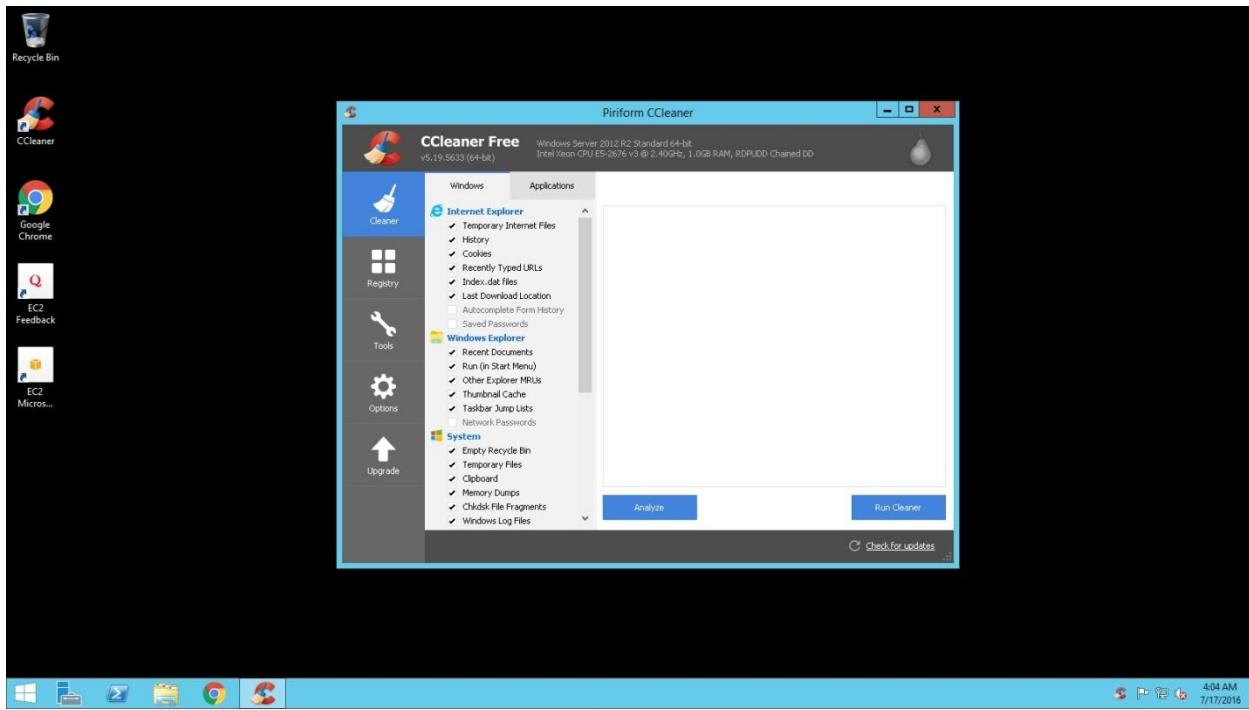


Step 11

Lets try installing some applications on the server.

Here I choose *CCleaner* application which is available for free.





Likewise we can use this server instance as of our own.