### Launch an Instance with Amazon EC2

An *instance* is a virtual server in the AWS cloud.

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

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 HVM edition of the Amazon Linux AMI. Notice that this AMI is 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.

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

On the **Review Instance Launch** page, under **Security Groups**, you'll see that the wizard created and selected a security group for you. You can use this security group, or alternatively you can select the security group that you created when getting set up using the following steps:

Choose **Edit security groups**.

On the **Configure Security Group** page, ensure that **select an existing security group** is selected.

Select your security group from the list of existing security groups (ensure all incoming & outgoing traffic is enabled), and then choose **Review and Launch**.

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

When prompted for a key pair, select **Choose an existing key pair**, then select the key pair that you created when getting set up.

Alternatively, 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**. This is the only chance for you to save the private key file, so be sure to download it. Save the private key file in a safe place. You'll need to provide the name of your key pair when you launch an instance and the corresponding private key each time you connect to the instance.

**Caution:** Don't select the **Proceed without a key pair** option. If you launch your instance without a key pair, then you can't connect to it.

When you are ready, select the acknowledgement check box, and then choose **Launch Instances**.

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

### Elastic IP

To use an Elastic IP address, you first allocate one to your account, and then associate it with your instance or a network interface.

When you associate an Elastic IP address with an instance or its primary network interface, the instance's public IPv4 address (if it had one) is released back into Amazon's pool of public IPv4 addresses. You cannot reuse a public IPv4 address. For more information, see Public IPv4 Addresses and External DNS Hostnames.

You can disassociate an Elastic IP address from a resource, and re-associate it with a different resource.

A disassociated Elastic IP address remains allocated to your account until you explicitly release it.

To allocate an Elastic IP address for use in EC2-VPC using the console

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

In the navigation pane, choose Elastic IPs.

Choose Allocate New Address.

Select EC2, and then choose Yes, Allocate. Close the confirmation dialog box.

To associate an Elastic IP address with an instance using the console

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

In the navigation pane, choose Elastic IPs.

Select an Elastic IP address, choose Actions, and then select Associate Address.

In the Associate Address dialog box, select the instance from Instance and then choose Associate.

To disassociate and re-associate an Elastic IP address using the console

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

In the navigation pane, choose Elastic IPs.

Select the Elastic IP address, choose Actions, and then select Disassociate Address.

Choose Yes, Disassociate when prompted for confirmation.

Select the address that you disassociated in the previous step. For Actions, choose Associate Address.

In the Associate Address dialog box, select the new instance from Instance, and then choose Associate.

Connecting from Laptop to AWS EC2 instance

Download Git Bash software & install it. <https://git-scm.com/download/win>

Open Git Bash & browse to the folder where the key pair .pem file was downloaded to.

Type below command to login to the AWS EC-2 instance

ssh –I <key\_par\_name>.pem ec2-user@<elastic-ip-allocated to EC2 instance>

Note: In case you find issues with permissions of the key pair .pem file use the below command to set the permissions.

chmod 600 <key\_par\_name>.pem