

AWS (Exercises)

Amazon Simple Storage Service (Amazon S3) and Amazon Glacier Storage

EXERCISE - 1.1

Create an Amazon Simple Storage Service (Amazon S3) Bucket

In this exercise, you will create a new Amazon S3 bucket in your selected region. You will use this bucket in the following exercises.

1. Log in to the AWS Management Console.
2. Choose an appropriate region, such as US West (Oregon).
3. Navigate to the Amazon S3 console. Notice that the region indicator now says Global. Remember that Amazon S3 buckets form a global namespace, even though each bucket is created in a specific region.
4. Start the create bucket process.
5. When prompted for Bucket Name, use `mynewbucket`.
6. Choose a region, such as US West (Oregon).
7. Try to create the bucket. You almost surely will get a message that the requested bucket name is not available. Remember that a bucket name must be unique globally.
8. Try again using your surname followed by a hyphen and then today's date in a six-digit format as the bucket name (a bucket name that is not likely to exist already).

You should now have a new Amazon S3 bucket.

EXERCISE - 1.2

In this exercise, you will upload a new object to your bucket. You will then make this object public and view the object in your browser. You will then rename the object and

Upload an Object

1. Load your new bucket in the Amazon S3 console.
2. Select Upload, then Add Files.
3. Locate a file on your PC that you are okay with uploading to Amazon S3 and making public to the Internet. (We suggest using a non-personal image file for the purposes of this exercise.)

4. Select a suitable file, then Start Upload. You will see the status of your file in the Transfers section.
5. After your file is uploaded, the status should change to Done.

The file you uploaded is now stored as an Amazon S3 object and should be now listed in the contents of your bucket.

Open the Amazon S3 URL

6. Now open the properties for the object. The properties should include bucket, name, and link.
7. Copy the Amazon S3 URL for the object.
8. Paste the URL in the address bar of a new browser window or tab.

You should get a message with an XML error code `AccessDenied`. Even though the object has a URL, it is private by default, so it cannot be accessed by a web browser.

Make the Object Public

9. Go back to the Amazon S3 Console and select Make Public. (Equivalently, you can change the object's permissions and add grantee Everyone and permissions Open/Download.)
10. Copy the Amazon S3 URL again and try to open it in a browser or tab. Your public image file should now display in the browser or browser tab.

Rename Object

11. In the Amazon S3 console, select Rename.
12. Rename the object, but keep the same file extension.
13. Copy the new Amazon S3 URL and try to open it in a browser or tab. You should see the same image file.

Delete the Object

14. In the Amazon S3 console, select Delete. Select OK when prompted if you want to delete the object.
15. The object has now been deleted.
16. To verify, try to reload the deleted object's Amazon S3 URL. You should once again get the XML `AccessDenied` error message.

EXERCISE - 1.3

Enable Version Control

In this exercise, you will enable version control on your newly created bucket.

Enable Versioning

1. In the Amazon S3 console, load the properties of your bucket. Don't open the bucket.
2. Enable versioning in the properties and select OK to verify. Your bucket now has versioning enabled. (Note that versioning can be suspended, but not turned off.)

Create Multiple Versions of an Object

3. Create a text file named `foo.txt` on your computer and write the word `blue` in the text file.
4. Save the text file to a location of your choosing.
5. Upload the text file to your bucket. This will be version 1.
6. After you have uploaded the text file to your bucket, open the copy on your local computer and change the word `blue` to `red`. Save the text file with the original filename.
7. Upload the modified file to your bucket.
8. Select Show Versions on the uploaded object.

You will now see two different versions of the object with different Version IDs and possibly different sizes. Note that when you select Show Version, the Amazon S3 URL now includes the version ID in the query string after the object name.

EXERCISE - 1.4

Delete an Object and Then Restore It

In this exercise, you will delete an object in your Amazon S3 bucket and then restore it.

Delete an Object

1. Open the bucket containing the text file for which you now have two versions.
2. Select Hide Versions.
3. Select Delete, and then select OK to verify.

4. Your object will now be deleted, and you can no longer see the object.
5. Select Show Versions.

Both versions of the object now show their version IDs.

Restore an Object

6. Open your bucket.
7. Select Show Versions.
8. Select the oldest version and download the object. Note that the filename is simply `foo.txt` with no version indicator.
9. Upload `foo.txt` to the same bucket.
10. Select Hide Versions, and the file `foo.txt` should re-appear.

TIP To restore a version, you copy the desired version into the same bucket. In the Amazon S3 console, this requires a download then re-upload of the object. Using APIs, SDKs, or AWS CLI, you can copy a version directly without downloading and re-uploading.

EXERCISE - 1.5

Lifecycle Management

In this exercise, you will explore the various options for lifecycle management.

1. Select your bucket in the Amazon S3 console.
2. Under Properties, add a Lifecycle Rule.
3. Explore the various options to add lifecycle rules to objects in this bucket. It is recommended that you do not implement any of these options, as you may incur additional costs. After you have finished, click the Cancel button.

TIP Most lifecycle rules require some number of days to expire before the transition takes effect. For example, it takes a minimum of 30 days to transition from Amazon S3 Standard to Amazon S3 Standard-IA. This makes it impractical to create a lifecycle rule and see the actual result in an exercise.

EXERCISE - 1.6

Enable Static Hosting on Your Bucket

In this exercise, you will enable static hosting on your newly created bucket.

1. Select your bucket in the Amazon S3 console.
2. In the Properties section, select Enable Website Hosting.
3. For the index document name, enter `index.txt`, and for the error

document name, enter `error.txt`.

4. Use a text editor to create two text files and save them as `index.txt` and `error.txt`. In the `index.txt` file, write the phrase "Hello World," and in the `error.txt` file, write the phrase "Error Page." Save both text files and upload them to your bucket.
5. Make the two objects public.
6. Copy the Endpoint: link under Static Website Hosting and paste it in a browser window or tab. You should now see the phrase "Hello World" displayed.
7. In the address bar in your browser, try adding a forward slash followed by a made- up filename (for example, `/test.html`). You should now see the phrase "Error Page" displayed.
8. To clean up, delete all of the objects in your bucket and then delete the bucket itself.