

Lab 5: Creating Launch Templates and Auto Scaling Groups

Lab overview

In this lab, you will use Amazon Elastic Compute Cloud (Amazon EC2) to create a launch template and an Auto Scaling group.

Duration

This lab requires approximately **45 minutes** to complete.

Access the AWS Management Console

1. To start the lab session, choose **Start Lab** in the upper-right corner of the page.
 - The lab session starts.
 - A timer displays at the top of this page and shows the time remaining in the session.

Tip: To refresh the session length at any time, choose **Start Lab** again before the timer reaches 0:00.

2. Before continuing, wait until the lab environment is ready. The environment is ready when the lab details appear on the right side of the page and the circle icon next to the **AWS** link in the upper-left corner turns green.
3. To return to these instructions, choose the **Readme** link in the upper-right corner.
4. To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

A new browser tab opens and connects you to the AWS Management Console.

Tip: If a new browser tab does not open, a banner or icon is usually at the top of your browser with the message that your browser is preventing the site from opening pop-up windows. Choose the banner or icon, and then choose **Allow pop-ups**.

Note: You are using the console through the lab environment, so you are not incurring any actual costs. However, in the real world, when using a personal or business account to access the console, users incur charges for use of specific AWS services.

Task 1. Create a launch template

4. Choose the **Services** menu, locate the **Compute** category, and choose **EC2**.
5. Note which Region you are in by looking at the upper-right corner of the console (for example, N. Virginia, which is the us-east-1 Region).

The Amazon EC2 Auto Scaling resources that you create are tied to the Region that you specify.

6. In the left navigation pane, choose **Launch Templates**.
7. Choose **Create launch template**, and configure the following:
 - **Launch template name:** Enter my_template
 - **Template version description:** Enter Test launch template for an Auto Scaling group

This description can help you remember what this launch template is for later.

- **Auto Scaling guidance:** Select **Provide guidance....**
- **AMI:** Choose a version of Amazon Linux 2023 AMI x86_64 (HVM) from the **Quick Start** list.

The Amazon Machine Image (AMI) serves as a basic configuration template for your EC2 instances.

- **Instance type:** Choose **t2.micro**.
- **Key pair name:** Choose **vockey**.

Note that this is optional for a launch template.

- **Subnet:** Choose **Don't include in launch template**.
- Skip **Security groups**.

You will configure a security group later. When a network interface is specified, the security group must be part of it.

- **Advanced network configuration:** Choose **Add network interface** and configure with the following settings:
 - **Auto-assign public IP:** Choose **Enable**.

This setting means that public IP addresses will be assigned to instances in a nondefault VPC. This provides the ability for your instances to communicate with the internet and other AWS services.

- **Security groups:** Choose the security group name that contains **Ec2SecurityGroup**.

This specifies the default security group of the VPC for the network interface.

- **Delete on termination:** Choose **Yes**.

This setting deletes the network interface when the Auto Scaling group scales in and terminates the instance to which the network interface is attached.

- Choose **Create launch template**.

8. On the confirmation page, choose **View launch templates**.
9. Choose the link for the **Launch template ID**.
10. From the **Actions** menu, choose **Create Auto Scaling group**.

Task 2. Create an Auto Scaling group

11. On the Step 1 page, configure the following:

- **Auto Scaling group name:** Enter **my-first-asg**
- **Launch template:** Choose the launch template that you created in the previous task.
- **Version:** Choose **Latest**.

You can also choose a specific version of the launch template when scaling out.

- Choose **Next**.

12. On the Step 2 page, configure the following:

- **VPC:** Choose the VPC name that contains **Lab VPC**.
- **Subnets:** Choose the subnet name that contains **Public Subnet 1**.
- Choose **Skip to review**.

13. On the Review page, choose **Create Auto Scaling group**.

Task 3. Verify your Auto Scaling group

14. In the left navigation page, choose **EC2 Dashboard**.

15. Choose **Instances (running)**.

Notice that a new EC2 instance has been started. If the instance does not appear yet, wait a moment and then choose the refresh icon. The **Instance state** shows that it is *Running*.

Lab complete

Congratulations! You have completed the lab.

16. Log out of the AWS Management Console.

- In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.
- Choose **Sign Out**.

17. Choose **End Lab** at the top of this page, and then choose **Yes** to confirm that you want to end the lab.