Amazon Simple Storage Service

Getting Started Guide

API Version 2006-03-01

Amazon Simple Storage Service: Getting Started Guide

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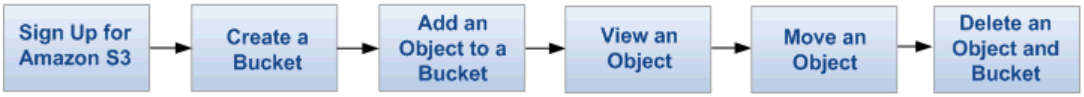
Get Started With Amazon Simple Storage Service

Amazon Simple Storage Service (Amazon S3) is storage for the internet. You can use Amazon S3 to store and retrieve any amount of data at any time, from anywhere on the web. You can accomplish these tasks using the AWS Management Console, which is a simple and intuitive web interface. This guide introduces you to Amazon S3 using the AWS Management Console to complete the tasks shown in the following figure:



Amazon S3 Basics

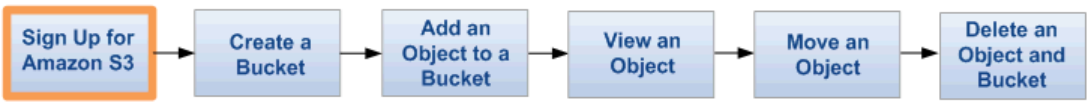
To get the most out of Amazon S3, you need to understand a few simple concepts. Amazon S3 stores data as objects within buckets. An object is comprised of a file and optionally any metadata that describes that file.

To store an object in Amazon S3, you upload the file you want to store to a bucket. When you upload a file, you can set permissions on the object as well as any metadata.

Buckets are the containers for objects. You can have one or more buckets. For each bucket, you can control access to the bucket (who can create, delete, and list objects in the bucket), view access logs for the bucket and its objects, and choose the geographical region where Amazon S3 will store the bucket and its contents.

When using the AWS Management Console you can create folders to group objects. You can nest folders (create folders within folders). If you have used the Amazon S3 API or other utilities, you can learn some important aspects about how folders work with other grouping conventions in the Amazon S3 Console User Guide.

Sign Up for Amazon S3



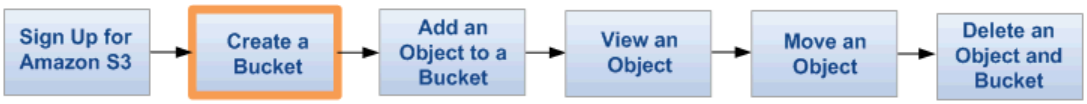
To use Amazon S3, you need an AWS account. If you don't already have one, you'll be prompted to create one when you sign up for Amazon S3. You will not be charged for Amazon S3 until you use it.

To sign up for Amazon S3

1. Go to http://aws.amazon.com/s3 and click **Sign Up for Amazon S3**.
2. Follow the on-screen instructions.

AWS will notify you by e-mail when your account is active and available for you to use.

Create a Bucket



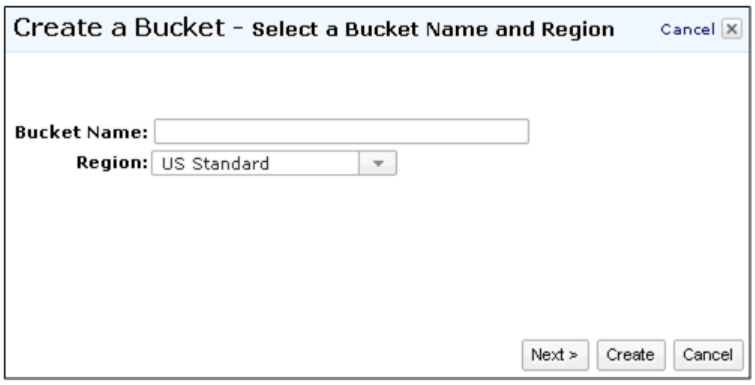
Now that you've signed up for Amazon S3, you're ready to create a bucket using the AWS Management Console. Every object in Amazon S3 is stored in a bucket. Before you can store data in Amazon S3 you must create a bucket.

Note

You are not charged for creating a bucket; you are only charged for storing objects in the bucket and for transferring objects in and out of the bucket. The charges you will incur through following the examples in this guide are minimal (less than $1). For more information, go to Amazon S3 Pricing.

To create a bucket

1. Go to the AWS Management Console web page.
2. In the drop-down list box, select **Amazon S3** and click **Sign in to the AWS Console**.
3. On the Amazon S3 tab, click **Create Bucket**.
   The **Create a Bucket** dialog box appears.



4. Enter a bucket name in the **Bucket Name** field.

The bucket name you choose must be unique across all existing bucket names in Amazon S3. One way to do that is to prefix your bucket names with your company's name.

Bucket names must comply with the following requirements. Bucket names:

- Can contain lowercase letters, numbers, periods (.), underscores (_), and dashes (-)
- Must start with a number or letter
- Must be between 3 and 255 characters long
- Must not be formatted as an IP address (e.g., 265.255.5.4)

There might be additional restrictions on bucket names based on the region your bucket is in or how you intend to access the object. For more information, see the *Amazon S3 User Guide*.

Note

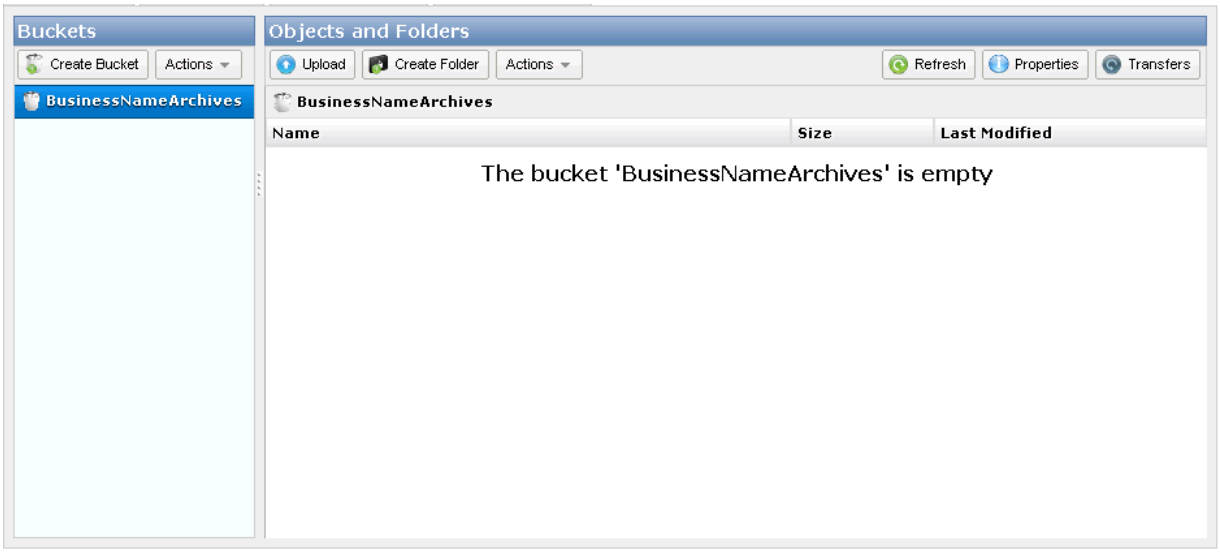
Once you create a bucket, you cannot change its name. In addition, the bucket name is visible in the URL that points to the objects stored in the bucket. Make sure the bucket name you choose is appropriate.

5. In the **Region** drop-down list box, select a region.

   By default, Amazon S3 creates buckets in the US-Standard region. You can choose a region to optimize latency, minimize costs, or address regulatory requirements. Objects stored in a region never leave that region unless you explicitly transfer them to another region. For more information about regions, see Introduction to Amazon S3 in the *Amazon S3 Console User Guide*.

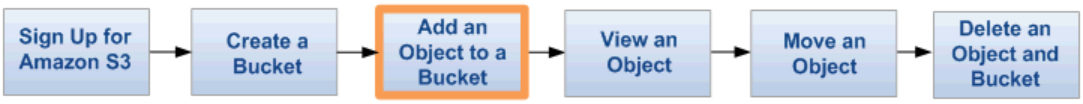
6. Click **Create**.

   When Amazon S3 successfully creates your bucket, the console displays your empty bucket in the **Buckets** panel.



You've created a bucket in Amazon S3.

Add an Object to a Bucket



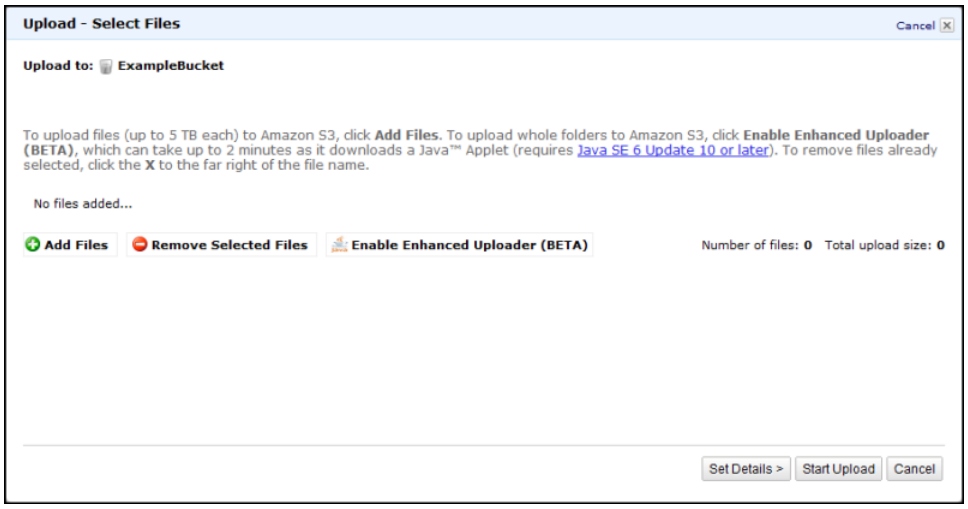
Now that you've created a bucket, you're ready to add an object to it. An object can be any kind of file: a text file, a photo, a video and so forth. When you add a file to Amazon S3, you have the option of including metadata with the file and setting permissions to control access to the file.

Important

The bucket you created is not in a sandbox. In this exercise you add an object to a real bucket and you will be charged a nominal amount for putting an object into the bucket, the time that you store the object in the bucket, and downloading the object from the bucket. For more information about Amazon S3 pricing, go to the Amazon S3 Pricing page.

To upload an object

1. On the Amazon S3 tab in the AWS Management Console, click the bucket you want to upload an object into and then click **Upload** in the **Objects and Folders** panel.
   The **Upload - Select Files and Folders** wizard opens as shown in the following sample wizard in Firefox:



2. If you want to upload a folder you must click **Enable Enhanced Uploader** for the Java applet. After you download the Java applet, the **Enable Enhanced Uploader** link disappears from the wizard. You only need to do this once per console session and you can transfer entire folders.

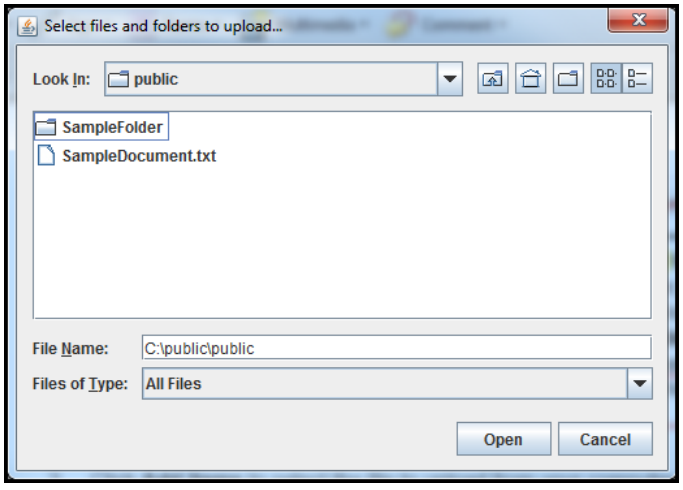
   Note

   If you are behind any corporate firewall you will need to install your corporate supported proxy client for the Java applet to work.

3. Click **Add Files** to select the file to upload from your computer.
   A file selection dialog box opens:

   - If you enabled advanced uploader in step 2, you see a Java file selection dialog box.
   - If not, you see an operating system specific dialog box.

   The following image shows a sample Java file selection dialog box.



4. Select the file you want to upload and click **Open**.
   The **Upload - Select Files and Folders** wizard shows the files and folders you've selected to upload.
5. Click **Start Upload**.
   You can watch the progress of the upload using the **Transfer** panel. The **Transfer** panel appears on the bottom of the screen as soon as a you begin the upload.

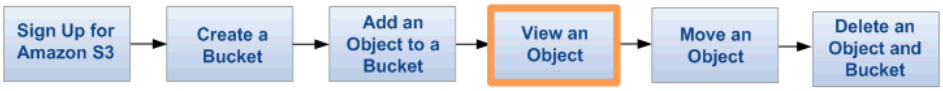
Tip

If you want to toggle between hiding and viewing the **Transfer** panel, click the **Transfers** button in the top right of the **Objects and Folders** panel.

After the object uploads successfully to Amazon S3, it appears in the object listing.

You've added a file to your bucket.

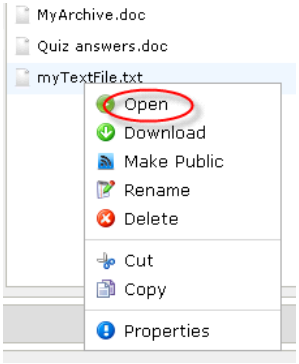
View An Object



Now that you've added an object to a bucket, you can open and view it in a browser. You can optionally save the object locally.

To open or download an object

1. On the Amazon S3 tab, in the AWS Management Console, right-click the objects you want to open.



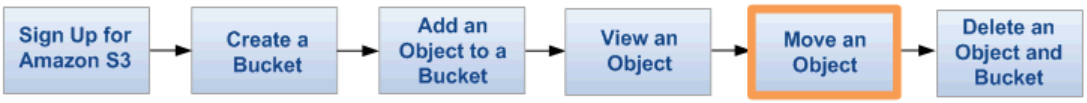
2. Click **Open** to open the object in the browser or **Download** to save the object locally.
   The object opens in your browser, or if you are downloading the object a dialog opens for you to specify folder location where you want the object saved.

You've opened your object.

Note

By default your Amazon S3 buckets and objects are private. To view object using a URL, for example, https://s3.amazonaws.com/Bucket/Object the object must be publicly readable. Otherwise, you will need to create signed URL that includes a signature with authentication information.

Move an Object



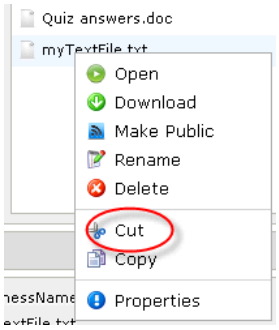
Now that you've added an object to a bucket and viewed it, you might like to move the object to a different bucket or folder.

To move an object

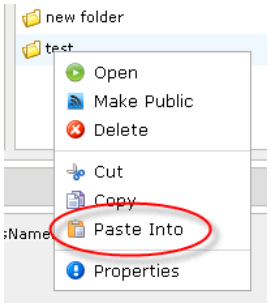
1. On the Amazon S3 tab in the AWS Management Console, right-click the object you want to move.

   Tip

   You can use the **SHIFT** and **CRTL** keys to select multiple objects and perform the same action on them simultaneously.



2. Click **Cut**.
3. Navigate to the bucket (and folder) you want to move the object to, and right-click the folder or bucket you want to move the object to.

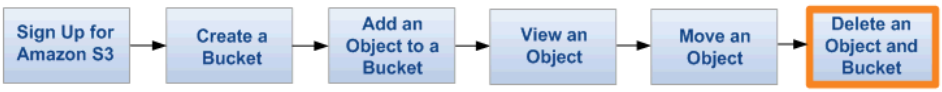


4. Click **Paste Into**.
   Amazon S3 moves your files to the new location.

Tip

You can monitor the progress of the move on the **Transfers** panel. To hide or show the **Transfer** panel, click the **Transfers** button at the top right of the console page.

Delete an Object and Bucket



You've viewed the object. Now, you can delete it and the bucket it's in.

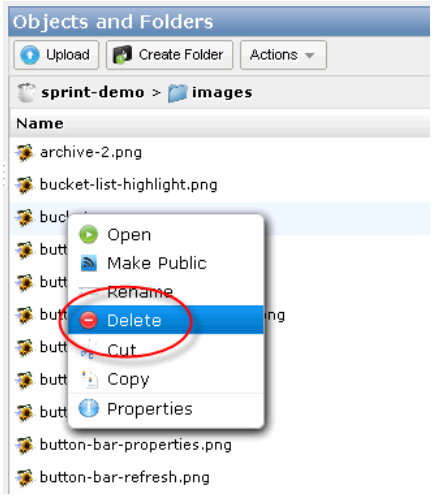
If you no longer need to store the objects you uploaded and moved while going through this guide, you should delete them so you do not incur further charges on those objects.

To delete an object

1. right-click on the object you want to delete.
   A dialog box shows the actions you can take on the selected object(s).

   Tip

   You can use the **SHIFT** and **CRTL** keys to select multiple objects and perform the same action on them simultaneously.



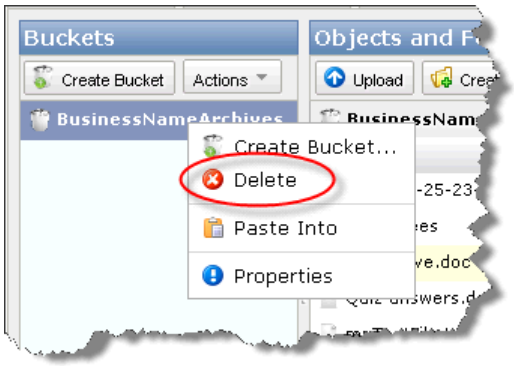
2. Click **Delete**.

3. Confirm the deletion when the console prompts you to.

To delete a bucket, you must first delete all of the objects in it. If you haven't deleted all of the objects in your bucket, do that now.

To delete a bucket

1. Right-click the bucket you want to delete.
   A dialog box shows the actions you can take on the selected bucket.



2. Click **Delete**.
3. Confirm the deletion when the console prompts you to.

You have now deleted your bucket and all its contents.

Where Do I Go From Here?

Topics

In the preceding examples you learned how to perform some basic Amazon S3 tasks. You can also learn to use our APIs and code samples to perform basic and advanced Amazon S3 tasks by reading the *Amazon Simple Storage Service Developer Guide* and by looking at code samples. For more information, go to Amazon Simple Storage Service Developer Guide and http://developer.amazonwebservices.com/connect/kbcategory.jspa?categoryID=188, respectively.

This section explains various ways in which you can gain a deeper understanding of Amazon S3 so that you can implement it in your applications.

Common Use Scenarios

The AWS Solutions web page lists many of the ways you can use Amazon S3. The following list summarizes some of those ways.

- **Backup and Storage—**Provide data backup and storage services for others
- **Application Hosting—**Provide services that deploy, install, and manage web applications
- **Media Hosting—**Build a redundant, scalable, and highly available infrastructure that hosts video, photo, or music uploads and downloads
- **Software Delivery—**Host your software applications that customers can download

For more information, go to AWS Solutions.

Considerations Going Forward

Topics

This section introduces you to topics you should consider before launching your own Amazon S3 product.

Security

Amazon S3 provides authentication mechanisms to secure data stored in Amazon S3 against unauthorized access. Unless you specify otherwise, only the AWS account owner can access data uploaded to Amazon S3. You can, however, encrypt your data before uploading it to Amazon S3. For more information, go to Amazon Web Services: Overview of Security Processes.

AWS Integration

You can use Amazon S3 alone or in concert with one or more other Amazon products. The most common products used with Amazon S3 are:

- Amazon Elastic Compute Cloud
- Amazon Elastic MapReduce
- Amazon Simple Queue Service
- Amazon CloudFront
- Amazon DevPay

Naming Strategy

Plan your bucket names in advance. The location of your data in Amazon S3 is a URL, generally, of the form: `http://[bucket-name].S3.amazonaws.com/[key]`. The bucket and key names should be descriptive of the objects. Each bucket is a namespace. Within one bucket, key names cannot clash. Before naming objects in buckets, you should develop a naming strategy.

Pricing

Learn the pricing structure for storing and transferring data on Amazon S3. For more information, go to Amazon S3 Pricing.

Advanced Amazon S3 Features

The examples in this guide show how to accomplish the basic tasks of creating a bucket, uploading and downloading data to and from it, and moving and deleting the data. The Amazon S3 API, however, offers advanced functionality not available in the AWS Management Console, which the following table summarizes. For more information, go to Amazon Simple Storage Service *Developer Guide*.

Link	Functionality
Using Amazon DevPay with Amazon S3	Learn how you can use Amazon DevPay to charge customers that access the data you store on Amazon S3.

Link	Functionality
Requester Pays Buckets	Learn how to configure a bucket so that a customer pays for the downloads they make.
Using BitTorrent With Amazon S3.	Use BitTorrent, which is an open, peer-to-peer protocol for distributing files.
Versioning	Learn about Amazon S3's Versioning capabilities

Development Resources

To help you build applications using the language of your choice, we provide the following resources:

- **Sample Code and Libraries—**The AWS Resource Center has sample code and libraries written especially for Amazon S3
  You can use these code samples as a means of understanding how to implement the Amazon S3 API. For more information, go to http://developer.amazonwebservices.com/connect/kbcategory.jspa?categoryID=188.
- **Tutorials—**Our Resource Center also offers more Amazon S3 tutorials
  These tutorials provide a hands-on approach for learning Amazon S3 functionality. For more information, go to http://developer.amazonwebservices.com/connect/kbcategory.jspa?categoryID=55.
- **Customer Forum—**We recommend you review the Amazon S3 forum to get an idea of what other users are doing and to benefit from the questions they've asked
  The forum can help you understand what you can and can't do with Amazon S3. The forum also serves as a place for you to ask questions that other users or Amazon representatives might answer. You can use the forum to report issues with the service or the API. For more information, go to Amazon S3 forum.
- **Case Studies—**To see code for applications that combine multiple Amazon products, including Amazon S3, go to Case Studies: Amazon Simple Storage Service

Reference Resources

The following list shows additional resources you can use to further your understanding of Amazon S3.

- The *Amazon S3 Console Users Guide* a complete description of all of the AWS Management Console functions related to Amazon S3.
  For more information, go to Amazon S3 Console Users Guide.
- The Amazon Simple Storage Service *Developer Guide* provides a detailed discussion of the service. It includes an architectural overview, detailed concept descriptions, and procedures for using the API.
- The Amazon Simple Storage Service *API Reference* provides a detailed discussion of the actions and parameters in Amazon S3.
- The Quick Reference Card provides quick access to important Amazon S3 API operations and functionality. For more information, go to Quick Reference Card.
- The AWS Developer Resource Center is the landing page for Amazon S3 code samples, tutorials, documentation, links to customer forums, pricing policies, and other information to help you build innovative applications with Amazon S3.
  For more information, go to AWS Developer Resource Center.
- The Service Health Dashboard shows you the status of the Amazon S3 web service.

The dashboard shows you whether Amazon S3 (and all other AWS products) are functioning properly. For more information, go to Service Health Dashboard.

About This Guide

This is the *Amazon Simple Storage Service Getting Started Guide*. This guide was last updated on October 17, 2011.

Amazon Simple Storage Service is often referred to within this guide as "Amazon S3." All copyrights and legal protections still apply.