



Training and
Certification

Introduction to Amazon Elastic Block Store (Amazon EBS)

Version 1.0

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Introduction

Overview

This guide introduces you to Amazon Elastic Block Store (EBS) using the AWS Management Console.

What is Amazon Elastic Block Store?

Amazon Elastic Block Store (EBS) provides block level storage volumes for use with Amazon EC2 instances. Amazon EBS volumes are network-attached, and persist independently from the life of an instance.

Topics Covered



This lab will introduce you to basic Amazon EBS activities, including:

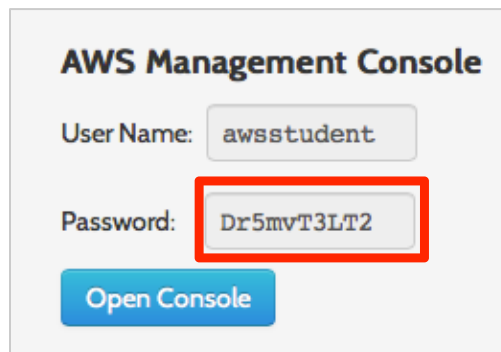
- Logging into the Amazon Management Console
- Creating an EBS Volume in the Amazon Management Console
- Adding an EBS Volume to an Instance
- Snapshotting an EBS Volume and Increasing Performance

Login to the AWS Management Console

Using qwikLAB to login to the AWS Management Console

Welcome to this self-paced lab! The first step is for you to login to Amazon Web Services.


1. Start your qwikLAB by clicking 
2. **Copy the password** into the clipboard:
Note: You are not charged for creating a bucket; you are only charged for storing objects in the bucket.
3. Go into the console by clicking 
4. Login to the console:
 - a. **User Name:** `awsstudent`
 - b. **Password:** Use the password in your clipboard



AWS Management Console

User Name:

Password:





Amazon Web Services Sign In

Please enter the AWS Identity & Access Management (IAM) User name and password assigned by your system administrator to sign in.

AWS Account: 174335992060

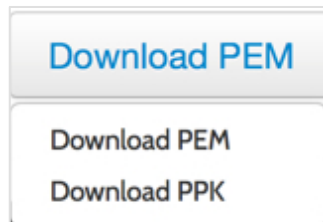
User Name: awsstudent

Password: *****

Sign in using our secure server

Gather Your *qwikLAB*™ Key


- Return to the *qwikLAB*™ web page and click the Download PEM dropdown box



- Choose **PPK** if you will be connecting through PuTTY on a Windows system, or **PEM** if you will be connecting with a Mac or Linux system.
Make note of the file location, as you will need it for connecting to your new instance!

Creating an Elastic Block Store Volume


To get started creating your first Amazon EBS Volume, you will need to access the Amazon EC2 icon on the Amazon Management Console, and then utilize the Volumes Management Panel. EBS volumes are like hard drives in a computer. The data on them persists through the lifetime of the volume and can be transported between virtual machines as needed.

- Click the Amazon **EC2** Icon on the homepage and go to that dashboard.
- In the navigation panel on the left under Elastic Block Store click Volumes go to the EBS control panel.
- Here you will see a volume already in use. If you do not, please wait a moment and click the refresh icon  located in the upper right corner of the window. This volume exists for a server that has been created for you for this lab exercise. **Take note of the Availability Zone that the volume exists in**, shown in the top panel.
- Create a new volume by clicking **Create Volume**.
- In the Create Volume window, select the following:
 - Volume Type: **Standard**
 - Size: **1 GiB**
 - Availability Zone: (match this from the zone noted in the previous step)
- Click **Yes, Create**

Congratulations! You have a new volume ready to be attached to an instance. Continue on to add that volume to your instance and manipulate the volume.

Adding an EBS Volume to an Instance

While you were creating the volume, a server instance was being prepared for you to attach volumes to.

13. From the **EC2 > Elastic Block Store > Volumes** window that you were just in, you should now see 2 volumes. Right-click the volume whose **state** is **available** and choose **Attach Volume**. If your volume still shows a State of **creating**, click the refresh icon , located in the upper right corner of the window.
14. Select the **instance**. If you had more than one instance, you would need to select the appropriate instance at this point. Also note that the next **Device** is already selected for you. Click **Yes, Attach**.

You have now connected an EBS volume to an instance. Congratulations!

Snapshotting an EBS Volume and Increasing Performance

Creating a snapshot of volume replicates the data in the volume. It also allows you to change the properties of the volume to enable features like provisioned IOPS.

15. Back at the **EC2 > Elastic Block Store > Volumes** window, right-click the 1 GiB volume you created, and choose **Force Detach**.

Note: In production, you would want to shut down your instance so you do not force detach the drive. However, for this lab, we will choose force detach to focus more on other features.

16. Click **Yes, Force**.
17. Right-click the volume again, and choose **Create Snapshot**.
 - a. Ensure the Volume matches the volume you created (it should by default).
 - b. For the Name, input: **ebslab**
 - c. For Description, input: **lab elb volume snapshot**
 - d. Click Yes, create
18. Go to **EC2 > Elastic Block Store > Snapshots** to view your newly created snapshot.
19. Right-click the snapshot, and choose **Create Volume from Snapshot**.
20. Here, you will increase the volume size and enable provisioned IOPS for increased performance. Select the following settings in the Create Volume window:
 - a. Volume Type: **Provisioned IOPS**
 - b. Size: **8 GiB**
 - c. Availability Zone: (select the availability zone you noted earlier in the lab).
 - d. Click Yes, create
21. Return to **EC2 > Elastic Block Store > Volumes** to find your newly created high performance drive. This drive would contain all the data from the original drive, as well!

Congratulations! You have created a snapshot volume that would contain all the data from the original drive, but is larger and has guaranteed IOPS.

End Your Lab

22. Return to the QwikLab lab homepage and click **End Lab** to conclude your lab.

Additional Resources

- For more information about Amazon EBS and EBS pricing, go to the [Amazon EC2 product page](#).
- [AWS Training and Certification](#).

Conclusion

Congratulations! You now have successfully:

- Logged into the Amazon Management Console
- Created an EBS Volume in the Amazon Management Console
- Added an EBS Volume to an Instance
- Snapshoted an EBS Volume and Increasing Performance

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