



SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

Enterprise Standards and Best Practices for IT Infrastructure

4th Year 2nd Semester 2014

Name: Dedigamuwa D.A.T.D

SLIIT ID: IT13103378

Group Number:

Practical Session: WD Friday

Practical Number : Lab 1

Date of Submission:

Date of Evaluation : _____

Evaluators Signature : _____

Lab 1

Covered Areas

-- Create AWS account -- create Amazon EC2 Windows Instance -- launch Amazon EC2 Windows Instance using remote desktop

EC2 Management Console

https://us-west-2.console.aws.amazon.com/ec2/v2/home?ref=pe_1679150_132208650&sc_campaign=wlc&sc_category=mult&sc_channel=em&sc_content=other

AWS Services Edit

Thinusha 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

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	

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-76ed9312

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 (40 users)

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EC2 Management Console

https://us-west-2.console.aws.amazon.com/ec2/v2/home?ref=pe_1679150_132208650&sc_campaign=wlc&sc_category=mult&sc_channel=em&sc_content=other

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AWS Services Edit

Thinusha Oregon Support

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

Step 1: Choose an Amazon Machine Image (AMI)

Cancel and Exit

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

AWS Marketplace

Community AMIs

Free tier only

Amazon Linux

Free tier eligible

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

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

Select

64-bit

Red Hat

Free tier eligible

Red Hat Enterprise Linux 7.2 (HVM), SSD Volume Type - ami-775e4f16

Red Hat Enterprise Linux version 7.2 (HVM), EBS General Purpose (SSD) Volume Type

Root device type: ebs Virtualization type: hvm

Select

64-bit

SUSE Linux

Free tier eligible

SUSE Linux Enterprise Server 12 SP1 (HVM), SSD Volume Type - ami-d2627db3

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.

Select

64-bit

Feedback English

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EC2 Management Console

https://us-west-2.console.aws.amazon.com/ec2/v2/home?ref=pe_1679150_132208650&sc_campaign=wlc&sc_category=mult&sc_channel=em&sc_content=other

AWS Services Edit

Thinusha Oregon Support

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Free tier eligible

Red Hat Enterprise Linux 7.2 (HVM), SSD Volume Type - ami-775e4f16

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AWS Services Edit

Thinusha Oregon Support

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 (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

Cancel Previous Review and Launch Next: Configure Instance Details

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EC2 Management Console

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AWS Services Edit

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	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

Cancel Previous Review and Launch Next: Configure Instance Details

EC2 Management Console

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-76ed9312 (172.31.0.0/16) (default) [Create new VPC](#)

Subnet No preference (default subnet in any Availability Zone) [Create new subnet](#)

Auto-assign Public IP Use subnet setting (Enable)

Domain join directory None [Create new directory](#)

IAM role None [Create new IAM role](#)

Shutdown behavior Stop

Enable termination protection ☐ Protect against accidental termination

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

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EC2 Management Console

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/sda1	snap-1baab85d	30	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](#)



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](#)



Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group
☐ Select an existing security group

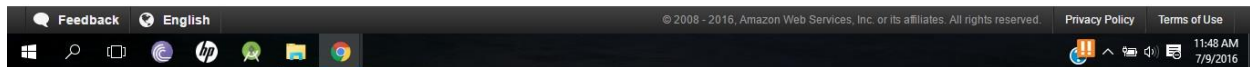
Security group name: launch-wizard-1
Description: launch-wizard-1 created 2016-07-09T11:48:07.579+05:30

Type	Protocol	Port Range	Source
RDP	TCP	3389	Anywhere

[Add Rule](#)

Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

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



EC2 Management Console

https://us-west-2.console.aws.amazon.com/ec2/v2/home?ref_=pe_1679150_132208650&sc_campaign=wlc&sc_category=mult&sc_channel=em&sc_content=other

AWS Services Edit

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Assign a security group: ☒ Create a **new** security group ☐ Select an **existing** security group

Security group name: launch-wizard-1

Description: launch-wizard-1 created 2016-07-09T11:48:07.579+05:30

Type	Protocol	Port Range	Source
RDP	TCP	3389	Anywhere 0.0.0.0/0

Add Rule

Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous Review and Launch

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EC2 Management Console

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AWS Services Edit

Thinusha Oregon Support

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

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

Security Groups [Edit security groups](#)

Security group name launch-wizard-1
Description launch-wizard-1 created 2016-07-09T11:48:07.579+05:30

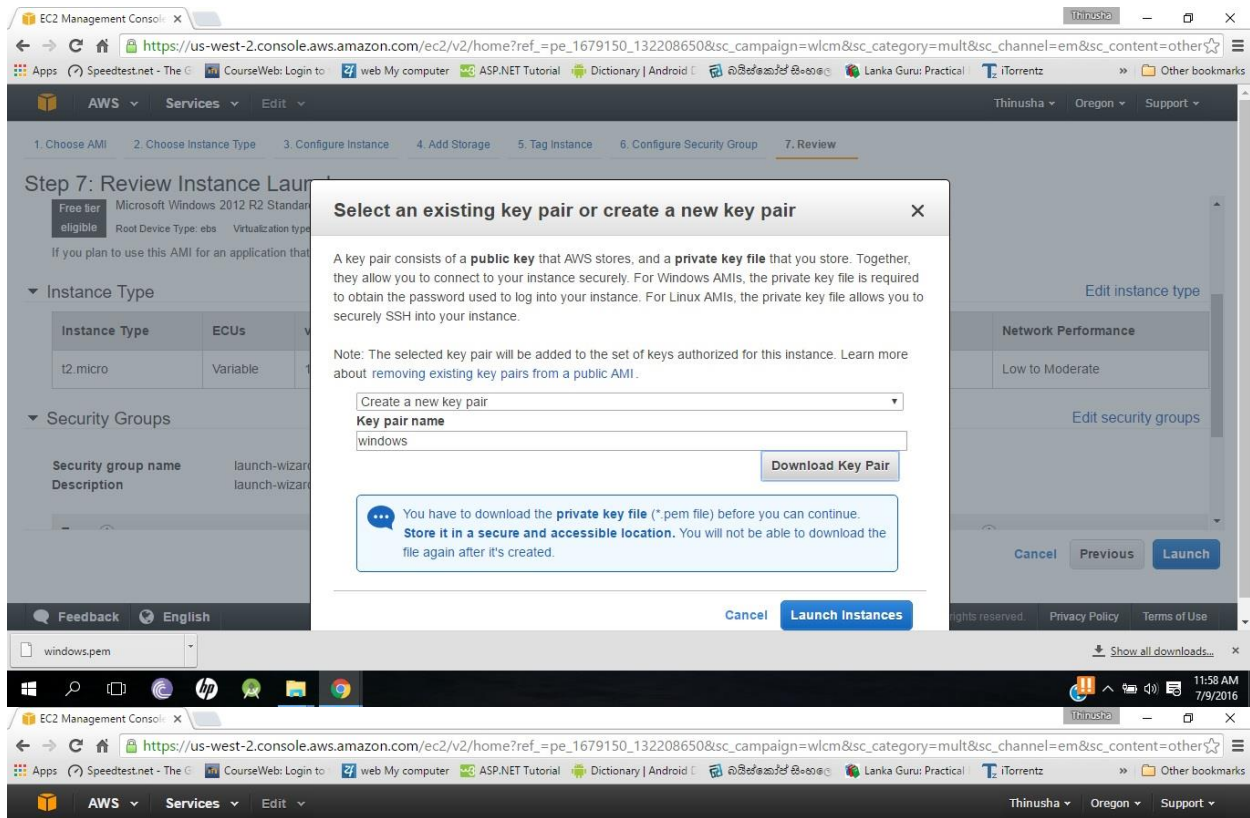
Type	Protocol	Port Range	Source
RDP	TCP	3389	0.0.0.0/0

Cancel Previous Launch

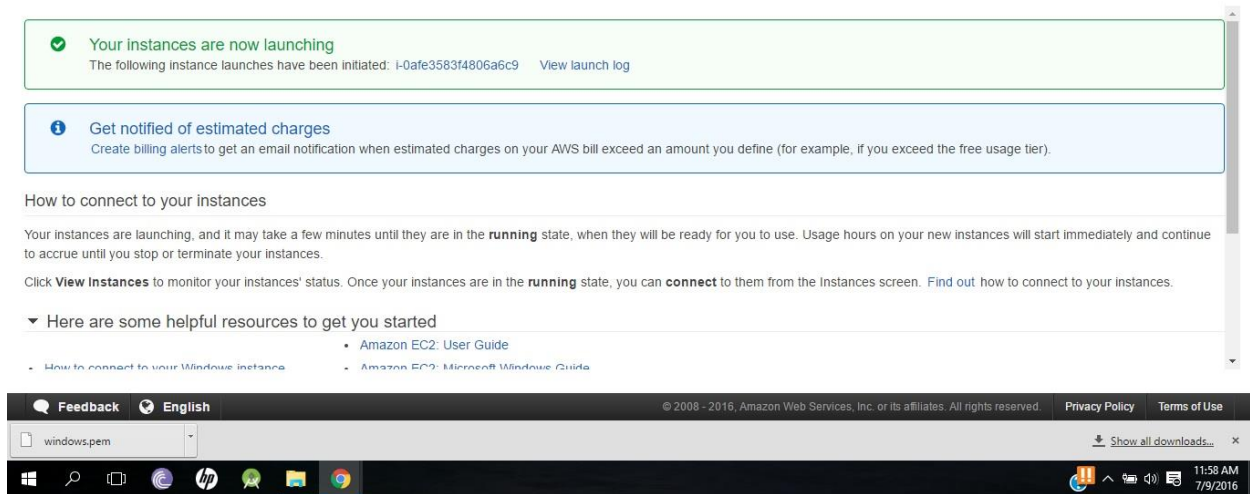
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Launch Status



EC2 Management Console

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	Public IP
	i-0afe3583f4806a6c9	t2.micro	us-west-2a	running	Initializing	None	ec2-52-10-32-110.us-west-2.compute.amazonaws.com	52.10

Instance: i-0afe3583f4806a6c9 Public DNS: ec2-52-10-32-110.us-west-2.compute.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID: i-0afe3583f4806a6c9 Public DNS: ec2-52-10-32-110.us-west-2.compute.amazonaws.com

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windows.pem

Show all downloads...

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EC2 Management Console

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	Public IP
	i-0afe3583f4806a6c9	t2.micro	us-west-2a	running	2/2 checks ...	None	ec2-52-10-32-110.us-west-2.compute.amazonaws.com	52.10

Instance: i-0afe3583f4806a6c9 Public DNS: ec2-52-10-32-110.us-west-2.compute.amazonaws.com

Remote Desktop Connection

The identity of the remote computer cannot be verified. Do you want to connect anyway?

The remote computer could not be authenticated due to problems with its security certificate. It may be unsafe to proceed.

Certificate name

Name in the certificate from the remote computer: WIN-V812N71G13N

Certificate errors

The following errors were encountered while validating the remote computer's certificate:

The certificate is not from a trusted certifying authority.

Do you want to connect despite these certificate errors?

☐ Don't ask me again for connections to this computer

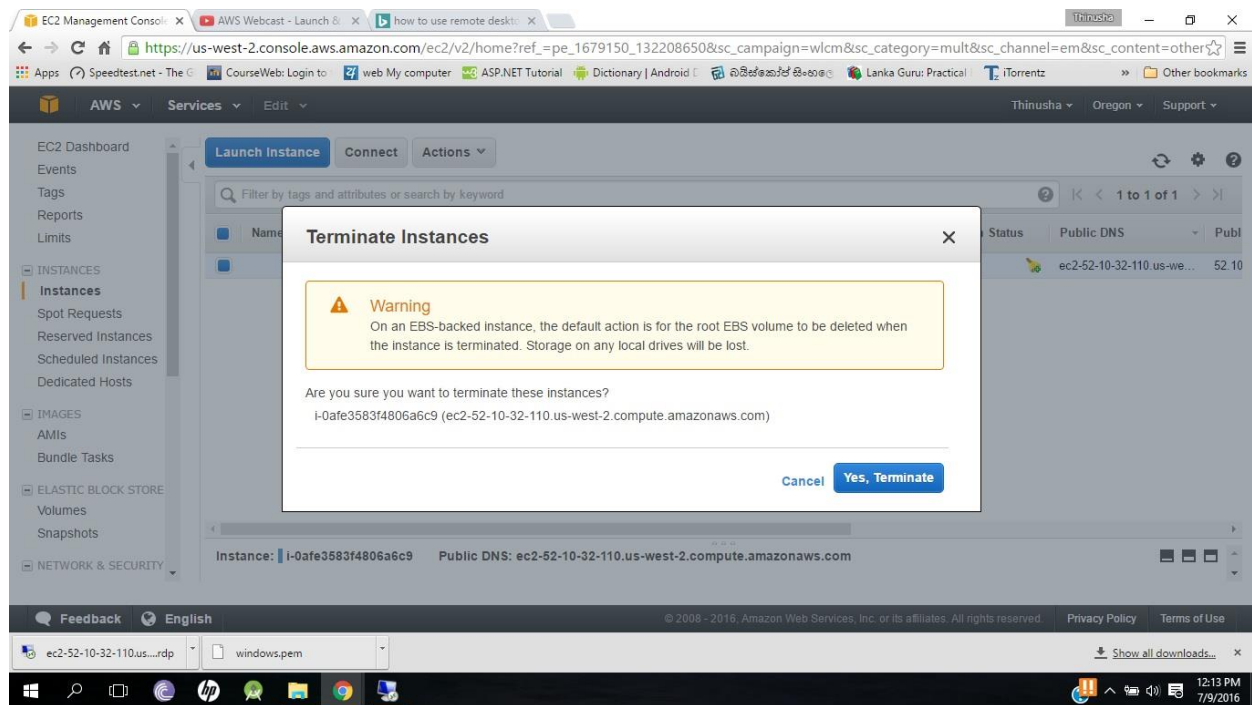
View certificate... Yes No

ec2-52-10-32-110.us...rdp

windows.pem

Show all downloads...

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Lab 2

Covered Areas

-- Create Amazon EC2 Linux Instance -- PuTTY download PuTTY configuration
Connecting Linux Instance from Windows Using PuTTY

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

Step 6: Configure Security Group

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Assign a security group: ☒ Create a **new** security group
☐ Select an **existing** security group

Security group name: SSH-ONLY
Description: Allowed SSH Access only

Type	Protocol	Port Range	Source
SSH	TCP	22	Anywhere 0.0.0.0/0
Add Rule			

Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

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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, SSH-ONLY, 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

Cancel Previous **Launch**

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Step 7: Review Instance Launch

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

Security Groups

Security group name: SSH-ONLY
Description: Allowed SSH

Type
SSH

Instance Details

Storage

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
ESBPII_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**

Feedback English

ESBPII_Linux.pem

Show all downloads

Launch Status



Initiating Instance Launches

Please do not close your browser while this is loading

Creating security groups... Successful

Authorizing inbound rules... Successful

Initiating launches...

Launch Status

Your instances are now launching

The following instance launches have been initiated: [i-053a9669b46f3dac0](#) [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](#)

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ESBP11_Linux.pem Show all downloads...

EC2 DashboardEventsTagsReportsLimitsINSTANCESInstancesSpot RequestsReserved InstancesScheduled InstancesDedicated HostsIMAGESAMIsBundle TasksELASTIC BLOCK STOREVolumesSnapshotsNETWORK & SECURITYSecurity Groups

Launch InstanceConnectActions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS	Public IP
ESBP11	i-053a9669b46f3dac0	t2.micro	us-west-2b	running	Initializing	None	ec2-52-10-167-246.us-west-2.compute.amazonaws.com	52.10.167.246

Instance: i-053a9669b46f3dac0 (ESBP11)Public DNS: ec2-52-10-167-246.us-west-2.compute.amazonaws.com

Description

Status Checks

Monitoring

Tags

Instance ID

i-053a9669b46f3dac0

Public DNS

ec2-52-10-167-246.us-west-2.compute.amazonaws.com

Instance state

running

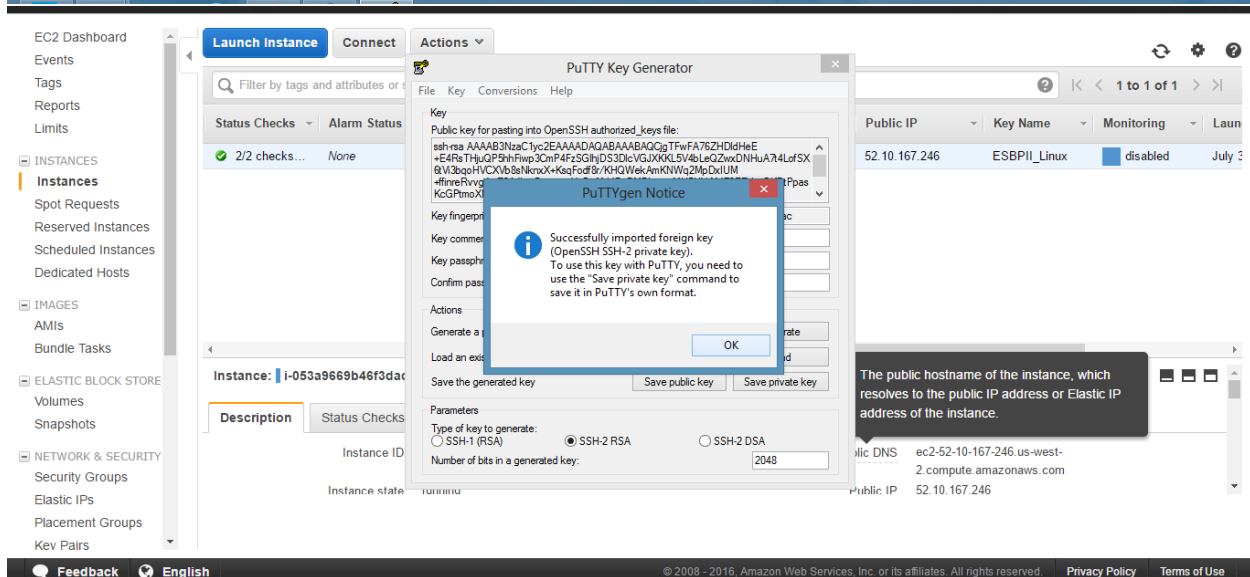
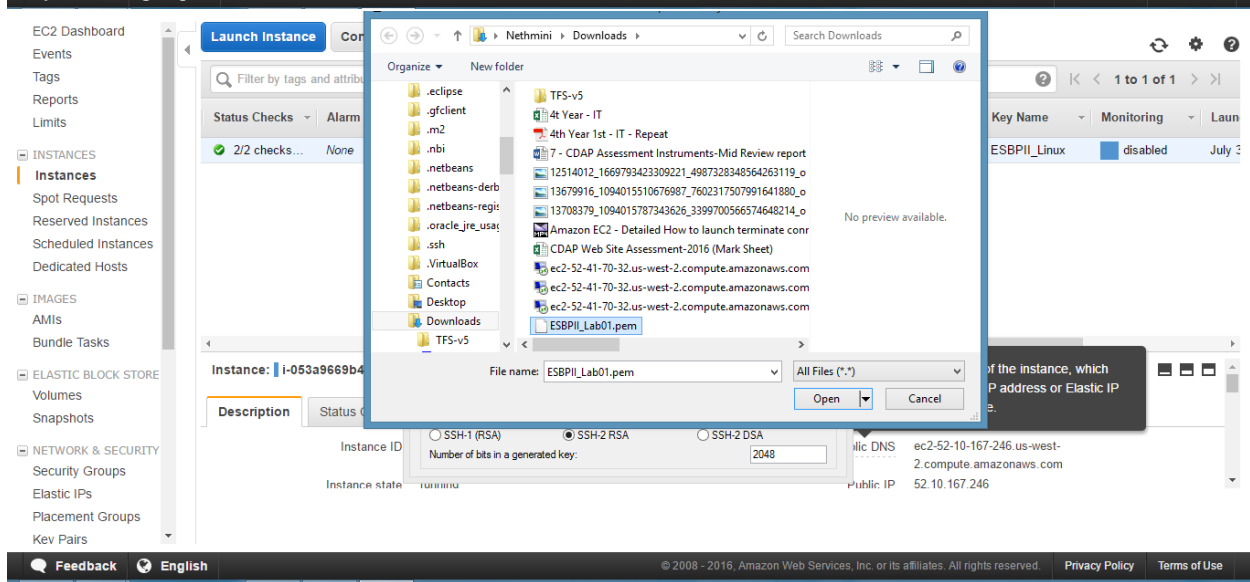
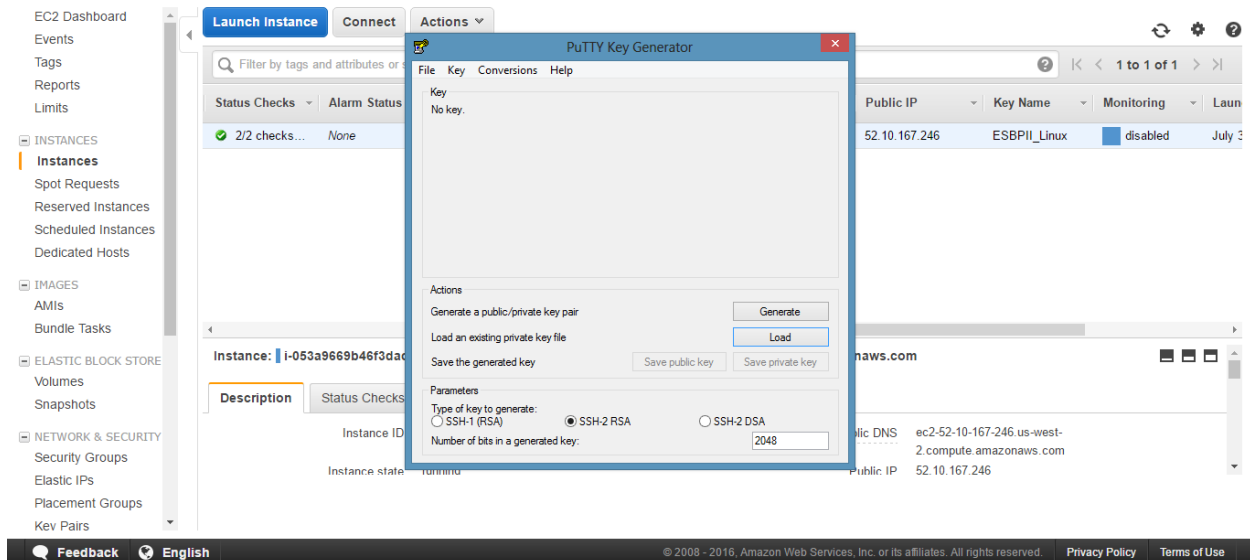
Public IP

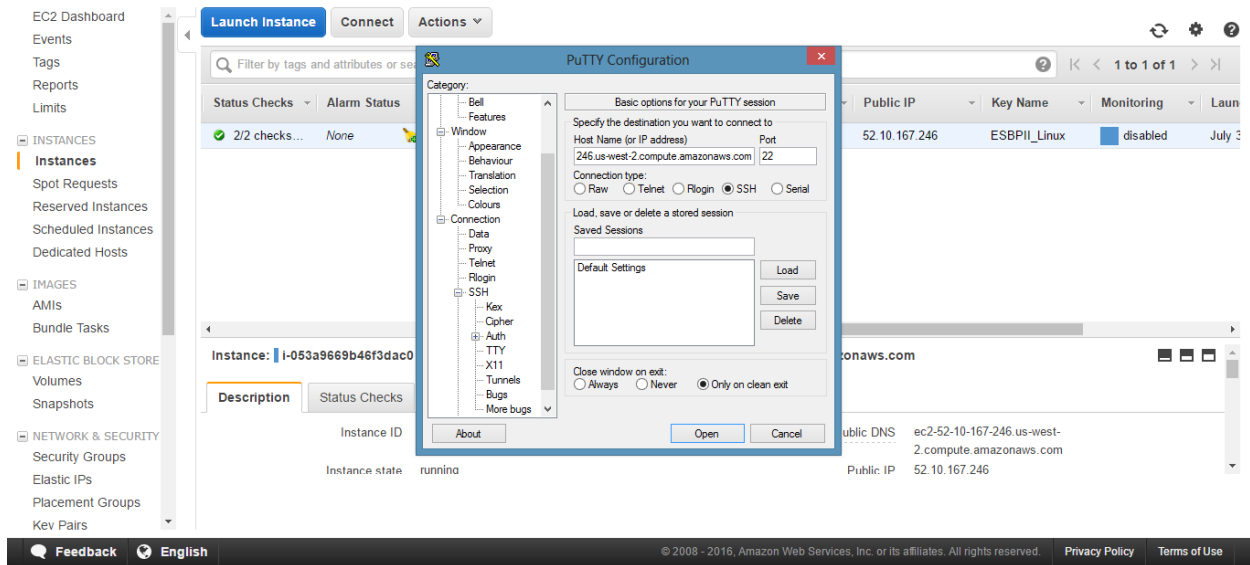
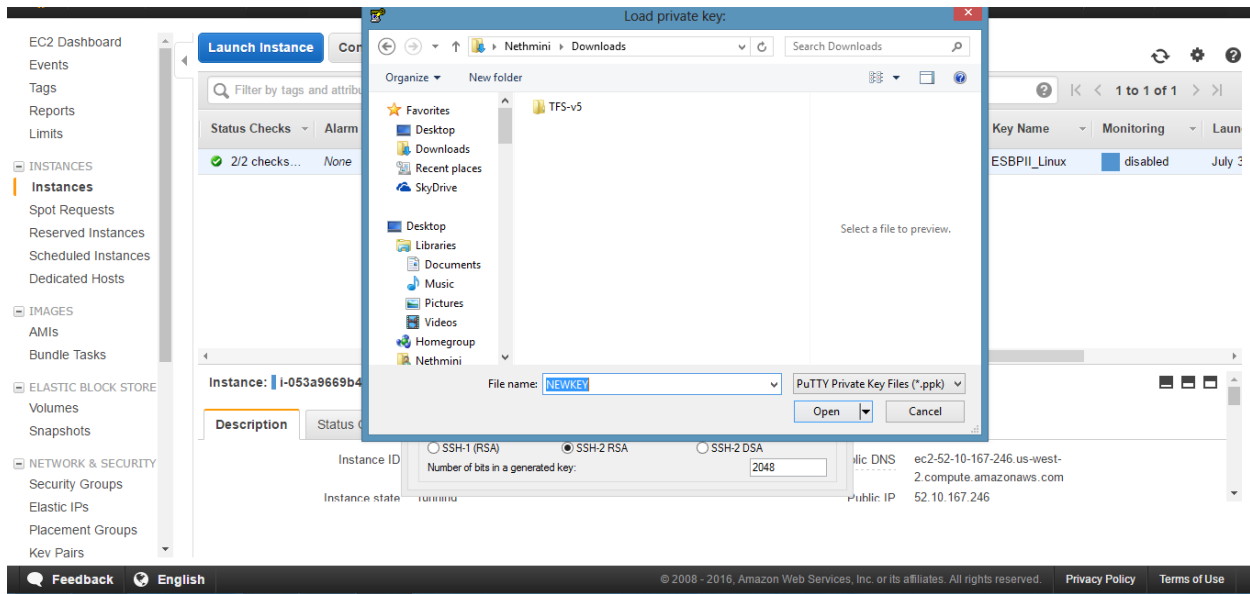
52.10.167.246

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ESBP11_Linux.pem Show all downloads...





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Filter by tags and attributes or search

Status Checks

Alarm Status

2/2 checks... None

Instance: i-053a9669b46f3dac0

Description

Status Checks

Instance ID

Instance state

running

Public IP

Key Name

Monitoring

Laun

52.10.167.246

ESBP11_Linux

disabled

July 3

onaws.com

Public DNS

ec2-52-10-167-246.us-west-2.compute.amazonaws.com

Public IP

52.10.167.246

Putty Configuration

Category:

- Window
 - Appearance
 - Behaviour
 - Translation
 - Selection
 - Colours
- Connection
 - Data
 - Proxy
 - Telnet
 - Rlogin
- SSH
 - Key
 - Auth
 - X11
 - Tunnels
 - Bugs
 - More bugs
 - Cipher

Options controlling SSH authentication

☐ Bypass authentication entirely (SSH-2 only)

☒ Display pre-authentication banner (SSH-2 only)

Authentication methods

☒ Attempt authentication using Pageant

☐ Attempt TIS or CryptoCard auth (SSH-1)

☒ Attempt "keyboard-interactive" auth (SSH-2)

Authentication parameters

☐ Allow agent forwarding

☐ Allow attempted changes of username in SSH-2

Private key file for authentication:

C:\Users\Nethmin\Downloads\1.ppk

Browse...

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La

login as: ec2-user

ec2-52-10-167-246.us-west-2.compute.amazonaws.com - Putty

Description

Status Checks

Monitoring

Tags

Instance ID

i-053a9669b46f3dac0

Instance state

running

Public DNS

ec2-52-10-167-246.us-west-2.compute.amazonaws.com

Public IP

52.10.167.246

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Name

Instance

i-0c0ee3205db08cc750

Instance: i-0c0ee3205db08cc750

Description

Status Checks

Monitoring

Tags

Instance ID

i-0c0ee3205db08cc750

Instance state

running

Public DNS

ec2-52-38-164-58.us-west-2.compute.amazonaws.com

Public IP

52.38.164.58

ec2-user@ip-172-31-30-132 ~

login as: ec2-user

Authenticating with public key "imported-openssh-key"

Amazon Linux AMI

<https://aws.amazon.com/amazon-linux-ami/2016.03-release-notes/>

1 package(s) needed for security, out of 1 available

Run "sudo yum update" to apply all updates.

[ec2-user@ip-172-31-30-132 ~]\$

Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

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 |< < 1 to 25 of 25 AMIs > >|

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only ⓘ

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

Select

64-bit

Red Hat Enterprise Linux 7.2 (HVM), SSD Volume Type - ami-775e4f16

Free tier eligible

Red Hat Enterprise Linux version 7.2 (HVM), EBS General Purpose (SSD) Volume Type

Root device type: ebs Virtualization type: hvm

Select

64-bit

SUSE Linux Enterprise Server 12 SP1 (HVM), SSD Volume Type - ami-d2627db3

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

Select

64-bit

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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: [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 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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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

Number of instances ⓘ

1

[Launch into Auto Scaling Group ⓘ](#)

Purchasing option ⓘ

☐ Request Spot Instances

Network ⓘ

vpc-66aad802 (172.31.0.0/16) (default)

[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

Additional charges will apply for dedicated tenancy.

[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 ⁱ	Device ⁱ	Snapshot ⁱ	Size (GiB) ⁱ	Volume Type ⁱ	IOPS ⁱ	Throughput (MB/s) ⁱ	Delete on Termination ⁱ	Encrypted ⁱ
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)
<input type="text" value="Name"/>	<input type="text" value="ESBP11"/>
<input type="button" value="Create Tag"/> (Up to 10 tags maximum)	

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

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Lab 3

Covered Areas

--steps involved in creating Amazon Relational Database Service (Amazon RDS)

RDS Dashboard

Instances

Clusters

Reserved Purchases

Snapshots

Security Groups

Parameter Groups


Option Groups

Subnet Groups

Events

Event Subscriptions

Notifications





Amazon Relational Database Service


Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale relational databases in the cloud. It provides cost-efficient and resizable capacity while managing time-consuming database administration tasks, freeing you up to focus on your applications and business.

Get Started Now

Getting Started Guide







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Step 1: Select Engine


...


Select Engine


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


Amazon Aurora











Aurora

Amazon Aurora is a high-performance, MySQL-compatible, enterprise-class database at a tenth the cost of commercial databases.

- Up to 5 times the throughput of MySQL.
- Up to 15 promotable Read Replicas with less than 10 ms lag.
- Up to 64 TB of Auto Scaling storage replicated over multiple Availability Zones.

Select

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Step 1: Select Engine

Select Engine

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

Amazon Aurora

MySQL

MariaDB

PostgreSQL

ORACLE

Microsoft SQL Server

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.

- 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.

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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.

☐ MySQL

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

Dev/Test

☒ MySQL

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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Step 3: Specify DB Details

Step 4: Configure Advanced Settings

The following selections disqualify the instance from being eligible for the free tier:

- DB Instance Class

You will be charged normal RDS Prices. [Learn More](#).

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

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 Enginemysql

License Modelgeneral-public-license

DB Engine Version5.6.27

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

DB Instance Classdb.m1.small — 1 vCPU, 1.7 GiB RAM

Multi-AZ DeploymentNo

Storage TypeGeneral Purpose (SSD)

Allocated Storage*5 GB

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.

Select the DB instance class that allocates the computational, network, and memory capacity required by planned workload of this DB instance. [Learn More](#).

Details: db.m1.small

TypeSmall

vCPU1 vCPU

Memory1.7 GiB

EBS OptimizedNo

Network PerformanceVery Low

Free Tier EligibleNo

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DB Instance using the [RDS Instance Cost Calculator](#).

DB Instance Classdb.m1.small — 1 vCPU, 1.7 GiB RAM

Multi-AZ DeploymentNo

Storage TypeGeneral Purpose (SSD)

Allocated Storage*5GB

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*rds-lab1

Master Username*cloudAcademy

Master Password*.....

Confirm Password*.....

Retype the value you specified for Master Password.

* Required

CancelPreviousNext Step

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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-66aad802)

Subnet Groupdefault

Publicly AccessibleYes

Availability ZoneNo Preference

VPC Security Group(s)

Create new Security GroupSSH-OONLY (VPC)default (VPC)launch-wizard-1 (VPC)

Database Options

Database NamerdsLab

Note: if no database name is specified then no initial MySQL database will be created on the DB Instance.

Database Port3306

DB Parameter Groupdefault.mysql5.6

Option Groupdefault.mysql-5-6

Select the DB option group that enables any optional functionality you want the DB instance to support, such as Oracle or SQL Server data

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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

RDS Dashboard

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Create DB Subnet Group

Edit

Delete

Filter: Search DB Subnet Groups

Viewing 1 of 1 DB Subnet Groups

	Name	Description	Status	VPC
<input type="checkbox"/>	default	default	Complete	vpc-66aad802

RDS Dashboard

- Instances
- Clusters
- Reserved Purchases
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- Security Groups
- Parameter Groups
- Option Groups
- Subnet Groups
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Create DB Subnet Group

To create a new Subnet Group give it a name, description, and select an existing VPC below. Once you select an existing VPC, you will be able to add subnets related to that VPC.

Name

Description

VPC ID

Add Subnet(s) to this Subnet Group. You may add subnets one at a time below or [add all the subnets](#) related to this VPC. You may make additions/edits after this group is created. A minimum of 2 subnets is required.

Availability Zone

Subnet ID

Availability Zone	Subnet ID	CIDR Block	Action
us-west-2c	subnet-02f5395a	172.31.0.0/20	<input type="button" value="Remove"/>
us-west-2b	subnet-0e690b6a	172.31.16.0/20	<input type="button" value="Remove"/>
us-west-2a	subnet-f1961387	172.31.32.0/20	<input type="button" value="Remove"/>

RDS Dashboard

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- Security Groups
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- Option Groups
- Subnet Groups
- Events
- Event Subscriptions
- Notifications

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 Role
MySQL	rds-lab1	creating			None	db.m1.small	vpc-66aad802	No	

Endpoint: Not available yet

Alarms and Recent Events

Monitoring

TIME (UTC+5:30) EVENT

No Recent Events

CURRENT VALUE THRESHOLD LAST HOUR

CPU No Data

Read IOPS No Data

Memory No Data

Write IOPS No Data

Storage No Data

Swap Usage No Data